

## 5. Eugenics and the Power of Testing

**Most of us are wholly convinced that the future of mankind depends in no small measure upon the development of the various biological and social sciences.**

Robert Yerkes

Chapter 4 explores the historical context in which eugenics flourished by examining the ways Americans in the late 1800s and early 1900s answered the question: What do you do with a difference? Chapters 5, 6, and 7 consider the impact of eugenics on public policy at the local, state, and national levels.

Some eugenicists sought to protect the nation from the danger of “inferior genes” by encouraging “good families” to have as many children as possible. Others favored “negative eugenics”—keeping the “unfit” from breeding, with force if necessary. Both approaches required an efficient way of determining who was “fit” and who was not. The key to protecting the nation’s gene pool lay in finding a method for measuring intellectual ability.

Eugenicists believed that a French diagnostic test developed in 1905 provided the tool they needed to separate the “fit” from the “unfit.” They called it an “intelligence test” even though it was originally developed to predict how children would do in school and which of them might need extra help. Among the few to suggest that new test was based less on science than on a “will to believe” was journalist Walter Lippmann. In the first of a series of articles in the *New Republic*, he wrote:

Without offering any data on all that occurs between conception and the age of kindergarten, they announce on the basis of what they have got out of a few thousand questionnaires that they are measuring the hereditary mental endowment of human beings. Obviously this is not a conclusion obtained by research. It is a conclusion planted by the will to believe.<sup>1</sup>

Despite such criticism, eugenicists convinced many educators, religious leaders, politicians, and ordinary citizens that intelligence testing could not only improve education but also end poverty, prevent crime, and wipe out disease by identifying the individuals responsible for these problems. In an age dazzled by scientific and mechanical wonders, few were willing to criticize a seemingly scientific theory. Indeed, many saw “men of science” as above the rough and tumble of politics.

The readings in Chapter 5 raise troubling questions about the power of tests not only to categorize and rank individuals and groups but also limit their possibilities. The chapter also reveals how science can be twisted to justify social inequalities, deny opportunities, and legitimize discrimination. British scientist P. B. Medawar has described the scientific method as taking “for granted that we guess less often right than wrong, but at the same time ensures that we need not persist in error if we earnestly and honestly endeavor not to do so.”<sup>2</sup> Yet long after Thomas Hunt Morgan and other scientists had shown that the laws of heredity are more complicated than “breeding the best with the best,” eugenicists were still trying to segregate “mental defectives.” Long after Franz Boas and other anthropologists had shown that intelligence is shaped at least in part by culture and environment, eugenicists were still seeking ways to “protect” the “superiority of the white race” by outlawing interracial marriages. Chapter 5, along with chapters 6 and 7, considers not only why eugenicists “persisted in error” but also the consequences of those errors on public policy long ago and today.

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1. Quoted in *The Mismeasure of Man* by Stephen Jay Gould. W.W. Norton, 1991, p. 174.

2. *The Limits of Science* by P. B. Medawar. Harper & Row, 1984, p. 101.

## Science, Eugenics, and Propaganda

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### Reading 1

The word *science* comes from *scientia*, the Latin word for knowledge. British scientist P. B. Medawar, a Nobel laureate, once described the term as “knowledge hard won, in which we have much more confidence than we have in opinion, heresy, and belief.” In response to those who argued, “Unless it’s successful, you don’t call it science,” he wrote:

What rot! I have been engaged in scientific research for about fifty years and I rate it highly scientific even though very many of my hypotheses have turned out mistaken or incomplete. This is our common lot. It is a layman’s illusion that in science we caper from pinnacle to pinnacle of achievement and that we exercise a Method which preserves us from error.<sup>1</sup>

Like Medawar, most scientists believe that research must be open to criticism, revision, and debate because any hypothesis may be “mistaken or incomplete.” Eugenacists took a different approach to research. They used it to confirm and disseminate what they already believed. The result is propaganda.

