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# Anti-Semitism as Skill: Rudolf Virchow's *Schulstatistik* and the Racial Composition of Germany

Andrew Zimmerman

ONE of the major events in the history of German anti-Semitism has been, if not entirely overlooked, then misunderstood and misrepresented. In the 1870s, the professor of medicine, liberal politician, and anthropologist, Rudolf Virchow (1821–1902), directed a study of the skin, hair, and eye color of 6,758,827 German school children, a study that marked “Jews” and “Germans” as racially different and trained a generation of Germans to perceive these differences both as real and as of political significance. Historians have been virtually unanimous in viewing this study as a blow against anti-Semitism, as a demonstration that there was neither a Jewish nor a German “race.”<sup>1</sup> This interpretation has survived, I believe, because it supports and rests on a commonly held conception of racism as primarily an intellectual phenomenon, as a set of more-or-less explicit propositions held in the minds of

1. The only historian to recognize that Virchow believed the study proved Germany to be racially “Aryan” is Léon Poliakov. See Poliakov, *The Aryan Myth: A History of Racist and Nationalist Ideas in Europe* (London, 1974), 264–66. George L. Mosse also recognized the equivocal nature of this study, although he did not discuss Virchow’s own conclusions about the German and Jewish races. See Mosse, *Toward the Final Solution: A History of European Racism* (New York, 1978), 90–93. Otherwise, historians have generally coordinated their presentation of the school survey with Virchow’s well-known liberalism and opposition to anti-Semitism, and assumed that Virchow’s study disproved the existence of German and Jewish “races.” The earliest presentation of the study as a blow against racial notions of Germany is in Carl Posner, *Rudolf Virchow* (Vienna, 1921), 67. See also Erwin Heinz Ackerknecht, *Rudolf Virchow: Doctor, Statesman, Anthropologist* (Madison, 1953), 212–16; Woodruff D. Smith, *Politics and the Sciences of Culture in Germany, 1840–1920* (New York, 1991), 103; Paul Weindling, *Health, Race and German Politics between National Unification and Nazism, 1870–1945* (Cambridge, 1989), 48–49. The conventional account of Virchow’s study is also presented in John M. Efron, *Defenders of the Race: Jewish Doctors and Race Science in Fin-de-Siècle Europe* (New Haven, 1994). Efron does an excellent job, however, of situating the study in a wider context of German discussions of Jewish racial separateness. Sander Gilman notes with Mosse that Virchow categorized Jews and Germans separately, although both Gilman and Mosse maintained the view that the study undermined the notion of a physically distinct Jewish race. See Gilman, “The Jewish Nose: Are Jews White? Or, The History of the Nose Job,” in his *The Jew’s Body* (New York, 1991), 169–93, here 177. While the present article contradicts Gilman’s brief account of the school survey, it has been aided and inspired by Gilman’s work.

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individuals. Virchow, a well-known opponent of political anti-Semitism, was never motivated by hostility to Jews in conducting this research. Indeed, he understood his focus on Jews as simply a race (rather than as a religion or a culture) to indicate that the study was not anti-Semitic.<sup>2</sup> Paradoxically, the study that Virchow designed and oversaw may have unintentionally provided an important practical basis for German racial anti-Semitism. By considering anti-Semitism as a set of skills rather than a philosophy, as hands-on practical knowledge more akin to riding a bicycle than to philosophical exposition, I hope to offer a new explanation of both Virchow's study of race and the place of that study in German history.

Virchow was an outspoken foe of anti-Semitism, which makes his racial study of Germans a particularly troubling irony.<sup>3</sup> A liberal physician, Virchow fought on the barricades in Berlin in 1848 and went to Frankfurt where he participated in attempts to draft a constitution for a unified German nation.<sup>4</sup> In 1856, after an eight-year exile at the University of Würzburg, he returned to Berlin as a professor of pathology and soon became one of the most famous medical scientists in the world. He distinguished himself as an opponent of philosophical concerns in medicine and as an advocate of more empirical clinical and laboratory practices. Virchow represented the Progressive Party in the Prussian House of Deputies from 1862 until his death in 1902. His role as an opponent of anti-Semitism increased in the later nineteenth century, as hostility to Jews emerged as a major political force in Germany. In 1880 he won an electoral contest against the anti-Semitic court preacher Adolf Stoecker to gain a seat in the Reichstag, which he held until 1893. Virchow's opposition to anti-Semitism

2. Virchow used the term "*Rasse*" and referred to Jews as a "*Rasse*" throughout his reports of the study. "*Rassen*" were each associated with a physical "*Typus*," although several races could have the same "*Typus*," for example Jews and Walloons. I will not place quotation marks around every instance of the words "race" or "racial" in this article. I use these terms simply as actors' categories and do not mean to impute any biological reality to the idea of "races." Indeed, I hope the present article further problematizes any notion of "race" as a biological category.

3. However, Virchow's opposition to anti-Semitism, as heroic and important as it was, should not be exaggerated. Werner Kummel is, as far as I know, the only historian to deal with the subtleties of Virchow's relation to Jews. As Kummel shows, Virchow's attitude was a fairly typical liberal one: Jews were in Germany to stay and were capable of being assimilated into mainstream German society. As Virchow declared to the Prussian House of Deputies on 21 March 1890: "The Jews are simply here. You cannot strike them dead." ("*Die Juden sind einmal da. Sie können sie nicht totschiessen.*") This position did not tolerate cultural and religious difference between Jews and non-Jews, but rather advocated eliminating this difference. It was only after Adolf Stoecker began attacking him in the 1880s that Virchow came to be regarded as an unequivocal enemy of anti-Semitism. See Werner Kummel, "Rudolf Virchow und der Antisemitismus," *Medizinhistorisches Journal* 3 (1968): 165–79.

4. East German scholarship viewed Virchow as a "humanist" and the German Democratic Republic honored him as a kind of cultural hero. The classic East German work is Kurt Winter, *Rudolf Virchow* (Leipzig, 1956). In the West Virchow was honored as a radical liberal, a possible alternative to Germany's illiberal path. The standard postwar Western account of Virchow is Ackerknecht's biography. The German translation of Ackerknecht was and still is also the principal German language source in the Federal Republic.

perhaps explains the historical blind spot for the conclusions he explicitly drew from the study of the German race, as well as for the effects of the study on popular understandings of race. If racism is merely a doctrine and Virchow did not subscribe to it, then a study he designed should not have promoted it. However, if racism is a skillful practice learned apart from ideology, as I will argue, then Virchow's own stand on anti-Semitism may not be relevant to the unforeseen impact of his study.

