

Darwinism and the teaching of racism and eugenics in biology textbooks

Jerry Bergman

Textbooks and reference books are a major means of imparting ideas to millions of people. The two people groups most often compared in books supporting Darwinism are the 'Caucasian' and 'Negroid' groups, sometimes called the 'white' and 'black' races. The view that whites are 'superior' to blacks who are more 'apelike' was commonly taught in science books published from about 1880 to around 1980 (and even some after this date). This was true of textbooks, books written for the general public, and even scholarly academic books. Shown by typical examples of textbooks were published in the USA and Germany that were used throughout the English and German speaking world.

Racism and eugenics were commonly taught in textbooks and popular science writings supporting Darwinism back to the very first book Darwin wrote on his theory published in 1859. The complete title of Darwin's most famous work, often abbreviated *The Origin of Species*, was *The Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life*. Morris noted as to Darwin's subtitle *The Preservation of Favoured Races in the Struggle for Life*: 'It is clear from the context that he had races of animals primarily in mind, but at the same time it is also clear ... that he thought of races of men in the same way.'¹ Darwin's views were unequivocal in his 1871 book titled *The Descent of Man and Selection in Relation to Sex*.

Was Darwin responsible for the racism and eugenics in the textbooks?

Many people have written articles and books advocating racism and eugenics, and many of them were far more racist than Darwin. For example, Count Arthur de Gobineau, in his 1854 book (reprinted as late as 1966), argued that the white, yellow and black races were 'unequal', and that the 'Aryans'

were not only superior to all the other races but were primarily responsible for the major advances of civilization.^{2,3} Furthermore, he claimed that when Aryans intermarried in large numbers with racially inferior people, the result was the decline of that civilization. Secondly, the inferior 'mixed races' that resulted 'ineluctably' rebelled against the ruling elite, resulting in the fall of even great nations.

In contrast, Darwin was opposed to slavery, concerned about reducing poverty, and did not devote even major sections of his work to ideas supporting human racism and eugenics. Actually, until Darwin's 1871 book, his major focus was on plants and animals. Yet it was Darwin, rather than Gobineau, who was the major influence of racist ideology and the Nazism that developed after both had died. One of the reasons was Gobineau's work 'was virtually ignored' and appealed to only a 'handful of reactionary aesthetes', whereas Darwin 'enjoyed massive success' both in acceptance and influence.³ The idea of a constant struggle for existence that was won by the stronger, superior life-forms (even within a species, including humans), legitimized racism and eugenics and put it on a scientific foundation, was propagated more by Darwin than any other person.

As a result of his influence, racism and eugenics were soon reflected in the textbooks in America and elsewhere, spreading their catastrophic effects throughout the Western world. In a study of early high school biology textbooks, Larson concluded that 'Public high schools were teaching evolution decades before the antievolution crusade [in the 1920s], with the presentation seeming to grow more dogmatically Darwinian over time.'⁴ Witham notes that the biology texts 'presented Darwin's theory with great certainty, though field scientists still were fiercely debating its particulars.'⁵ Even in books not dealing with biology, racism and eugenics, conclusions were included. A leading geography book concluded, in a discussion of race, that 'The White race is superior to all the others in intelligence and civilization.'⁶

Racism and eugenics were also often discussed along with Darwinism. An excellent example of the racism common in textbooks in the past was the high school biology textbook by George Hunter titled *A Civic Biology* (the most widely used life-science textbook in American at the turn of the century).⁷ In the section on evolution, under the subtitle 'The Races of Man', the text stated that 'at the present time there exists upon the earth five races or varieties of man, each very different from the other in instinct, social customs, and to an extent, in structure'. The five races were then ranked from inferior to superior as follows:

'... the Ethiopian or negro type, originating in Africa; the Malay or brown race, from the islands of the Pacific; the American Indian; the Mongolian or yellow race, including the natives of China, Japan and the Eskimos; and finally, *the highest type of all*, the Caucasians, represented by the civilized white inhabitants of Europe and America' [emphasis mine].⁷

The textbook concludes that the 'highest' race is

the Caucasian, who are said to be ‘more highly’ developed specifically in terms of ‘instincts, social customs, and ... [physical] structure’.⁸ This book, widely adopted by American public high schools for over thirty years, was the same textbook that John Scopes used as a substitute biology teacher (and was the one he used when convicted of violating the Butler Act—the law against teaching evolution in public schools). This book also advocated the now-discredited concept of eugenics, for which Nazi Germany has now become infamous.⁹ One passage under the subtopic ‘Improvement of Man’ teaches eugenics in the following passage:

‘If the stock of domesticated animals can be improved, it is not unfair to ask if the health and vigor of the future generations of men and women on the earth might not be improved by applying to them the laws of selection? This improvement of the future race ... we as individuals may play a part ...’¹⁰

Under the subtopic ‘eugenics’, the text stated that when people marry

‘... there are certain things that the individual as well as the race should demand. The most important of these is freedom from germ diseases which might be handed down to the offspring. ... epilepsy, and feeble-mindedness are handicaps which it is not only unfair but criminal to hand down to posterity. The science of being well born is called *eugenics*.’¹⁰

The author then gives as an example of eugenics, the infamous (and now-discredited) Jukes family history—which he calls a ‘notorious example’ of families ‘in which mental and moral defects were present in one or both of the original parents’. The text adds that the mother of the Jukes family

‘... is known as “Margaret, the mother of criminals.” In seventy-five years the progeny of the original generation has cost the state of New York over a million and a quarter of dollars, besides giving over to the care of prisons and asylums considerably over a hundred feeble-minded, alcoholic, immoral, or criminal persons.’¹¹

To add weight to his illustration, Hunter discusses yet another case, that of

‘... the ‘Kallikak’ family. This family has been traced to the union of Martin Kallikak, a young soldier of the War of the Revolution, with a feeble-minded girl. She had a feeble-minded son from whom there have been to the present time 480 descendants. Of these 33 were sexually immoral, 24 confirmed drunkards, 3 epileptics, and 143 *feeble-minded*. The man who started this terrible line of immorality and feeble-mindedness later married a normal Quaker girl. From this couple a line of 496 descendants have come, with *no* cases of feeble-mindedness. The evidence and the morals

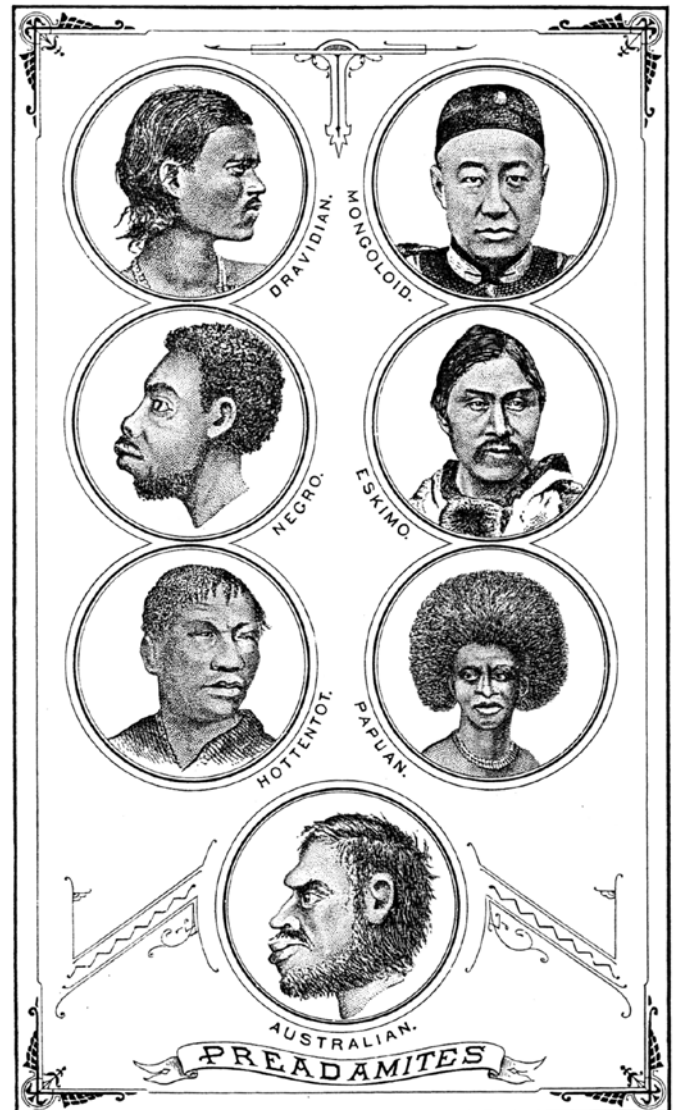


Figure 1. Drawings of ‘preadamites’ who lived before Adam. This view was a popular early attempt to harmonize the Bible with evolutionism. These illustrations were in a text book by a geology professor who taught at the University of Michigan. Dr Winchell was a major author of the time and published many semipopular books on geology and related areas (from Winchell).³¹