Propaganda is often defined as the dissemination of information for the purpose of persuasion or to advocate a particular agenda. Those who create propaganda seldom want careful scrutiny or criticism. Their goal is to bring about a specific action. Eugenacists organized fairs and exhibitions to promote their ideas and detailed them in books, magazines, and newspapers. Ministers preached eugenics from the pulpit and teachers incorporated it into their lessons. Eugenacists supplied civic groups, social clubs, and libraries with speakers and free study materials. They also arranged a variety of contests to introduce Americans to the principles of eugenics—including the idea that intelligence is shaped almost solely by heredity and is linked to morality. Among the most popular of these contests were the Fitter Families competitions. The first was held at a state fair in Topeka, Kansas, in 1920. By the end of the decade, they were featured, along with eugenic exhibits, at fairs in Kansas and in a number of other states. Historian Daniel J. Kevles says of these contests:

At state fairs, the Fitter Families were held in the “human stock” sections. (“The time has come,” a contest brochure explained, “when the science of human husbandry must be developed, based on the principles now followed by scientific agriculture, if the better elements of our civilization are to dominate or even survive.”) Any healthy family could enter. Contestants had only to provide an examiner with

the family's eugenic history. . . . At the 1924 Kansas Free Fair, winning families in three categories—small, average, and large—were awarded a Governor's Fitter Family Trophy, presented by Governor Jonathan Davis. "Grade A Individuals" won a Capper Medal, named for United States Senator Arthur Capper and portraying two diaphanously garbed parents, their arms outstretched toward their (presumably) eugenically meritorious infant. A fair brochure noted that "this trophy and medal are worth more than livestock sweepstakes or a Kansas oil well. For health is wealth and a sound mind in a sound body is the most priceless of human possessions."<sup>2</sup>

Eugenicists also offered prizes to the "best baby" and young couples about to embark on a "eugenic marriage." School children were ranked not only according to their intelligence but also their mental outlook, height, dental hygiene, vision, and hearing. For example, a child whose height deviated in either direction from the Hastings' Age-Height Tables, which stated the "normal height" for a child at a particular age, received a low score.

The eugenics exhibits at these fairs often featured billboards like the one shown in the photograph on page 144. The lights flashed every 15 seconds to

indicate how often \$100 of the taxpayers' money went for the care of a mentally deficient person born in the United States. Other lights flashed every seven and a half minutes to indicate how often a "high grade" person was born. "How long are we Americans to be so careful about the pedigree of our pigs and chickens and cattle—and then leave the ancestry of our children to chance or to blind sentiment?" asked a nearby sign. A pamphlet published in 1915 by the Juvenile Protective Association of Cincinnati reveals yet another way eugenicists tried to alert Americans to the "menace of the feeble-minded." (See cover, page 145.)



First prize winners in a "Fitter Family Contest" Topeka, KS, 1927.