Virchow's interest in politics and pathology led him to the anthropological investigations I will consider in this article. He was famous for his interest in humans with rare pathologies and was often called on by the popular press to explain noteworthy freak-shows in Berlin. Virchow was a vocal opponent of Darwinism. Thus, when the Darwinist Carl Vogt asserted that microcephalics (known in circus sideshows as "pinheads") were atavistic returns to an intermediary race of ape-men, Virchow demonstrated to the satisfaction of most that microcephaly was an individual pathological phenomenon. Similarly, when the Darwinist Hermann Schaaffhausen asserted that a skull fragment discovered in the Neander valley represented an intermediary race between apes and humans, Virchow demonstrated that the skull belonged to a diseased and severely injured, but otherwise normal, human. He also argued against the notion that human races could be viewed as successive steps in a development from monkey to man, so that some races were closer to apes than others. Virchow, like most German anthropologists of his time, saw race as a fixed type, perhaps influenced by environmental conditions in a distant past, but immutable in the present.<sup>5</sup> German anthropologists generally believed that race was an essential and unvarying characteristic of human populations, although they were not polygenists and generally opposed the idea that different races had fundamentally different mental abilities. This interest in human racial variation, as well as a growing interest in German prehistory, led Virchow increasingly toward anthropological subjects.<sup>6</sup>

5. On Virchow's understanding of the permanence of race and species, see Virchow, *Menschen- und Affenschädel* (Berlin, 1870). On Berlin anthropology, see my "Anthropology and the Place of Knowledge in Imperial Berlin" (Ph.D. diss., University of California, San Diego, 1998).

6. One of the most common interpretations of the German Anthropological Society's study has been as a response to the assertion of the French anthropologist Armand de Quatrefages in *La race Prussienne* (Paris, 1871) that German troops behaved barbarously in the Franco-Prussian war because Prussians, who led the attack, were not German at all, but rather Finns. Quatrefages asserted that a Prussian-dominated unified Germany was therefore "*une erreur anthropologique*" (p. 104) that "menaced all of Europe with a second Thirty Years' War" (p. 1). However, although opposition to Quatrefages's theory may indeed have added zeal to the work of pro-Prussian and anti-French anthropologists, the physical anthropology of the Germans was a project central to German anthropologists even before Quatrefages's attack, as the articles in the *Archiv für Anthropologie* (AA), from its founding in 1866, indicate. Furthermore, Virchow, to his own satisfaction at least, had already demolished Quatrefages' account on methodological grounds before he began his own study. See Virchow, "Über die Methode der wissenschaftlichen Anthropologie: Eine Antwort an Hrn. de

In the 1870s a scientific revolution in the study of race occurred in Germany, in which natural scientists, especially physicians, turned their attention to the identification and classification of races and sought to apply the empiricism and materialism developing in German medicine to these questions.<sup>7</sup> For German anthropologists, race was not a quality discernible by the naked eye, but rather an esoteric category. The practice of identifying race did not involve such exterior and plainly visible characteristics as skin color, but rather relied on interior characteristics, especially measurements of the skull, not visible to the naked eye, but identifiable only by experts with special instruments.<sup>8</sup> German anthropologists particularly favored the so-called cephalic index, the ratio of a skull's length to its breadth, for racial classification. Those with relatively long heads were referred to as *dolichocephalic* and those with relatively wide heads were referred to as *brachycephalic*. To locate race in the formation of the bones rather than in skin color further served to bolster the argument against those who believed that race, like a suntan, varied with the climate of a region. This new, scientific conception held that race was an essential human characteristic, but one that only trained experts could establish.

German anthropologists of the later nineteenth century also opposed the notion that a racial type could be identified by measuring a supposedly typical individual member of a race. Because of a dearth of craniological material, earlier anthropologists, such as the eighteenth-century Göttingen professor, Johann Friedrich Blumenbach, had relied on studies of what they assumed to be typical individuals to characterize entire races. The new anthropologists advocated measuring large numbers of individuals, using increasingly complex statistical methods to compare the data, from simple averaging, in the late 1860s and 1870s, to more complex tests of statistical inference around the turn of the century. The anthropologist Robert Hartmann mocked the lone scholar who takes "this or that cranium" and "measures, describes, draws, and with childish joy catalogs it in one of the usual craniological categories."<sup>9</sup> The anthropologist Hermann Welcker wrote that "because a single case can never contain the

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Quatrefages," *Zeitschrift für Ethnologie* (ZfE) 4 (1872): 300–20. When the study was finally completed, Virchow's reports mention only in passing that it disproved Quatrefages' hypothesis.

7. For the turn of German physicians toward race and other social questions, see Weindling, *Health, Race and German Politics*.

8. This was also the case in the study of non-European races. For example, when considering whether the people of the Sudan were more closely related to inhabitants of the Middle East than to inhabitants of sub-Saharan Africa, their skin color was intentionally disregarded. Although, Virchow pointed out, Sudanese skin color resembled that of sub-Saharan Africans, the shape of their head and face demonstrated they were really more related to inhabitants of the Middle East. See *Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte* (VBGAEU) 10 (1878): 333–55, 387–407. In no case that I am aware of did color or any other obvious feature take precedence over head and face shape in deciding racial questions.

9. Robert Hartmann, "Untersuchungen über die Völkerschaften Nord-Ost-Afrikas," *ZfE* 1 (1869): 23–45; 135–58, here 33.

whole truth, one uses statistics.”<sup>10</sup> The requirement that anthropological knowledge be based on large samples, as well as the esoteric character of race, meant that only an organized group of skull-measuring experts, such as the German Anthropological Society, could make convincing conclusions about race.

However, the esoteric notion of race also made the anthropologists' need for large quantities of data harder to satisfy. Since few people possessed the skills to collect trustworthy data, anthropologists rarely had what they regarded as a sufficient empirical basis for their studies. They always had to strike a balance between the quantity and the quality of their data. The anthropologists in charge of the “statistical study of skull form in all of Germany” found they could neither obtain enough anatomical material nor conduct sufficient measurements on the living to draw any conclusions.<sup>11</sup> They therefore reformulated their criteria for the study of race to allow lay people to collect data. They hoped to get school teachers to survey their pupils and military officers to survey new recruits. Instead of skull measurements, anthropologists decided to consider, in Virchow's words, some “external characteristics of living humans” that untrained observers could measure.<sup>12</sup> The commission settled on eye, hair, and skin color as such “external characteristics.” Instead of dividing Germans into dolichocephalic and brachycephalic groups, German anthropologists intended to use these color data to divide them into a “blond type” (*der blonde Typus*) and a “brunet type” (*der brünette Typus*).

The German Anthropological Society did not merely want disaggregated numbers of, for example, how many pairs of blue eyes or how many heads of blond hair existed in a given region. Anthropologists wanted to determine the distribution of various combinations of hair, eye, and skin color because they associated these combinations with racial types. They held that there were just two pure physical types and that all others were a mixture of these two types. One of these pure types, they assumed, was “the blond type,” the “classical appearance of the Teutons” (“*classische Erscheinungen der Germanen*”) described by Tacitus, with blond hair, blue eyes, and white skin.<sup>13</sup> The other type, “the brunet type,” they seem to have derived simply by taking the opposite of the

10. Hermann Welcker, “Kraniologische Mittheilungen,” *AA* 1 (1866): 89–160, here 93–94.

11. The members of the commission in charge of the study were Alexander Ecker, Wilhelm His, Wilhelm Krause, Hermann Schaaffhausen, Albert Kölliker, Gustav Lucae, and Hermann Welcker, as well as Virchow. See anon., “Protocoll über die 1. Sitzung der 2. allgemeinen Versammlung der Deutschen Anthropologischen Gesellschaft zu Schweren, am 22. September 1871, im Saale des Schauspielhauses,” *Correspondenz-Blatt der Deutschen Anthropologischen Gesellschaft (CBDAG)* 2 (1871): 41–80, here 59. See also Virchow, report on the statistics of the skull form, in “Die Vierte Allgemeine Versammlung der Deutschen Anthropologischen Gesellschaft zu Wiesbaden,” attached to *CBDAG* 4 (1873), 28–30.