speak for themselves!’¹²

Under the subheading ‘Parasitism and its Cost to Society’, Hunter claims that hundreds of families such as the Jukes

‘... exist to-day, spreading disease, immorality, and crime to all parts of this country. The cost to society of such families is very severe. Just as certain animals or plants become parasitic on other plants or animals, these families have become parasitic on society. They not only do harm to others by corrupting, stealing, or spreading disease, but they are actually protected and cared for by the state out of public money. Largely for them the poorhouse and the asylum exist. They take from

society, but they give nothing in return. They are true parasites.¹³

Hunter then concludes that the remedy to this problem is eugenics, adding that if people like the Kallikak family

‘... were lower animals, we would probably kill them off to prevent them from spreading. Humanity will not allow this, but we do have the remedy of separating the sexes in asylums or other places and in various ways preventing intermarriage and the possibilities of perpetuating such a low and degenerate race. Remedies of this sort have been tried successfully in Europe and are now meeting with success in this country.’¹³

He concludes that ‘blood tells’, and that eugenics shows us ‘a study of the families in which are brilliant men and women’ found that their descendants ‘received the *good* inheritance from their ancestors’.¹³ Some textbooks were more tactful—such as *Evolution, Heredity and Eugenics* by University of Chicago professor John Coulter. Yet, even this text notes that ‘destruction of the unfit’ may be a more accurate summary of Darwinism than the more positive ‘survival of the fittest’.¹⁴

Another widely used text, in a chapter titled ‘Heredity, Eugenics, Euthenics: Some Family Histories’, repeats the Kallikak and Jukes family histories, but adds the Jonathan Edwards family as an example of ‘a superior family, the founder of which had sterling character and high mental ability’.¹⁵

Racism and eugenics in Nazi Germany

Ironically, a leading biology book published in Nazi Germany at about the same time the Hunter book was in print, titled *Lebenskunde-Lehrbuch der biologie für Höhere Schulen* (Life-Sciences-Biology textbook for high schools) by Dr Erich Meyer and Dr Karl Zimmermann with Dr Werner Dittrich, came to the same conclusion as the Hunter and Sanders texts. Instead of ‘Negroes’, though, it focused on ‘Jews’ and ‘Gypsies’ as examples of ‘inferior races’.¹⁶ This text concludes that ‘primitive races have found their last place of refuge’ in remote areas and that these

‘... rather primitive races are physically, as well as mentally, far behind the highly developed races, henceforth leaving a primeval impression. ... The most highly developed races are the master races; greater aptitude enabled them to found superior cultures and civilizations.’¹⁷

The authors also claim that the Jews are ‘a racial mixture of parasitic nature’ and that the

‘... disharmony of the Jewish racial mixture is apparent also in the frequency of certain diseases. Specifically, the obvious flat feet, among others. Diabetes is four times as common as in other nationalities. But the most repugnant features of the Jewish people root in their mental and moral

disposition. ... Major characteristics, therefore, are craftiness, physical and mental uncleanness, cruelty, greed, a distaste for physical labor, particularly the vocation of farmer or soldier. ... It is therefore right to view Jews as a parasitic nation or a racial mix of parasitic characteristics that causes its host nation only disadvantage and spells disaster. The calamity brought upon Europe initiated by the emancipation of Jewry, which gave them equal civil and political rights, was nearly disastrous

‘The Gypsy nation is also a foreign body and consequently has to be rejected. ... Above all, it is our sacred and civil duty to protect our blood from being contaminated with alien blood, especially Jewish blood. No greater shame can be inflicted on the honor of the German nation than the breaking of this law.’¹⁷

The authors then agree that ‘racial reinvigoration of German blood’ requires drastic action, and that