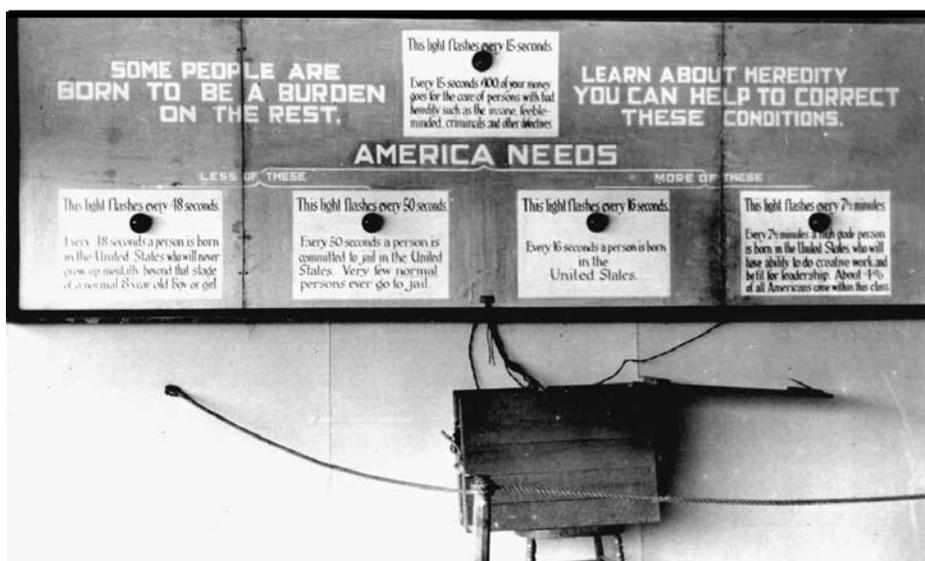


Exhibit at a eugenics fair.

## CONNECTIONS

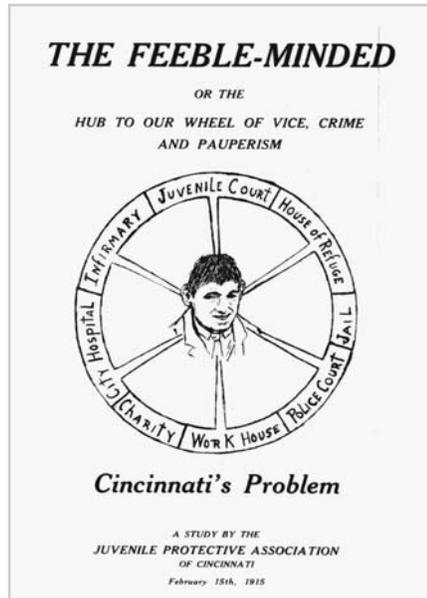
The contests, the pamphlet cover on page 145, and the exhibit shown above are all examples of propaganda—attempts to use emotion to sway public opinion. What feelings does each evoke? What techniques does each use to promote those feelings? To alter or adjust perceptions? For example, what is the message or moral of the various eugenics contests? At whom is that message aimed? To what emotions do the contests appeal? How do you think the winners of these contests regarded themselves? Their lower-ranked neighbors? How do you think the losers saw themselves and others?

Working in small groups, take a closer look at the cover of the pamphlet on the following page:

- What do you see? Try not to explain the drawing, simply describe what you notice. Have someone in the group record your observations and those of your classmates. You may also want to chronicle your impressions in your journal.
- Interpret the drawing. Why do you think the artist placed a man's face at the center of the wheel? How does it reinforce the words on the diagram? What message do the words and wheel convey? Would the message be different if the figure at the center of the wheel were an elderly woman? An African American? A parent and child?
- What is the significance of the spokes that emanate from the man's face to the outer ring? How does this technique reinforce the artist's message? At whom is the message aimed?

—What characteristics make the drawing seem scientific? Authoritative?  
—Identify the emotions that the drawing evokes in you and others in your group. What might have been the reaction of a person seeing this image in 1915?

Study the traveling exhibition shown in the photograph on page 144 much the way you studied the pamphlet cover. Keep in mind that the exhibition, unlike the drawing, was three-dimensional. The flashing lights were designed to turn a viewer's attention to the short messages that appeared on the various posters in the exhibit. What effect might those lights have on a viewer?



In the introduction to this chapter, Walter Lippmann compared conclusions based on scientific research to those “planted by the will to believe.” To what extent are the images in this reading based on scientific research? “Planted by the will to believe”? What similarities do you see in the messages each image conveys? How do you account for differences? Which seems more scientific?

The two images included in this reading describe a problem but offer no solution. What solutions is a person likely to suggest after viewing them? After participating in a “Fitter Family” contest? Compare those solutions with the one Charles Davenport offers in *Heredity in Relation to Eugenics* (pages 75-76). What similarities do you notice? What differences are most striking?

This reading describes how eugenicists in the early 1900s tried to communicate their ideas to a broad, general audience. How might a group today popularize an idea? What technologies might they use? What methods do you think would be most effective? Least effective? Be prepared to state why you have chosen a particular strategy. How might those who disagree with an idea get heard?