12. Virchow, “Berichterstattung über die statistischen Erhebungen bezüglich der Farbe der Augen, der Haare und der Haut,” *CBDAG* 7 (1876): 91–102.

13. Virchow, “Die Ziele und Mittel der modernen Anthropologie,” *CBDAG* 8 (1877): 1–7.

blond type: the brunet type had brown hair, brown eyes, and brown skin. All other combinations of hair, eye, and skin color, anthropologists argued, resulted from various mixtures of the two pure types. The blond type was associated with the “German race,” and the brown type with a number of other races, including Czechs, Walloons, Slavs, Franks and, most importantly for the present discussion, Jews. Thus, while not themselves races, blond and brown types were the physical markers that defined the races inhabiting Germany. By grouping their color data to reflect the distribution of two distinct “types,” anthropologists ensured that their study would produce information analogous to more esoteric studies of the distribution of dolichocephaly and brachycephaly.

The architects of the study associated these race-defining types, though named by hair color—blond and brunet—with skin color, white or brown. They valued data on eye and hair color because “the color of the hair and the eyes stands in a certain relation” to the color of the skin. The color of the skin, they now argued, constituted a racial marker and thus corresponded more directly than eye or hair color to skull form, the true racial marker. Skin color, anthropologists admitted, would be difficult to measure accurately, since, to the untrained eye, Germans had more or less the same skin color. They asked for data on eye and hair color because they perceived a strong correlation between these more easily differentiable colors and skin color. Thus they included in the pure “brunet type” those Germans reported to have brown eyes, brown hair, and white skin, since they assumed that the untrained data collector had mistakenly recorded brown skin as white. Anthropologists hoped that this notion of race based on skin color would ultimately correlate with notions of race based on skull form, although they left this final correlation to an unspecified future date.<sup>14</sup>

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An assumption of racial difference between non-Jewish and Jewish Germans was incorporated into the study almost from the beginning. When Virchow proposed the method of the study to the German Anthropological Society at its yearly congress in 1873, a member, whose name has not been recorded, called out: “Herr Dr. Virchow will perhaps also have the confession [of the subjects] recorded. There are many regions with a large population of Jews, and the data from these regions would lead to false conclusions.”<sup>15</sup> Members of the assembly

14. Die Sechste Allgemeine Versammlung der Deutschen Anthropologischen Gesellschaft in München, attached to *CBDAG* 6 (1875): 47–50.

15. Virchow, report on the statistical study of skull form, “Die Vierte Allgemeine Versammlung der Deutschen Anthropologischen Gesellschaft zu Wiesbaden,” 28–30. This was not the first time Jews had been excluded from statistical surveys. Hermann Hölder excluded Jewish and French subjects from his “Beiträge zur Ethnographie von Württemberg.” Ian Hacking notes that in 1769 Prussia separated Jews from non-Jews in its statistical surveys, resulting in the General-Judentabellen

agreed that Jewish subjects could distort the data about “German” racial characteristics, and by the next meeting Virchow had adjusted his methodology accordingly.<sup>16</sup> Unlike foreign populations living in Germany, such as those of French or English descent, who were excluded from the survey altogether, racial data was to be taken from Jews and listed separately. Virchow had initially decided to record the confession of every subject but was reportedly accused in the press of wanting to use this data to begin an “inquisition” against Catholics. Virchow’s interest in confession must have seemed particularly ominous to Catholics because of his prominent support for the anti-Catholic *Kulturkampf*. Virchow explained that his separate tabulation of racial data about Jews did not constitute a negative evaluation of that group. He did not separate Jews from Germans in the study for religious considerations, he offered, but rather because Jews belong, “according to their origin, to a different nation.”<sup>17</sup> Thus, Virchow maintained, he was not carrying out a new anti-Semitic “inquisition.”<sup>17</sup> He clearly conceived of anti-Semitism primarily as a religious prejudice, so that a purely racial understanding of Jews could not be considered anti-Semitic. At this early stage of the project, Jews represented a group of indeterminate racial characteristics, which posed a threat to the purity of the data to be collected. The role of the Jews changed markedly over the course of the study, as the Jewish racial data moved from the periphery to the center of the inquiry.

The military and public schools, the commission decided, contained populations that were representative of German society and subject to authorities that could conduct the study. While the military declined to participate, the German states agreed to have teachers collect the data from their classrooms, although many governments did not recognize the scientific value of such data.<sup>18</sup> The Prussian *Kultusminister* also doubted the ability of rural school

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and Provinzial-Judenfamilien-Listen. See Ian Hacking, *The Taming of Chance* (Cambridge, 1990), 23. Of course the eighteenth-century Prussian statistics did not include surveys of racial characteristics. In the nineteenth century, Prussia ceased to count Jews separately in its censuses. The anti-Semitic petition presented to Bismarck in 1882 demanded a restoration of the special census for Jews, as well as the exclusion of Jews from public positions and the end of Jewish immigration. See Peter Pulzer, *The Rise of Political Anti-Semitism in Germany and Austria* (1964; London, 1988), 91.

16. The question of a separate Jewish race had interested physical anthropologists since the late eighteenth century, although this question had never before been pursued on the grand scale of Virchow’s study. On the question of a Jewish race in German anthropology, see Annegret Kiefer, *Das Problem einer ‘Jüdischen Rasse’: Eine Diskussion zwischen Wissenschaft und Ideologie (1870–1930)* (Frankfurt am Main, 1991). Kiefer’s discussion of Virchow’s study of school children (pp. 26–31) gives a conventional account of it as a challenge to anti-Semitism.

17. *CBDAG* 6 (1875): 32–36. Michael B. Gross shows how liberal opponents of the *Kulturkampf* themselves associated anti-Catholicism with potential anti-Semitism. See Gross, “*Kulturkampf* and Unification: German Liberalism and the War against the Jesuits,” *Central European History* 30, no. 4 (1998): 545–66.

18. The ability of states to order teachers to participate in this study was made possible by the 1872 School Supervision law, part of the *Kulturkampf* laws, which decreased church control of schooling and increased the state’s influence in education. See Marjorie Lamberti, *State, Society and the Elementary School in Imperial Germany* (New York, 1989).



teachers to carry out the study with sufficient accuracy.<sup>19</sup> To help persuade the state governments to support the study, Virchow emphasized that the statistics would have political value, for they would provide “exact knowledge of the entire people and the individual tribes [*Stämme*], especially their particular physical and mental capabilities.”<sup>20</sup>

While the potential political uses of these “school statistics,” as the project came to be known, made state governments more cooperative, the politics of the survey only alarmed the subjects of the study and their parents. People in southern Germany apparently did not want to make information about their color available to Prussia, because they feared it would be used to levy some new tax.<sup>21</sup> In Prussia too, especially among the Catholic population in the eastern half of the monarchy, there were revolts, reportedly led by women who feared that the statistics would be used to further the *Kulturkampf*.<sup>22</sup> A rather incredible, but often repeated, account has it that many feared that the survey would be used to select children of particular complexions to be sent either to Russia or to Turkey (the latter to pay off a gambling debt that Kaiser Wilhelm owed to the Sultan).<sup>23</sup> Be that as it may, it seems clear enough that at least a portion of the people studied did not comprehend the purpose of the study and were suspicious about its possible political uses.

