



Goldberger, Joseph Dr.

Eugenics Vs. Poor White Trash

THE GREAT PELLAGRA COVER-UP

As the battle over the heritability of IQ continues, it's instructive to look back at the turn-of-the-century victimization of the Southern poor. Scientific evidence to the contrary, glib eugenicists sold Congress, and the country, on the wisdom that bad genes, not bad diets, caused lower-class sloth.

by Allan Chase

IN RECENT YEARS, this country has seen a revival of time-worn eugenic claims that poverty, ill-health and low IQ are all products of inferior genes, rather than the inadequate food, education, cultural materials and medical care that usually accompany poverty. Unfortunately, the case for genetic mental inferiority offered by such noted nongeneticists as Arthur Jensen, Richard Herrnstein and William Shockley has already influenced current social policies. Wittingly or not, parents, teachers and public officials have accepted the notion of inherited ignorance in ways that have cruelly punished generations of poor and black children.

To appreciate the danger of such scientific racism, Americans should study one of its greatest tragedies: the great pellagra cover-up, which caused the needless death of millions of poor Southerners—black and white—during the first half of this century. As in the race and IQ controversy of today, scientists and Government officials incorrectly blamed a tragic

and preventable defect on heredity, rather than poverty.

By the turn of the 20th century, the American eugenics movement had achieved considerable eminence and influence, particularly in Congress. Testifying as expert witnesses, eugenicists convincingly warned of the deterioration of the country's pure Anglo-Saxon stock through intermingling with such genetic inferiors as Russians, Poles, Hungarians, Italians, Greeks, and other non-Nordic immigrants [see "The Politics of Genetic Engineering," PT, June 1974].

Poor White Trash. One constant source of shame for the eugenicists was the Southern Anglo-Saxon known as "poor white trash," noted primarily for being lazy, shiftless and ignorant. In order to explain this embarrassing phenomenon, eugenicists described them as a subrace of "chronic pauper stock," doomed by their "inferior blood" to behavioral, intellectual and economic poverty. About that time, however, public-health offi-

* Allan Chase, 1975 "The Great Pellagra Cover-Up": From the forthcoming book KILLERS OF HOPE: THE NEW RACISM AND THE OLD to be published by Alfred A. Knopf, Fall, 1975.

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cials began to realize that most of these same Southerners suffered from energy-draining diseases like hookworm and pellagra.

The eugenical myth of hereditary laziness and ignorance was severely shaken about 1902 by the work of Charles Wardell Stiles, a U.S. Public Health Service zoologist. Stiles identified the hookworm and noted its prevalence among the poor people; he explained how it lived in human fecal matter, and spread because of the lack of toilets and shoes in the poor regions of the South. According to a report on his work, "one of the most important symptoms of 'hookworm' disease is an extreme lassitude, both mental and physical; this condition is due to the emaciation and to the watery character of the blood, which does not properly nourish either the brain or the muscles." Stiles noted that hookworm disease was endemic among children, interfering with their school attendance, and gaining them a reputation among teachers for backwardness and stupidity.

Once Stiles' discoveries were reported in medical and popular journals, public health officials recognized that hookworm could be eradicated quite simply by the construction of closed privies and the use of shoes. The sanitation campaign to wipe out this "germ of laziness" was successful in part because it attracted the support of John D. Rockefeller Sr., who contributed nearly \$800,000. The case of pellagra was less fortunate.

Exclusive Disease. Pellagra first appears in the form of rough, red, skin eruptions, generally followed by a debilitating sequence of diarrhea, lassitude, dizziness and mental disorders ranging from depression to lunacy. It also lowers natural resistance to a variety of infectious and parasitic diseases: common colds, influenza, malaria, yellow fever, pneumonia, tuberculosis, dysentery, hookworm and roundworm.

In the United States and Europe, pellagra had been misdiagnosed for many years as anemia, leprosy, scurvy, syphilis and other diseases marked by similar skin conditions. As a result, the few pellagrins

who did receive medical care were dosed with such useless remedies as arsenic, alcohol, various opiates, purges, leeches, and every foul-tasting, evil-smelling drug known to clinical and veterinary medicine.