For more information on the “Fitter Family contests” and eugenic displays at state fairs, visit a website devoted to the archives of the Eugenics Record Office at Cold Spring Harbor: [www.eugenicsarchive.org/eugenics](http://www.eugenicsarchive.org/eugenics).

1. *The Limits of Science* by P. B. Medawar. Harper & Row, 1984, p. 101.
2. *In the Name of Eugenics* by Daniel J. Kevles. Harvard University Press, 1985, 1995, p. 62.

## Targeting the “Unfit”

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### Reading 2

In his textbook, *Heredity in Relation to Eugenics*, Charles Davenport argued, “It is just as sensible to imprison a person for feeble-mindedness or insanity as it is to imprison criminals belonging to such strains. The question of whether a given person is a case for the penitentiary or the hospital is not primarily a legal question but one for a physician with the aid of studies of heredity and family histories.” Throughout the early 1900s, Davenport and other eugenicists repeatedly warned the nation of the threat posed by the “unfit”—the so-called “menace of the feeble-minded.”

Caretakers at institutions for people with mental disabilities popularized the term *feeble-minded* in the late 1800s. Although they never clearly defined it, the word originally referred to an individual who was not only “hereditarily deficient in mental capacity” but also a “burden” to society. By the turn of the century, the word had a new connotation—the “feeble-minded” were more than a “burden,” they had become a “threat” to society. Lewis Terman, a noted psychologist and eugenicist, explained:

Not all criminals are feeble-minded, but all feeble-minded persons are at least potential criminals. That every feeble-minded woman is a potential prostitute would hardly be disputed by anyone. Moral judgment, like business judgment, social judgment, or any other kind of higher thought process, is a function of intelligence. Morality cannot flower and fruit if intelligence remains infantile.<sup>1</sup>

The campaign against the “feeble-minded” had consequences. Lawmakers in state after state responded by building special institutions to separate the “feeble-minded” from other Americans. By 1917, 31 of the nation’s 48 states supported “homes,” “colonies,” or “schools” for mentally retarded and epileptic persons (regardless of intelligence).<sup>2</sup>

The campaign also affected how the “menace” was defined. In 1920, a writer for *Mental Hygiene*, a professional journal, explained, “Whereas ten years ago 80% of [admissions] were idiots and imbeciles and only 20% border-line cases or morons, now 20% are of the idiot and imbecile class and 80% are morons or border-line cases.”

The vast majority of those admitted to institutions for the “feeble-minded” in the early 1900s shared other characteristics as well. Almost all of them were white. There were no comparable institutions for African Americans at the time.

Almost all of the inmates were poor and the vast majority were female. In many respects, “Deborah Kallikak” (pages 82-84) was a typical inmate. An article in a professional journal reflected the “conventional wisdom”:

Feeble-minded women are almost invariably immoral, and if at large usually become carriers of venereal disease or give birth to children who are as defective as themselves. The feeble-minded woman who marries is twice as prolific as the normal woman.

There is no class of persons in our whole population who, unit for unit, are so dangerous or so expensive to the state. This excepts no class, not even the violently insane. There are much more dangerous and expensive than the ordinary insane or the ordinary feeble-minded or the ordinary male criminal. Why is this? They are dangerous because being irresponsible wholly or in part they become the prey of the lower class of vile men and are the most fertile source for the spread of all forms of venereal disease. They have not the sense or the understanding to avoid disease or any care as to its spread. They are most expensive to the state because they are the most fruitful source of disease and mentally defective children who are apt to become state charges.<sup>3</sup>

These assumptions and beliefs shaped both public policy and private actions. Until the 20th century, all but the most severely retarded lived much as their neighbors did. They attended the same schools, prayed in the same churches and synagogues, paid the same taxes, and worked at many of the same jobs. They, too, married and had children. By the early 1900s, eugenic propaganda had persuaded a growing number of Americans that the “feebleminded” should not only be separated from the rest of society but also denied the rights that other Americans enjoyed.