‘National Socialist Germany, as the first country on earth to recognize the mortal danger facing civilized nations on this globe due to a violation of fundamental laws of life, has therefore as a consequence adjusted its policies toward armed combat of these dangers. ... After the assumption of power by the National Socialism, our first concern was to protect the German nation from further increase of hereditarily ill individuals and to reduce to a minimum any further increases. The passing in 1933 of the *Law for the Prevention of Hereditarily Diseased Offspring* stems from this desire ... ’ [italics in original].¹⁷

The text concludes with the amazing statement that this new German ‘law is an immense blessing and exposes the alternative as something of an unjust, yes, even a cruel, nature’ because it ‘... removes the calamitous results in the absence of natural selection within modern culture and serves us with the aid of advanced science to keep our race clean in a humane way, a method that otherwise is brought about in nature more brutally.’¹⁷

Many, if not most, German biology textbooks of the Nazi period came to similar conclusions.

Biological racism and eugenics in reference books

Typical of the views of the educators at that time is an *Encyclopaedia Britannica* article which, under the heading ‘Negro’, stated ‘the nearly unanimous consent of anthropologists’ is that Negroes occupy ‘the lowest position in the evolutionary scale’ and, as evidence, the author argued that:

‘... the cranial sutures ... close much earlier in the Negro than in other races. To this premature ossification of the skull, preventing all further development of the brain, many pathologists have

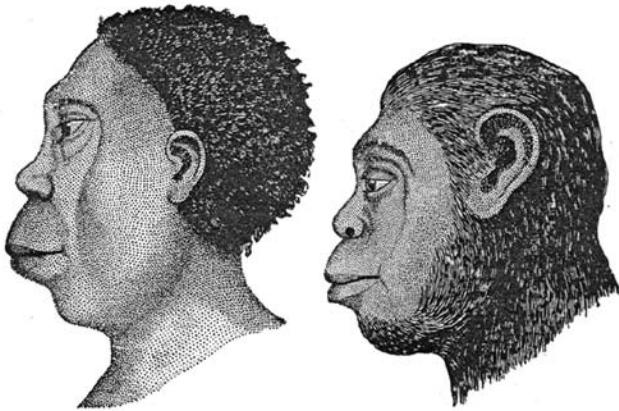


Figure 2. Drawing of a female Hottentot and a female gorilla. Note the drawings show little relationship with reality but are drawn to prove the author's preconceived idea. The author concludes that 'The physical aspects of many native Africans gives them, beyond question, a decidedly beastly look' (from Winchell).³¹

attributed the inherent mental inferiority of the blacks an inferiority which is even more marked than their physical differences ... the development of the Negro and White proceeds on different lines ... in the former the growth of the brain is ... arrested by the premature closing of the cranial sutures ... No full blooded Negro has ever been distinguished as a man of science, a poet, or an artist and the fundamental equality claimed for him by ignorant philanthropists is belied by the whole history of the race ...¹⁸

The *Encyclopaedia Britannica*—at least up to the 1903 edition—also claimed that America has not produced any 'great' Negroes. Later editions dropped this claim.

Even some religious works made racist claims. Moser, in a book written for popular consumption to defend his views using Scripture, concluded that '... American Negroes ... have made contributions to various fields, sports, science, etc., but ... it is only that Negro that has a mixture of white genes in his system that has risen to the level where he has produced on the level with the white race.'¹⁹

Racism and eugenics in college biology textbooks

Sometimes racism and eugenics in biology books is less pronounced than the texts quoted above, but the implications are clear. A college zoology text, which otherwise almost totally avoided even discussing the topic of evolution, listed the average brain capacity of various races. For Caucasians it claimed 91–92 cubic inches, for Africans, 85, and for Australian Aboriginals, 75 to 79. The author then described the various ape-like traits of a 'Negro' such as 'prognathism' (a jutting ape-like jaw), and concluded that 'the black and Australian races are slightly nearer the apes than civilized peoples'.²⁰ Packard then claims that in

'... apes, as in the lower mammals, the pelvis

is higher than wide; when there is a degradation in the human pelvis it tends to become higher than wide, as seen in the pelvis of the Hottentots. In civilized man the legs are one half the height of the body, but in the South Africans, Hottentots, and Bushmen the legs are a little less than half the height, and the thigh-bone is flattened from side to side, as in the gorilla. ... The form of the skull varies greatly in the different races, and even in individuals of the same race of mankind.'²⁰