The disease received the name pellagra, meaning "angry skin," from its appearance among the Italian peasantry in the 18th century. In each country where it spread, it seemed to affect only the very poor, which should have been significant to anyone studying the disease. In fact its exclusivity was one reason pellagra had never been classified as one of the great plagues of society. The microbial agents of malaria, yellow fever, typhus and typhoid had no similar respect for rank or wealth, and visited the stateliest mansions. But not a single case of pellagra had ever been reported among the rich, or middle class, except for individuals malnourished because of alcoholism or other noneconomic causes of dietary deficiencies.

Upon discovering that pellagra was endemic throughout the poor regions of the South, various states established pellagra commissions. By 1909 a National Association for the Study of Pellagra began holding annual scientific meetings to discuss the new plague. These meetings helped spread the little knowledge scientists had about the prevalence of pellagra, but they didn't produce much information about its cause.

Since most pellagrins subsisted primarily on corn, various hypotheses blamed the disease on spoiled corn, uncured corn, or too much corn. According to other hypotheses, however, pellagra was an infectious disease spread by an unknown microbe. Both hypotheses were quite reasonable; they just happened to be wrong.

The Disease of Poverty. Had the authors of these hypotheses bothered to consult the medical literature, they would have found a constant thread of evidence suggesting that pellagra was a poverty disease caused by malnutrition, and that it could be cured and prevented by plentiful food and a balanced diet. For example, in 1866,

a French physician named Theophile Roussel demonstrated that European outbreaks of pellagra invariably coincided with shortages of fresh meats and vegetables.

In 1914, the U.S. Public Health Service assigned an epidemiologist named Joseph Goldberger, its leading field investigator of infectious diseases, to head a task force to study pellagra. To test the infectious hypothesis, Goldberger first tried to induce pellagra in monkeys by inoculating them with blood samples from pellagrins. Nothing happened.

In studying the medical literature, Goldberger was struck by the degree to which pellagra was exclusively a disease of the poor. During his field trips to the South, Goldberger found the incidence of pellagra was particularly high in institutions filled primarily with the poor: insane asylums, prisons, homes for the aged, and orphanages. He was struck by the fact that none of the professional staff or employees of these institutions had ever developed a case of pellagra, which would have been amazing if the disease were really infectious. He then toured the mill towns and rural slums and found that even where pellagra was endemic it never struck the nonpoor. Wherever he found great poverty, he found pellagra.

Goldberger then assigned statistician Edgar Sydenstricker to produce data on wages, family budgets, food prices and family diets. He came up with the fact that while food prices had increased 60 percent since 1900, wages had risen less than 25 percent in general, and considerably less for poor mill workers and field hands. In some industries wages had increased less than five percent between 1907 and 1912. Foods like meat and fresh vegetables were simply too expensive for poor families.

Convinced that pellagra was a disease of malnutrition, rather than infection, Goldberger persuaded a dozen convicts to live for six months on a high carbohydrate, low-protein diet, with no fresh green vegetables. All of them developed pellagra. He then cured them simply by restoring their normal diet. As a final proof,

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he injected blood, skin scrapings and other biological materials from pellagrins into himself, his wife, and several colleague volunteers. None developed pellagra. Goldberger concluded, after further studies, that pellagra was caused by a deficiency of vitamin-B bearing foods such as fresh meats, cereals, dairy products and vegetables.

When Goldberger's discoveries were reported in various Public Health Service and clinical journals, they created a scientific sensation. Medical leaders around the world sent their congratulations. Goldberger had not only conquered the plague of pellagra; he had founded a new medical specialty, clinical nutrition.

In the best of all possible worlds, Goldberger's discovery would have brought an immediate and massive nutritional campaign by Federal and state governments to wipe out pellagra, just as the construction of clean water systems had wiped out cholera in mid-19th century England. However, because of the eugenics movement, the current state of medicine, and good old-fashioned capitalism, pellagra flourished for another 25 years.

Science Threatens Eugenics. The prospect of purely environmental solutions to pellagra and hookworm threatened the future of the American eugenics movement. It meant the lazy "poor white trash" of the South were suffering from bad diets and bad plumbing rather than bad genes. It meant they were victims of poverty rather than heredity. In fact it meant they differed little genetically from the Anglo-Saxon eugenicists of the North.