In 1907, Congress closed the nation’s borders to immigrants who were “feeble-minded.” A few years later, nine states had laws banning the sale of alcohol to such individuals and one forbade the sale of firearms. By the 1920s, 39 states denied the “feebleminded” the right to marry. In 18 states they could not vote, and six states denied them the right to enter into a contract. In some states, they could not serve in the National Guard and there was talk of removing the “feebleminded” from the U.S. armed forces.<sup>4</sup>

What did the growing isolation mean to those who were labeled as “unfit”? How did their families respond to their incarceration? For the most part, their feelings and emotions have been lost to history. Stories like “Deborah Kallikak’s” offer some clues. So does a letter written in 1902 by a resident of a facility for the “feebleminded”:

My dear Father:

I wish you would leave me come home for my birthday which is not far off. It comes on the 25th of September, which is Thursday. There is one question I wish to ask you it is this: if I ask you to take me home, you say you haven't the money and I run away why you seem to have it to bring me back, and that is what puzzles me. I only wish I could spend just one month with you, I would be more than satisfied, and you know I have been here exactly 9 years and haven't been home in a decent way yet, and I guess I never will. If you can't give me a little change, I will have to make it myself. I will never show my face near home, and you can depend on it.

Your unthought of Son.<sup>5</sup>

An experiment in an institution in New York State also offers insights into the way some young Americans responded to the labels. Although the directors of most institutions supported eugenicists in their calls for lifelong segregation of the mentally retarded, Charles Bernstein was among the few to challenge that idea in the early 1900s. Convinced of the power of education to help the "feeble-minded" become self-sufficient, he began to release inmates after offering them some training. In a monthly newspaper, he often printed letters from recently discharged inmates. In 1917, a former inmate wrote:

Just a few lines to let you know that I am still alive and in the best of health. I am now in the US Navy. I enlisted July 9th and I am now at the Training Station at Newport, R.I. and expect to leave here on the ship next week for France.

This is a fine place down here. There are about 10,000 boys down here. There isn't a chance to get lonesome. There are a lot of boys in your institution who I think if they were in the navy it would make a man of them.

I was considered feeble-minded once, but I was given the chance to prove I was not. I am now in a place where you have to have a strong mind and be quick witted. I am proud to say that I am just as good as any of them. The reason for me getting out of that I once got in is that I made a fool out of the ones that tried to make a fool out of me. You must remember me, the kind of a boy that I was, so if there are any others like me, give them a chance, they will make good.<sup>6</sup>

A few years later, yet another former inmate reported:

I have just received my report card Friday, so I thought I'd let

you know my marks. Algebra, three; Civics, three; English, two; Latin, four; Gym, three, and Citizenship, two. On the back of the card it told what the marks stood for and I will copy it for you. Group one includes those whose work is of the highest excellency, a distinction reached by few in a class; group two those whose work while not perfect is still so excellent that it is decidedly above the average of good work.<sup>7</sup>

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## CONNECTIONS

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How do you explain why people in one century accepted individuals with the characteristics of “feeble-mindedness” and people in the next century isolated them? What fears prompted the change? What does the reading suggest about the consequences of neighbor turning against neighbor? Record your ideas in your notebook so that you can add to your ideas or revise them as you continue reading.

How do you account for the fact that the majority of inmates in “homes for the feeble-minded” were white females from poor families? What do those facts suggest about the way Americans were defining their “universe of obligation” in the early 1900s? What attitudes and values were reflected in those definitions?

Why do you think that women labeled as “feeble-minded” were considered a burden to society and more dangerous than “the violently insane” or the “ordinary male criminal”? What did they threaten? Whom did they threaten?