An example he gives is the so-called *facial angle* that is determined by drawing a line

'... from the occipital condyle along the floor of the nostrils, and intersecting it by a second, touching the most prominent parts of the forehead and upper jaw; the angle they make is an index of the cranial capacity, and of the degree of intelligence of the individual. The facial angle in the reptiles is very slight, as it is in the birds; in the dog it is 20°, in the gorilla 40°, in the Australian 85°, in the civilized Caucasian it averages 95°, while the Greek sculptors adopted an ideal angle of 100°.'²⁰

He then adds that when

'... the lower part of the face protrudes, as in the Negro, the face is said to be *prognathous*; where the facial angle is high, and the face straight, as in the more intellectual forms, the cranium is said to be *orthognathous*.'²¹

One college anthropology text even included several chapters of extensive measurements of various human racial differences that unambiguously ranked the races in the usual pattern of whites on top, blacks on bottom. The data suggested that the human brain size was 1230 cc for Neanderthals, 1295 cc for Australian Aboriginals (noted as the most primitive living race), 1340 cc for Negroes, 1452 cc for Chinese, and 1500 cc for the 'highest type', which were the Swedes.²² The author even gives a phylogenetic tree for the evolution of the human races.²³

Racism and eugenics teachings were much more common in college textbooks, especially pre-1940 texts, than those at other levels. In a work titled *Evolution, Genetics, and Eugenics*, the author, Professor Horatio Newman, includes a chapter by the infamous racist Albert Edward Wig-gam, which concludes that the differences among humans 'are almost entirely due to their differences in natural power and aptitudes'.²⁴ Newman also concluded that the reason why 'Croesus and Rockefeller were the two richest men in the world is due almost wholly to their superior natural powers over those of other men to acquire wealth'.²⁴

Newman defines evolution as 'racial change', and concludes that 'races are the *evolutionary units of life*' (emphasis in original) and 'If there is no variation there can be no evolution.'²⁵ He concludes that the races are not equal, and the condition or state of equality is 'supremely undesirable from the purely evolutionary point of view, because ... organic evolution ... depends upon the struggle between

creatures possessing various variations and the consequent selection of those variations which constitute their possessors best adapted or fitted to the particular environment', i.e. the survival of the fittest.²⁶ Anyone who collects old biology books soon finds that such examples are legion, especially in books that focus on, or even discuss, Darwinism.

As late as 1957, University of Michigan professor Alfred Elliott included a laudatory discussion of eugenics which he defined as 'the study of race improvement' in his widely respected zoology text.²⁷ He cited statistics indicating that because of ignoring the facts of the science of eugenics, 'by the year 2000 the percentage of the population with an IQ of 115 or better will have been reduced from the current 12 percent to 7 percent, and the present 2 percent below 70 (moron, etc. group) will have doubled'.²⁷ He then discussed the specific 'dysgenic practices' which he felt might be contributing to this projected decline of intelligence in humans. One example he provided is as follows:

'Another dysgenic factor in our present civilization is modern warfare. In centuries past the strongest, cleverest, and most intelligent men went into battle and the best of these survived to come home and become the fathers of the next generation. This was natural selection at work. Since the advent of gunpowder and subsequent deadly weapons, the strong and able are cut down equally with the less well endowed.'²⁸

He added that the military '... can hardly be blamed for wanting the best men they can get to man the complicated instruments of modern warfare, but these same men are also the best stock we have and their chances of becoming the parents of the next generation are much reduced when in service as compared to life at home. For the past several hundred years, then, we have been following a policy that is definitely contrary to natural selection and undoubtedly has had its influence in reducing the quality, not the quantity, of our stock.'²⁸

War, in other words, prunes off the best, resulting in devolution (backwards evolution). Note that in this text, humans are called 'stock', like livestock, and the 'quality' of the stock is defined in animal terms as well.

Racism in textbook illustrations

The textbook drawings that depicted our supposed immediate ancestors, such as *Homo erectus* and *Homo habilis*, typically have features that are exaggerated stereotypical Negroid characteristics, including dark skin, kinky hair, thick lips and flat noses. Modern humans (*Homo sapiens*), though, often are pictured as having light skin, straight hair, a flat forehead, a narrow nose and small lips.²⁹ Most of the drawings of 'apemen' and early or prehistoric humans also show very pronounced Negroid traits, even today.³⁰ This

stereotype presented in texts is not true of many Negroid people groups, yet reinforces the image that has caused much of the prejudice and fuelled much of the racism in America and the rest of the world.