There was little the eugenicists could do about the solution to hookworm disease, inasmuch as the efforts to eradicate it were supported in a large part by John D. Rockefeller Sr., from whom they had been trying for years to get financial support. They therefore concentrated their efforts on discrediting Goldberger and pellagra.

In 1912, the New York Post-Graduate Medical School had organized a national Pellagra Commission to search for the cause and cure of that disease. When Goldberger's work made the Commission superfluous in the following year, its two

senior investigators, physicians J. F. Siler and P. E. Garrison sent him their congratulations, and left the Commission. This left the Commission in the virtual control of Charles Benedict Davenport, who also happened to be the director of the Eugenics Record Office.

Hereditary Poverty. A zoologist with no clinical training or experience, Davenport had written books and articles claiming that insanity, mental retardation, imbecility, low IQ and low income were all hereditary conditions. The fact that pellagra afflicted only poor people simply reinforced his belief that it was a genetic disease, because according to eugenic theory, poverty itself was hereditary.

Although he admitted that "pellagra is not an inheritable disease in the sense that brown eye color is inheritable," Davenport insisted that "the disease does depend, however, on certain constitutional, inheritable traits of the affected individual." Ignoring the fact that pellagra was even more prevalent among poor Southern blacks, Davenport claimed that "colored persons . . . are less subject on the whole to the disease than white persons."

The final report of the Pellagra Commission, published in 1917, devoted only a single footnote to Goldberger's work. Although Davenport knew Garrison and Siler had revoked their infection hypothesis in the face of Goldberger's proofs, the report included their previous articles describing pellagra as an infectious disease.

The report's final two chapters, written by Davenport and a physician on the staff of the Eugenics Record Office, described pellagra as an hereditary disease that infected people of inferior breeding stock. These chapters included the pedigree trees so dear to eugenic scholars, showing hereditary links between generations of pellagrins. (Because the children of most pellagrins grew up under the very same conditions of poverty as their parents, those links hardly required a genetic explanation.)

For the next two decades, the Commission's prestige overpowered the facts, and scientists accepted as scientific truth the

Davenport description of pellagra as an hereditary infectious disease. In 1920, for example, the American Psychological Association's *Psychological Bulletin* published an article by Davenport in which he labeled feeble-mindedness, criminality and pellagra as genetic conditions. Unfortunately for pellagrins, Davenport's views were also accepted by those who made and administered Governmental policies concerning the health, education and welfare of the Southern poor.

To understand how the theories of eugenics could prevail for so long over the scientific evidence of research, one must appreciate the state of knowledge of the American medical and public-health community at that time. As of 1917, most American physicians were graduates of grossly inadequate medical schools. Except for Johns Hopkins and a few others, even the schools attached to colleges and universities of high repute were little more than diploma mills. As a result, most American physicians and public-health officials were quite capable of accepting the impressive 500-page report of the Pellagra Commission as scientific truth.

Heredity Vs. Social Reform. While the ignorance of the country's doctors and health officials was partly responsible for the failure to eradicate pellagra, some of the blame must be shared by the businessmen, politicians and landowners of the South. For, as Goldberger had pointed out, one of the simplest ways to wipe out the disease would have been to make sure the poor people of the South ate fresh meats, dairy products, cereals and vegetables, or at least earned enough money to buy them.

If, as Davenport claimed, pellagra was a genetically determined disease, then it could not possibly be eradicated by such social reforms as minimum wage laws. Nor could it be prevented by subsidized food supplements for families too poor to pay for a proper diet.

Politicians, Government officials and businessmen found it cheaper to buy the theories of eugenics. Landowners saw no reason why they should pay their tenant sharecroppers and field hands more

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money simply because some Yankee doctor claimed it would get rid of a disease they knew little about. The mill owners and other employers in the towns were not about to increase wages because of some complicated biological theory, especially since low wages were the chief attraction in their courtship of Northern industry.

The Southern businessmen did not realize that pellagra actually impeded their efforts to woo new industry. The landless, poor field hands who migrated from rural poverty to the new factory towns in search of work usually suffered from chronic ill-health and disease-caused absenteeism. As a result, they discouraged attempts to attract textile mills and other industries that would have brought higher wages, better food, and thus an end to pellagra.