What do the words of inmates and former inmates suggest about what it meant to be labeled as “feeble-minded”? How did that label shape their identity—their sense of who they were and what they might become? How might their voices have shaped public policies aimed at the “menace of the feeble-minded”? What questions might their experiences have raised about the meanings people attach to differences? About the power of labels?

Walter Lippmann coined the word *stereotype* in the 1920s. He defined the term as a “picture in our heads.” He thought of stereotypes as both positive and negative. Today, any kind of stereotype is considered offensive, because it applies a small kernel of truth about some people to an entire group. According to sociologist Herbert J. Gans, “Negative labels rarely stereotype only behavior; more often they transform and magnify it into a character failing. As a result, welfare recipients become defective personalities or deficient moral types; that they are also family members, churchgoers, or neighbors is immaterial. Indeed, one of

the purposes of labels is to strip labeled persons of other qualities.” Research the way a particular group—the mentally or physically disabled, the poor, African Americans, Chinese Americans, Latinos—is portrayed in the news, in movies, and on TV. Brainstorm a list of ways the stereotypes you and your classmates uncovered might be revised or abandoned.

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1. *The Measurement of Intelligence* by Lewis Terman. Houghton Mifflin, 1916, p. 11.
  2. Quoted in *A History of Mental Retardation* by R.C. Scheerenberger. Paul H. Brooks Publishing Co., 1983, p.158.
  3. “High-Grade Mental Defectives” by W. Bullard. *Journal of Psycho-Asthenics*, 1909, p. 15.
  4. Quoted in *A History of Mental Retardation* by R.C. Scheerenberger. Paul H. Brooks Publishing Co., 1983, p. 155.
  5. *Ibid.*, p. 159.
  6. Quoted in *Inventing the Feeble Mind* by James W. Trent. University of California Press, 1994, p. 210.
  7. *Ibid.*, pp. 210–211.

## Identifying the “Unfit”

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### Reading 3

In the early 1900s eugenicists needed a cheap and efficient method of identifying people they considered “unfit.” On a trip to Europe, Henry Goddard, who directed a laboratory for the study of mental deficiency at the Vineland Training School for Feeble-minded Boys and Girls in New Jersey (Chapter 3), learned about a new test that would allow him and others to easily measure and then identify the “feebleminded.” He translated it into English with a few minor changes, and then administered it to inmates at the school. He labeled those who scored 25 points or lower, “idiots,” those who scored between 25 and 55, “imbeciles,” and those between 55 and 75, “morons.”

The test Goddard discovered was created in 1905 by Alfred Binet, the director of the Psychology Laboratory at the Sorbonne in Paris. Binet saw the test as a technique for predicting how children would do in elementary school. He wanted to alert teachers to students in need of extra help. So Binet asked children to perform tasks much like the ones they would be expected to perform at school. As he noted, “One might almost say, ‘it matters very little what the tasks are so long as they are numerous.’”

Binet and his colleague, Théodore Simon, compiled a long list of tasks that children between the ages of three and twelve were typically assigned in school. They placed an age level on each task based on what they thought was the youngest age at which a child could successfully perform it. Those tasks formed the basis of the Binet-Simon scale. Binet believed that the scale was simply a measure of a child’s ability to perform specific tasks at a particular moment in the youngster’s life. He warned against attaching greater meaning to the results:

Some recent thinkers seem to have given their moral support to these deplorable verdicts by affirming that an individual’s intelligence is a fixed quantity, a quantity that cannot be increased. We must protest and react against this brutal pessimism: we must try to demonstrate that it is founded upon nothing.<sup>1</sup>

Goddard disagreed. He was convinced that the tasks were reliable indicators of intelligence, despite Binet’s disclaimers. He and other researchers used the Binet-Simon scale as the basis of what is now known as IQ, or intelligence quotient. IQ is calculated by dividing a person’s “mental age” as determined by the Binet-Simon scale by his or her chronological age and then multiplying by 100 to eliminate a decimal point. (A child with an IQ of 100 on such a test has a mental age equal to his or her chronological age.)