To secure the cooperation of the teachers who would gather the data, the German Anthropological Society distributed a pamphlet explaining the purposes of the survey and the methods teachers should use to determine eye, hair, and skin color.<sup>24</sup> The pamphlet appealed to the humanistic bent of the German school system, explaining that the study of the racial composition of Europe “is a necessary prerequisite for the study of the cultural history of humanity in general and the prehistory of each country in particular.” Determining the geographical distribution of the blond type and the brunet type in Germany would help anthropologists reconstruct the prehistory of Germany, when one

19. See, for example Alexander Ecker to Rudolf Virchow, 8 February 1876, in Christian Andree, *Rudolf Virchow als Prähistoriker* (Cologne, 1976), 2:83–84, and Adalbert Falk (Kultusminister) to the Berlin Anthropological Society, 10 August 1874 and 12 October 1874, printed in *CBDAG* 6 (1875): 32–36.

20. Virchow, *CBDAG* 6 (1875): 2–3, here 3.

21. Oscar Fraas, *CBDAG* 6 (1875): 36–37.

22. *VBGAEU* 7 (1875): 90. See Georg von Mayr, Report on the school statistic in Munich, “Die Sechste Allgemeine Versammlung der Deutschen Anthropologischen Gesellschaft in München,” 50–55.

23. This story was first reported by E. B. Tylor in his “Address to the Department of Anthropology of the British Association,” reprinted in the *Journal of the Anthropological Institute of Great Britain and Ireland*, 9 (1879): 235–46, here 245–46. It was then cited in Alfred C. Haddon, *History of Anthropology* (London, 1910). Finally it was cited in Ackerknecht, *Rudolf Virchow*, 213.

24. A copy of this pamphlet, *Der Vorstand der deutschen anthropologischen Gesellschaft an die Lehrer der höheren Unterrichtsanstalten und der Volksschulen*, exists in the Rudolf Virchow Papers, folder 2642, Archives of the Academy of Sciences, Berlin.

or more original populations in Europe were joined by a later “Aryan (Indo-Germanic)” migration. Even in this pamphlet, anthropologists admitted that the question of German races would finally only be settled by determining the distribution of dolichocephalic and brachycephalic skull types. Until anthropologists could gather enough craniological data, however, this survey of the distribution of skin color would have to suffice for studying the race of Germans. “Well-known scientists hold the opinion,” the pamphlet assured the teachers, “that the long-headed population is blond and light-colored, the short-headed population brunet and dark-colored.” Reconstructing this prehistory by tabulating the racial makeup of their classrooms would, the anthropologists promised the teachers, “lead finally to the same goal toward which the school also strives: self-knowledge.”

In addition to explaining the purposes of the study, the pamphlet also imparted to teachers and students the skills necessary to undertake a study of race. The procedural recommendations given in the pamphlet, as well as the layout of the table distributed to teachers to record the data, suggest the methods teachers might have used to conduct the study (see fig. 1). The teachers would have taken the form and entered the type of school and its location at the top. They then would have lined up all the students in their classes, excluding any of foreign parentage, as the pamphlet recommended. The students would then be counted, and the number entered at the top of the form. If the teachers did not already know which children were Jewish, they would have had to find out, so that the number of Jewish students could also be entered at the top of the form. The line of students would then be arranged according to eye color, with the lightest blue eyes at one end and the darkest brown or black eyes at the other.<sup>25</sup> The students would be required to remove their jackets and roll up their shirt-sleeves to expose their forearms, which were normally covered and thus not tanned by the sun. The teachers could then proceed down the row of children, beginning at the end with the student with the lightest blue eyes. They would first examine the student’s hair, determining whether it was blond or brown. If it was blond, the only option on the table was that the student’s skin was white. All blond, blue-eyed German children were thus counted as white. Students with gray eyes and blond hair were similarly automatically listed as white, whereas students with gray eyes and black hair were automatically listed as brown. If a blue-eyed child’s hair was brown, the teacher would have to examine the student’s exposed forearm to determine whether the student was white-skinned or brown-skinned.

25. I draw this conclusion from the fact that eye color was the only color anthropologists recommended be measured comparatively and was the first category given in each of the eleven combinations.

Formular.

Schule (Volksschule, Gymnasium u. s. w.) zu . . . . .

Zahl der Schüler: . . , darunter Juden . .

Davon haben:

	Gesammtzahl	darunter Juden
1) blaue Augen, blonde Haare, weisse Haut . . . . .		
2) " " braune " " " . . . . .		
3) " " braune " braune " . . . . .		
4) graue Augen, blonde Haare, weisse Haut . . . . .		
5) " " braune " " " . . . . .		
6) " " braune " braune " . . . . .		
7) " " schwarze " " " . . . . .		
8) braune Augen, blonde Haare, weisse Haut . . . . .		
9) " " braune " " " . . . . .		
10) " " braune " braune " . . . . .		
11) " " schwarze " " " . . . . .		

Durchschnittliches Alter der besichtigten Schüler:

Fig. 1. Table on which teachers recorded the hair, eye, and skin color of their students. Note the separate column for Jewish students. Source: Rudolf Virchow, “Gesamtbericht über die von der deutschen anthropologischen Gesellschaft veranlassten Erhebungen über die Farbe der Haut, der Haare und der Augen der Schulkinder in Deutschland,” *Archiv für Anthropologie* 16 (1886): 275–475.

Teachers were to note separately the total number of students who fit into each of the eleven types and the number from each type who were Jewish. This division of the types into Jewish and non-Jewish could have taken place in two different ways. Teachers could have determined the type of the student and, if the student were non-Jewish, made a mark in the “Gesammtzahl” (total number) column, or, if the student were Jewish, made a mark in the “darunter Juden” (Jews among them) column. After finishing with all of the students the teacher would then have had to add the number from the “darunter Juden” column to the “Gesammtzahl” column. Alternatively, teachers could have taken the students successively out of line and grouped them according to which of the eleven types they belonged. They would have then simply counted the total number in each group, entered it into the “Gesammtzahl” column and counted the number of Jews in each group and entered it into the “darunter Juden” column. In either case, conducting the survey entailed a precise arrangement of students according to race.