The Ravages of Pellagra. The social, economic and human costs of America's failure to eradicate pellagra for more than two decades after Goldberger's discovery were catastrophic. For nearly 25 years, the disease ravaged the poor people of the South. In 1914, when Goldberger reported his findings, there were 847 reported deaths from pellagra in the U.S. By 1929, the annual figure reached more than 6,000.

Between 1914 and the outbreak of World War II nearly 80,000 poor white and black Southerners officially died from pellagra. These figures, based on clinical diagnosis, represent only a fraction of the actual total, because few pellagrins—dead or alive—received any formal medical attention. As a result, like all diseases of poverty, pellagra was always grossly underreported. Medical reports of the time also did not reflect pellagra's resistance-lowering responsibility for hundreds of thousands of deaths from other causes.

It would not be overstating the clinical effects of the great pellagra cover-up to claim that it caused millions of unnecessary premature deaths, chronic degenerative diseases, deformations and otherwise needlessly wasted lives. Had this society acted promptly on Goldberger's findings, and made certain that the poor obtained the foodstuffs neces-

sary to cure and prevent pellagra, the same investment would have had a tremendous effect on many other disorders caused by malnutrition: low birth weights, inadequate pre- and postnatal growth, and infectious diseases ranging from measles to pneumonia.

Through one of the great ironies of American history, pellagra was finally conquered not by the application of Goldberger's discoveries to social policy, but by the effects of the great Depression. Only when the stock-market crash in 1929 turned bankers and other affluent people into welfare clients, and put millions of previously middle-class Americans out of work, did the Federal Government finally establish relief programs for the needy. Only then did the poor pellagrins of the South finally begin to enjoy the luxury of fresh meats and vegetables.

The New Deal provided jobs for millions of poor Southerners on federally financed work projects. The construction of the TVA created cheap power that attracted new industry and jobs to the poor regions of the South. The outbreak of the war created many new jobs in defense factories. And, however bland and tasteless the Army diet seemed to some recruits, it represented a vast improvement for millions of poor draftees from the South. In 1943 the War Food Administration decreed that all white bread must be enriched with vitamins and minerals. By the end of the war, economic progress and improved diets had essentially eradicated pellagra as a major disease in this country.

Pellagra has pretty much disappeared, without any apparent change in anyone's genes, which should give pause to those who now claim that blacks have low IQs because of some genetic deficiency. Just as pellagra resulted from inadequate diets, differences in intelligence—whatever that term means—may be caused by inadequate education. In both cases, the real disease is poverty.

But poverty is still very much with us. And the malnutrition caused by poverty still has its side effects: low birth weights, high infant mortality rates, and low intelligence. In his famous 1969 paper, Ar-

thur Jensen claimed that malnutrition severe enough to cause brain damage is rare in the United States. In that same year, however, Charles Lowe, scientific director of the National Institute of Child Health and Human Development, gave the following testimony before the House of Representatives: "one fourth of the nation's children, and one out of every three children under six years of age, are living in homes in which incomes are insufficient to meet the costs of procuring many of the essentials of life, and particularly food." Lowe pointed out that among these poor, the rate of premature and immature babies with abnormally low birth weights "is from two to four times as high as it is in middle-class communities." Lowe then explained that premature babies contribute the majority of those who grow up to be mentally retarded. Depending upon the degree of prematurity, up to 50 percent of low-birth-weight infants may end up with IQ scores below 70. Lowe concluded: "There is no evidence that feeding people makes them smart, but it is indisputable that hunger makes them dull."

Given the widening gap between black and white family incomes, these data guarantee that the growing poverty of the average black family will continue to produce lower IQ test scores. Just as Davenport's hereditary theory of pellagra diverted the attention of the nation's lawmakers from the malnutrition that really caused it, the efforts of his modern successors to sell the equally eugenic concepts of hereditary racial intelligence can only prolong the war against poverty. ■

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decade he has specialized in medical topics, particularly the history of virology. His book, *The Biological Imperatives*, was published in 1971. This article on pellagra is adapted from a chapter of his forthcoming book on scientific racism, entitled *Killers of Hope*, to be published next fall by Alfred Knopf.

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1975

"Psychology Today"

1975 Feb.

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