In addition, the fact that certain facial features that are more common in some modern groups are closer to the facial characteristics of many primates (the kinky hair, flat nose, large lips and sloping forehead, as well as the cheek and jaw bone construction) has lent superficial support to this contention. Yet, the fact that other Negroid features are less similar to primates than are certain white traits is often ignored. For example, primates have white skin, straight hair, and large amounts of body hair, as do many Caucasian groups.

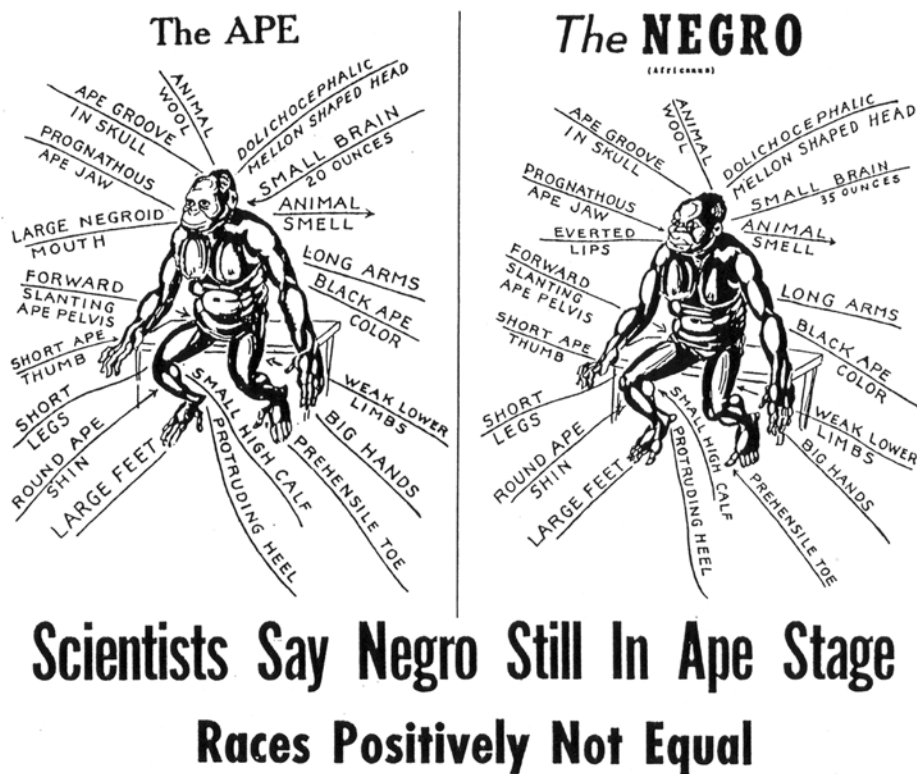


Figure 3. A Ku Klux Klan leaflet picked up at a Klan rally in Bryan OH in the late 1990s. The track used quotes and claims from older, pre 1900 scientific literature to justify its claims of Negro inferiority.

Conclusion

The selection of texts reviewed above is, in general, typical of the racist and eugenics ideas taught in textbooks for close to a century after Darwin introduced his 1859 work on evolution. Many worse examples exist, as do a few that presented less objectionable discussions of race. It is not difficult to imagine the leap from the ideas that are commonly found in these textbooks and reference books to the overt racism as practised by the Ku Klux Klan, the Aryan nation, and other hate groups during the period that these texts were widely used in public, and many private, schools throughout America.

Significantly, these were the texts that influenced the youth of the early twentieth century, some of whom became the educational and political leaders of our generation. This fact illustrates the relevance of these old references to our contemporary social problems. How these books influenced racist policies and attitudes that resulted in the horrors of the most racist period of America, e.g. crimes against blacks and other minorities that ranged from blocked job opportunities to lynching, will never be known. Fortunately, less racism exists than otherwise might, because after the Scopes trial, many textbooks reduced or eliminated altogether all coverage of Darwinism.⁴ It is clear, though, that they made a major contribution, just as later books refuting these racist and eugenic ideas have had a major influence in the opposite direction.

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