The process of the survey trained students and teachers to experience race. As is clear from the pamphlet anthropologists wrote for schoolteachers, as well

as from the initial resistance to the survey by the parents of its subjects, notions that Germans were made up of separate, discernible races were by no means obvious to ordinary Germans. The initial line-up required by the measurement, in which students were arranged on a continuum from the lightest-blue to darkest-brown eyes, would have taught the students and the teachers—not theoretically but practically, with their bodies—that one's own body and the bodies of others could be experienced and ranked according to regular racial differences. From this initial, perhaps simpler arrangement, the teachers then taught themselves and their students more subtle distinctions and arrangements. They learned that bodies could be arranged not only according to eye color but also according to hair color. They also learned, if not through a second spatial arrangement, then at least through the physical gestures of pointing and counting, that two far more difficult to discern properties, skin color and Jewishness, could also be used as principles of arrangement and treated as somatic phenomena.<sup>26</sup> The form itself reproduced this physical ordering in the classroom; from the simple gesture of lining up according to eye-color, students learned spatial divisions between white and non-white Germans, between non-Jewish and Jewish Germans. The process of filling out the form distributed by the German Anthropological Society taught both students and teachers to perceive and judge an individual's race based upon simple observations of eye and hair color, and to relate these racial observations to whether a person was Jewish or not. Just as a dance, the layout of a village, or a parade can produce, concretize, and reproduce cosmologies, so too did the spatial arrangement both in the classroom and on the survey form produce an order of races—an order that did not exist before.<sup>27</sup>

German whiteness became a socially real phenomenon in the course of this study, and it is worth reconstructing in greater detail the phenomenology of whiteness: how did participants learn that some people were white, and what was it like to have a skin color in Imperial Germany? The whiteness of the skin was quite literally a hidden property. Visible skin, the public skin of the face and hands, was tanned by the sun, and thus the whiteness and brownness of skin could not be apprehended publicly. By being exposed—both to the public and to the sun—skin became unable to disclose its own color. Only by partially disrobing, by removing the jacket and rolling back the shirt-sleeve to reveal hidden skin, could true skin color be revealed. By focusing on the category of skin color, anthropologists reproduced the esoteric and permanent notion of race,

26. Mosse is surely correct in observing that “the survey must have made Jewish children conscious of their minority status and their supposedly different origins.” Mosse, *Toward the Final Solution*, 91.

27. Jack Goody shows how lists organize thought, action, and objects and are thus a kind of cosmological representation. See Goody, “What’s in a List,” in *The Domestication of the Savage Mind* (Cambridge, 1977), 74–111.

even while abandoning subtle measurements of the skull as the principal indicators of race. Like the skull, the skin of the forearm was immutable, hidden, and interior, and therefore provided a secure indicator of race, independent of the effects of the environment. Being white was no mere skin condition, like being suntanned or having a rash. White was interior, it was invisible, it lay beneath the clothes. The act of exposing the unexposed, of rolling back the sleeve to reveal to the teacher the secret skin beneath, performed the interiority of skin color and therefore of race, its permanence and its essential connection to the very being of a person. Skin color thus became a property of nakedness, associated in the biblical creation narrative with humans as they were created rather than humans as they have made themselves. Color was thus no longer pure accident: it became substance. By locating skin color beneath the clothing, it was symbolically ordered beneath—and therefore imaginatively prior to—the social.

The study posited skin color as concealed, however, only so that it might be revealed. It transformed the invisible into a public, visible category. Germans could not have become racially marked simply by constantly exposing their forearms, since those would also be tanned by the sun and thus would conceal skin color and therefore race. Furthermore, even when teachers had access to the hidden forearm of a student they could not always, anthropologists admitted, correctly evaluate whether a student was white or brown. The esoteric, invisible whiteness had to be transformed into exoteric, visible whiteness. Anthropologists achieved this by correlating skin color with hair and eye color. If skin color was construed as a secret esoteric category, hair and eye color were construed as public, exoteric categories. Teachers made the first public distinction based on eye color, arranging the students from the lightest blue eyes to the darkest brown eyes. If the skin was the most private organ, the eyes were the most public. Indeed, the eyes constituted publicity itself, for the skin was private and esoteric precisely in relation to the public gaze, to the eye. Whiteness was constituted by a gaze that reveals the concealed, and eyes, including their color, were the organs of this revelation. One could not have concealed eyes and revealed race, for race was conceived of as color and thus constituted by the vision of an other. To ask the question “are Germans white?” was both to open the eyes and to open them to public scrutiny.

The commission presented hair as a public category for the same reason that it presented skin as a private category: the transformations effected by exposure to the sun. The commission decided that children whose hair became blond only in the sun, as well as blond children whose hair would become brown later in life, should be counted as blond.<sup>28</sup> As Virchow wrote, “those blondes that later

28. Board of Directors of the German Anthropological Society, minutes of discussion on the statistical survey of the anthropology of the Germans, *AA* 7 (1874): 137–38; *Der Vorstand der*

become brown still belong essentially to the pure race."<sup>29</sup> Hair, in contrast to skin, thus became a good racial marker because it was exposed to the sun. Being public revealed the true color of hair, since brown hair that became blond when exposed to sunlight counted as blond; hidden hair, unlike hidden skin, concealed rather than revealed its true color. Whiteness and brownness thus became esoteric categories that were publicly accessible through the conspicuous markers of hair and eye color. Participating in the survey gave teachers and their pupils a hands-on, practical interpretive key to deciphering the public markers of hair and eye color as signs of the less visible skin color. Anthropologists thus exteriorized the interior racial property of whiteness, which was itself an exteriorization of the even more internal property of skull form.

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As the hundreds of thousands of forms came in from all parts of the Reich, the German Anthropological Society rendered the classification of races on the form (which itself represented an arrangement of races in the classroom) as a spatial ordering on a map of Germany. In 1875, the Anthropological Society hired the Royal Statistical Bureau in Prussia to compile the statistics, which took two years to collect.<sup>30</sup> Other state statistical bureaus also tabulated local results. From the single surviving tabulation, it appears that state statistical bureaus filled out forms of the kind used by individual teachers with the collected results for each county.<sup>31</sup> These forms were then sent to Berlin, where anthropologists, including Virchow, transferred the data onto simple black and white maps of Germany marked off into squares, each representing a county.<sup>32</sup> They made a separate map for each trait, and colored each square varying shades of green according to the prevalence of a given trait. They also made maps giving the prevalence of the blond type and the brunet type throughout Germany. These schematic maps were then used to draw more realistic maps, presenting

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deutschen anthropologischen Gesellschaft an die Lehrer der höheren Unterrichtsanstalten und der Volksschulen.

29. Rudolf Virchow, "Berichterstattung," 101.

30. See anon., "Cassenbericht," "Die Sechste Allgemeine Versammlung der Deutschen Anthropologischen Gesellschaft in München," 21–22. Hamburg never conducted the survey. As Mosse notes, the Hamburg government explained that the survey conflicted with ideas of personal liberty. (One Jewish school from Hamburg did complete the survey and sent it to Virchow.) See Rudolf Virchow, "Gesamtbbericht über die von der deutschen anthropologischen Gesellschaft veranlassten Erhebungen über die Farbe der Haut, der Haare und der Augen der Schulkinder in Deutschland," *AA* 16 (1886): 275–475, here 283–84.

31. See the tabulation for Altenburg, Saxony, in Virchow Papers, 2644.

32. These maps were by the cartographer Daniel Gottlob Reymann. Some copies survive in the Virchow Papers, 2644, as well as in the Archive of the Berlin Anthropological Society, Museum für Vor- und Frühgeschichte, Berlin.

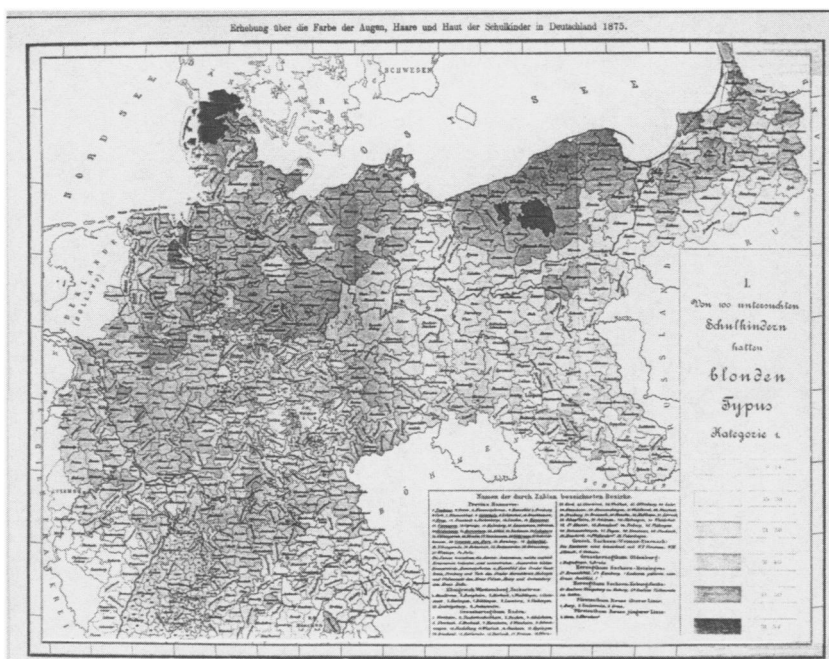


Fig. 2. Map showing the geographical distribution of “Blond Type,” entitled “Survey of the Color of Eyes, Hair, and Skin of Schoolchildren in Germany, 1875. I. Of 100 Schoolchildren Examined, the Following were of the Blond Type.” Source: Rudolf Virchow, “Gesamtbericht über die von der deutschen anthropologischen Gesellschaft veranlassten Erhebungen über die Farbe der Haut, der Haare und der Augen der Schulkinder in Deutschland,” *Archiv für Anthropologie* 16 (1886): 275–475.

the geography of Germany in terms of the distribution of the two German “types” (see fig. 2).<sup>33</sup> As the initial data collecting involved a spatializing ritual in which teachers arranged children to racialize them, this map-coloring process did the same on a larger scale for the nation. Germany itself was pictured as a racially differentiated space.

As early as 1876, even before the results of the school statistics were complete, Virchow concluded from the data that Jews formed “a quite respectable contrast to the real Teutons.”<sup>34</sup> The process of conducting the survey had taught

33. Virchow gives some information on his map coloring in his “Berichterstattung,” 101. More finished versions of these maps appear in Rudolf Virchow, “Gesamtbericht,” AA.

34. “. . . also ein recht respectabler Gegensatz gegen die wirklichen Germanen.” Virchow, “Berichterstattung,” 102.

Virchow to view Jews as a separate race. Virchow himself recognized this process, noting that the “children of Jewish confession” were originally considered separately because it was thought they might cause a “disturbance in the summation” of the data. Although, as it turned out, there were not enough Jews to disturb the data, the separate study did lead to an unexpected conclusion:

From the separated survey it became clear . . . that certain very sharp oppositions exist between the races. While the total number of German school children, calculated together, are almost 32 percent blond, among the Jewish school children only 11 percent were counted [as blond]. Brunets occurred among all the schoolchildren a bit more than 14 percent; among the Jews it was 42 percent.<sup>35</sup>

While today one might regard the same data as evidence of a lack of racial uniformity among Jews or Germans, when Virchow and his contemporaries considered the data it was unequivocal: “Jews” were a separate race from “Germans.” While not all individuals of the “brunet type” were Jewish, Jews were racially distinct from the “blond type,” which was largely made up of “Germans.”

Virchow was able to maintain the idea of a single Jewish race despite the obvious variations in the statistics of Jewish hair, eye, and skin color. Anthropologists had been aware of the existence of blond Jews before the survey discovered them. There were three prevalent explanations for blond Jews: Jews came to look like the surrounding population as they assimilated; Jews mixed with the surrounding population as they assimilated; there were two Jewish types, a common dark type and a rarer blond type.<sup>36</sup> Against the first two arguments Virchow pointed to his statistics: Jews did not look like the surrounding population into which they had, supposedly, assimilated, and they did not mix with the surrounding population to a significant extent. The statistics show that 54 percent of non-Jews were mixed-form while only 47 percent of Jews were mixed-form. Thus, the “first cardinal phenomenon” discovered by the survey was that “it is precisely among the Jews that the smallest number of mixed types appear.”<sup>37</sup> Virchow further noted that blond Jews rarely had blue eyes, and thus they were actually mixed types. He held that an inclination of Jews to marry among themselves meant that these mixed types would soon be eliminated: “finally through new pure Jewish marriages the old blood will be freshened up

35. Rudolf Virchow, “Gesammtbericht über die Statistik der Farbe der Augen, der Haare und der Haut der Schulkinder in Deutschland,” *CBDAG* 16 (1885): 89–100, here 91.

36. The third explanation had recently been put forward in the Berlin Anthropology Society’s journal and seems to have been the most commonly held among German anthropologists at the time the survey results were evaluated. See Richard Andree, “Rothe Haare,” *ZfE* 10 (1878): 335–45. Virchow cites James Cowles Prichard’s *Researches into the Physical History of Mankind*, (1844), 4: 597 as the source for the view that Jews took on the physical characteristics of the population into which they assimilated.

37. Virchow, “Gesammtbericht,” *CBDAG*, 91.



again.”<sup>38</sup> Virchow concluded that there was a single “brown” Jewish racial type that, despite variations, would always be kept pure because the Jewish race remained separate. Data on “Jews” had originally been marginalized simply to preserve the purity of data about “Germans”; Virchow later drew the Jewish data into the center of the study and transformed the school statistic into a racial study, and mass racialization, of Jews.

The second “cardinal phenomenon” discovered by Virchow’s study was that Germans were of the blond type, that they were white rather than brown.<sup>39</sup> While more than half of the students measured were of the mixed type, of the pure, two-thirds were of the blond type while only one-third were of the brown type. The study did find that the north of Germany was more blond than the south. However, while the brunet type was only 27 percent more prevalent in the south than in the north, the blond type was 47 percent more prevalent in the north than in the south. Virchow concluded that because the blond type varies more from north to south, and, presumably, because there are more pure blondes than pure brunets in Germany, the blond type was “the dominant type” (*der herrschende Typus*). The brunet type in contrast was a “secondary type” (*Nebentypus*). The two “cardinal phenomena” that Virchow derived from the study were that, despite variation, Jews were a single brown racial type and that Germans were predominantly a single blond (and therefore white) racial type. Far from overturning scientific racism, the German Anthropological Society’s study, even as interpreted by Virchow, gave racism a new statistical, scientific, and practical basis.

In his methodological discussions, Virchow also drew the Jews from the periphery of the school statistic to its center. Indeed, Virchow legitimized the very value of the data on skin color with reference to a specific racial characterization of Jewish Germans. While the study was primarily concerned with skin color as a racial characteristic possibly related to skull form, the measurement of skin color, to a greater extent even than the measurement of eye and hair color, seemed highly arbitrary. It would be difficult, Virchow feared, to rely on the regularity of teachers’ judgments about the whiteness or brownness of their students’ skin, for skin that looks brown to one teacher might look white to another. In a final step, closing the circle of the argument, Virchow used the two cardinal phenomena to justify the data from which these phenomena themselves had been derived. That teachers recorded white skin for 91.5 percent of the non-Jewish children, but only for 74.37 percent of the Jewish children, indicated, for Virchow, that the measurements of skin color were done relatively accurately and reliably. Virchow supposed that both of these figures for

38. Virchow, “Gesammtbericht,” *AA*, 368.

39. Virchow, “Gesammtbericht,” *CBDAG*, 92.

the whiteness of skin were higher than they should be because teachers had not yet learned to discriminate between whiteness and brownness in German children.<sup>40</sup> That teachers correctly identified Jews as less likely to be white than non-Jews also indicates, however, that they had already begun to acquire the discriminating eye that Virchow's study demanded.

The school statistics had a discernible, if difficult to measure, impact on the German public. Although Virchow's conclusions were not officially published for ten years, local newspapers reported the findings for their region as soon as they were calculated.<sup>41</sup> Almost immediately, the color of the Jewish and non-Jewish students, as well as the number of Jews in a given area, became public knowledge. That the findings were published in newspapers along with other items of public interest must have given them a kind of significance that they did not necessarily already possess. The political controversies surrounding the study and the initial popular resistance to it, as well as the apparent newsworthiness of the results, likely imprinted it in the memories of students, teachers, and parents.<sup>42</sup> The experience in any case was a common one for nearly an entire age cohort of Germans.<sup>43</sup> The study was not only an important event in

40. Virchow, "Gesamtbbericht," *AA*, 299–300.  
41. Such newspaper reports survive the Virchow Papers. See for example, *Nichtpolitische Zeitung* (Munich), 13 August [probably 1874]; Victor Böhmert, "Die sächsische Erhebungen über die Farbe der Haut, der Haare und der Augen der schulpflichtigen Jugend (Aus dem statistischen Bureau des Königl. Ministeriums des Innern)," *Wissenschaftliche Beilage der Leipziger Zeitung*, 23 November 1876, 581–85, Virchow Papers, 2644.  
42. While I have found no direct evidence of popular memories of this study in Germany, there is evidence of such memories in Austria, where a similar survey was conducted several years later. An 1890 article in the *Wiener Familien Journal* begins: "Our younger readers will certainly still remember that one day in school they were examined to find out what kind of hair and eyes they had and if their skin was whitish or brownish: in short if they were blond or brunet." C. Falkenhorst, "Von Blonden und Brünetten." *Wiener Familien Journal* 8 (1890). In Virchow Papers, 3003.  
43. I estimate that 81 percent of all children in Germany between the ages of 6 and 14 participated in the survey. I arrived at this figure using German census data from 1871 and 1880. Since the age group measured by anthropologists was 6–14, while the census included groups from 5–9 and 10–14, I took 1/5 from the 5–9 age group to reflect the absence of five-year-old children, because I assumed that there were an equal number of children of each age. I thus calculated as follows (figures are in thousands):

Census Year	Age: 5–9	Less 1/5	Age: 10–14	Total, age 6–14
1871	4626	3701	4270	7971
1880	5171	4137	4676	8813

I then averaged the total population of 6–14 year-old children for 1871 and 1880 to estimate the number of children in this age group at the time of the study, in the mid-1870s, to arrive at the following estimated population of 6–14 year-old children in Germany during the time of the measurement: 8392. The number measured was 6759, or 81 percent of the relevant age group. This figure does not reflect the teachers also directly involved in the study and the parents indirectly involved. For the statistics, see B. R. Mitchell, *European Historical Statistics, 1750–1970* (London, 1975).

the history of scientific racism, it was also a broad dissemination of skills for perceiving race.<sup>44</sup>

More important than any explicit racist ideas that the study may have imparted are the tacit knowledge and the skills for perceiving and classifying race that the participants acquired.<sup>45</sup> Virchow himself never drew anti-Semitic implications from his conclusion that Jews and Germans were separate races. It is not clear, furthermore, that students ever understood what the study meant, learned of Virchow's conclusions, or thought about the statistical relation of white and brown Germans. It would be misleading, however, merely to look for anti-Semitic doctrines to assess the impact of the study. The political theorist Michael Oakeshott has argued against the notion that politics consists of explicit doctrines and ideologies that one might read in a book. Such doctrines, Oakeshott maintains, are mere "cribs" of tacit political skills, skills that cannot be learned cognitively, but rather can only be experienced as practices. Oakeshott's distinction between cognitive, "rationalist" politics and traditions of skill helps to highlight the importance of this study for German history.<sup>46</sup> Although the anthropologists who designed the study harbored no anti-Semitic agenda, in performing the school statistics a significantly large group of Germans learned a set of tacit skills necessary for the subsequent development of racist, anti-Jewish ideology and politics. Teachers and students did not have to derive propositions cognitively from the results of the survey: the process of the survey itself constituted a political experience far more significant than any ideological proposition. This noncognitive, tacit experience imparted practical skills that ideologies could later transform into "cribs," into political tracts proposing and denouncing various racial doctrines.<sup>47</sup> The survey taught neither anti-Semitism

44. I do not mean to assert that the survey of German races itself caused German anti-Semitism. Indeed, studies of hair, eye, and skin color were conducted in Belgium, Switzerland, and German-speaking Austria before 1885, although there is no indication that these studies also excluded Jews or of how they were conducted. Virchow used the results of these studies to bolster his assertion of the peculiar blondness (and therefore whiteness) of the population of Germany. See Virchow, "Die Verbreitung des blonden und des brünetten Typus in Mitteleuropa," *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin* 5 (1885): 39–47, here 39–40.

45. On tacit knowledge, see Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (Chicago, 1958); Gilbert Ryle, "Knowing How and Knowing That," *Proceedings of the Aristotelian Society* 46 (1945–46): 1–16.

46. This is not to deny the importance of explicit ideologies, but rather to draw attention to what Oakeshott called "the liquid" in which "moral ideals were suspended." Michael Oakeshott, "Rationalism in Politics," in *Rationalism in Politics and Other Essays* (New York, 1962), 1–36, here 36. The classic studies of these "moral ideals" are Mosse, *Toward the Final Solution*, and Fritz Stern, *The Politics of Cultural Despair: A Study in the Rise of the Germanic Ideology* (Berkeley, 1961).

47. I do not mean to assert that there were no ideological tracts opining in favor of racial anti-Semitism in Germany before the school statistic. Indeed, Wilhelm Marr's seminal 1867 *Der Sieg des Judentums über das Germanentum vom nicht konfessionellen Standpunkt aus betrachtet* established an anti-Semitic discourse almost ten years before the school statistic. However, one cannot speak of a popular anti-Semitic movement existing before the study, as it did after 1878 with Adolf Stöcker's

nor philo-Semitism as explicit political opinions, but rather, far more fundamentally, a set of skills prior to both of these opinions.

This is not to argue that the school statistic merely taught practical, tacit skills and produced no explicit propositions. Indeed, as I have already discussed, Virchow himself drew specific propositions about the German and the Jewish races from the statistical material. Anthropologists long admired and used the school statistics. The Munich anthropologist Johannes Ranke (1836–1916) cited Virchow's survey as the greatest anthropological study ever and viewed it as establishing the blond type as a particularly German racial type.<sup>48</sup> Julius Kollmann (1834–1918), a Swiss anthropologist and professor of medicine, used Virchow's findings immediately after they were published to argue that races were permanent types that could be changed neither by climate nor by cross breeding. Individuals born of parents of different races would appear as a cross between the two races, but they would not themselves constitute a new racial type. Racial characteristics could also not be changed by migrating to new climates. This constituted an important argument against evolution, for if types were perfectly passed on from parent to child then there would be no means by which evolutionary transformation could happen.<sup>49</sup> Virchow agreed with these views on the permanence of race, which he regarded not only as an argument against Darwinism, but also as support of German eastward colonization. The permanence of racial types meant for Virchow that Germans in Eastern Europe would remain German rather than being transformed by the local environment.<sup>50</sup>

Although he did not grasp the specifics of Virchow's argument, Friedrich Nietzsche did use Virchow's "ethnographical maps of Germany" in his 1887 *On the Genealogy of Morals* to differentiate "a blond race," which he called "the conqueror and master race, the Aryan," from an inferior race, which he characterized by its peculiar "coloring" and "shortness of skull." On the basis of this distinction, Nietzsche suggested that socialism represented a primitive, pre-Aryan, social form, a "monstrous atavism [*ungeheuern Nachschlag*]," and an attempt of the brown people to rule the blond.<sup>51</sup> The anthropologist Otto Ammon (1842–1916) cautioned that Nietzsche had not grasped the details of Virchow's study

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Christian Social Workers' Party and after 1893 with the Conservatives adoption of the anti-Semitic Tivoli Program. See Pulzer, *The Rise of Political Anti-Semitism*.

48. Johannes Ranke, "Somatisch-anthropologische Beobachtungen," in Alfred Kirchhoff, *Anleitung zur deutschen Landes- und Volksforschung* (Stuttgart, 1889), 329–80, here 332–39.

49. Julius Kollmann, "Die Verbreitung des blonden und des brünetten Typus in Mitteleuropa," *CBDAG* 16 (1885): 33–35.

50. See Virchow, "Gesamtbericht," *CBDAG*.

51. While Nietzsche does not specify that "the more careful ethnographical maps of Germany" to which he refers are Virchow's, he does name Virchow in that passage. The contemporary anthropologist Otto Ammon also identified the maps to which Nietzsche referred as Virchow's (see n. 52, below). Friedrich Nietzsche, *On the Genealogy of Morals*, 1:5, trans. Walter Kaufmann and R. J. Hollingdale (New York, 1967). Kaufmann and Hollingdale translate "*ungeheuern Nachschlag*" as

and used it unfairly as an argument against socialism. He did, however, applaud Nietzsche for being “completely conscious of the meaning of race for culture.”<sup>52</sup>

These ideological influences of the school statistics are, however, only the tip of the iceberg: beneath them, hidden from the view of the historian of ideologies, is an enormously significant level of tacit skills that this study conveyed to ordinary Germans. The survey taught Germans not so much to *think* as to *experience* themselves in terms of whiteness and brownness and to recognize racial distinctions between “Jews” and “Germans.”<sup>53</sup> Before Germans learned to think racism they learned to do it. I do not argue that this tacit knowledge was neutral and that it did not favor certain ideological positions over others. Indeed, the tacit knowledge imparted by the study, the skills and presuppositions that the interpretation of the data required, led even Virchow, despite his benign intentions, to conclusions that can only be regarded as precursors of racial anti-Semitism.<sup>54</sup> I have also suggested that the subjects of the study drew similar lessons from the tacit knowledge it imparted.<sup>55</sup> My purpose has not, however,

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“tremendous *counterattack*.” However, Nietzsche’s association in this paragraph of primitive races and socialism suggests that “monstrous *atavism*” renders his meaning more accurately. Nietzsche actually claims to use Virchow’s map against the view, which he attributes to Virchow, that the brown people were of Celtic origin. Virchow, however, never presented a definite view on the origin of the non-Jewish brown type. At one point he did argue against the view (held by Quatrefages) that the non-Jewish brown type was Slavic in origin and suspected instead a mixture of Celts, Romans, Illyrians, and Rhaetians. See Rudolf Virchow, “Die Verbreitung des blonden und des brünetten Typus in Mitteleuropa.”

52. Otto Ammon, *Die Gesellschaftsordnung und ihre natürlichen Grundlagen: Entwurf einer Sozial-Anthropologie zum Gebrauch für alle Gebildeten, die sich mit sozialen Fragen befassen* (Jena, 1895), 173–74.

53. Donald MacKenzie indicates the political importance of tacit knowledge in his study of nuclear missiles. Producing these missiles required not just engineering plans but also a repertoire of skills transmitted within local scientific communities. MacKenzie speculates that if communities cease to transmit these skills, nuclear missiles could be “uninvented.” See Donald MacKenzie, *Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance* (Cambridge, 1990); Donald MacKenzie and Graham Spinardi, “Tacit Knowledge, Weapons Design, and the Uninvention of Nuclear Weapons,” *American Journal of Sociology* 101 (1995): 44–99. Perhaps Germans could have similarly uninvented racial anti-Semitism—and indeed, perhaps they have been doing so since 1945.

54. The cataclysmic break historians of German anthropology have perceived between the supposedly antiracist anthropology of Virchow and others in the nineteenth century and the more racist anthropology of the twentieth century appears less clean when racism is viewed as a set of practices rather than an ideology. For accounts of twentieth-century German racist anthropology as a cataclysmic break from nineteenth-century anthropology see Robert Proctor, “From *Anthropologie* to *Rassenkunde* in the German Anthropological Tradition,” in *Bones, Bodies, Behavior: Essays on Biological Anthropology*, ed. George W. Stocking (Madison, 1988), 138–79; Benoit Massin, “From Virchow to Fischer: Physical Anthropology and ‘Modern Race Theories’ in Wilhelmine Germany,” in *Volksgeist as Method and Ethic: Essays on Boasian Ethnography and the German Anthropological Tradition*, ed. George W. Stocking (Madison, 1996), 79–154. Weindling and Smith also have similar views of the history of German anthropology.

55. As Stephen Turner has written, “. . . we may manipulate experiences in ways that form habits—this is after all what education is—without understanding what habits we are producing and how they will later manifest themselves.” Stephen Turner, *The Social Theory of Practices: Tradition, Tacit Knowledge, and Presuppositions* (Chicago, 1994), 105.

been to unmask Virchow as yet another German anti-Semite, but rather to draw attention to the limitations of conceptions of anti-Semitism as merely a kind of philosophy.<sup>56</sup> Far more important than the beliefs that Germans may have derived from these skills are the skills themselves, for without them ideological tracts could not have made sense, and the practical regimes that would later so distinguish German anti-Semitism could not have been implemented.

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56. A mistakenly cognitive understanding of anti-Semitism, I believe, accounts for the flaws in the quite important questions posed in Daniel J. Goldhagen's *Hitler's Willing Executioners: Ordinary Germans and the Holocaust* (New York, 1996). Studies of practice and tacit knowledge will, I propose, allow historians better to answer questions about continuity and discontinuity in German history. Indeed, Christopher R. Browning, examining much of the same material Goldhagen did later, demonstrates the importance of understanding even Germany's genocidal anti-Semitism primarily in terms of practice rather than in terms of peculiar beliefs. See Browning, *Ordinary Men: Reserve Police Battalion 101 and the Final Solution in Poland* (New York, 1992).