In the spring of 1913, Goddard decided to demonstrate the effectiveness of the Goddard-Binet test by sending two field workers to Ellis Island in New York harbor, the entry point for most immigrants. The two were told to “pass by the obviously normal” immigrant and choose individuals from the great mass of “average immigrants” for testing. They selected 35 Jews, 22 Hungarians, 50 Italians, and 45 Russians. Based on the results of those tests, Goddard claimed that 83 percent of the Jews, 80 percent of the Hungarians, 79 percent of the Italians, and 87 percent of the Russians were “feeble-minded.” In defense of these claims, he stated:

Doubtless the thought in every reader’s mind is the same as in ours, that it is impossible that half of such a group of immigrants could be feeble-minded, but we know it is never wise to discard a scientific result because of its apparent absurdity. Not only are these figures representative of these ethnic groups as a whole, they are probably too small.<sup>2</sup>

When Goddard published his findings in 1917, a number of social workers and educators questioned his findings—particularly those that contradicted their own experiences. In a journal for social workers and others involved in “philanthropic charity work,” Helen Winkler and Elinor Sachs wrote:

“As stated,” says Dr. Goddard’s report in the *Journal of Delinquency*, “the physicians had picked out the obviously feeble-minded, and to balance this we passed by the obviously normal.” It would therefore seem that the group left was somewhat subnormal. But the paper goes on to say, “That left us the great mass of ‘average immigrants.’” I always thought “average” meant normal, so that Dr. Goddard’s group would from the start be below the par. This, and the fact that 148 persons altogether, or from twenty to fifty persons of each of the four nationalities represented, is entirely too small a number to constitute a fair sample upon which to base general conclusions, would make the results of the tests invalid if taken to have the significance the Survey clothes them with.

But although Dr. Goddard slips up on his conclusions, he does not set out to prove the percentage of feeble-mindedness among immigrants. The problems set for the experiment were: First, whether persons trained in work with the feeble-minded could recognize, by simple inspection, the feeble-minded immigrant; second, to what extent, if any, could mental tests successfully be applied to the detection of defective immigrants. . . .

In his summary, the writer says, “It seems evident that mental

tests can be successfully used on immigrants, although much study is still necessary before a satisfactory scale can be developed.”

Following on the heels of this modest statement comes the assertion, “One can hardly escape the conviction that the intelligence of the average ‘third class’ immigrant is low, perhaps of moron grade.”

The Department of Immigrant Aid of the Council of Jewish Women has been in daily contact with immigrants, particularly Jewish, and particularly women, girls, and children, who have much less opportunity for mental education than men and sometimes none at all. This daily contact does not bear out the statement of Dr. Goddard. In fact, the Department’s statistics for the last fifteen months would show a contrary condition. Out of 2,549 Jewish women, girls, and children admitted during that time, only three were certified feebleminded.

. . . The conclusion of the Council of Jewish Women, drawn from its experience, is that out of the great bulk we have welcomed to our shores, the number of mental subnormals is inappreciable. . . .

In fact it is by no means agreed among psychologists that the Binet-Simon scale makes an accurate test of mental capacity, even though the examination may take into account the emotional state of the individual. In considering the value of the Binet test as applied to immigrants, we must take into account the fact that the test was originally designed for American children for the purpose of differentiating them into grades, and not to test capacity for mental development of peoples from different kinds of environment, with different languages, different education or lack of education.<sup>3</sup>

Even before Goddard published his findings, a number of his colleagues were also expressing their concerns about the test. J. E. Wallace Wallin, a clinical psychologist, gave two versions of the test to people he had known all of his life—individuals whose character and ability he could vouch for. At the 1915 meeting of the American Psychological Association, he gave a paper describing the results. It was later published in the 1916 *Journal of Criminal Law and Criminology* as “Who Is Feeble-Minded?” According to two versions of Goddard’s tests, all of the “successful and wealthy” individuals Wallin tested in his hometown were “morons and dangerous feebleminded imbeciles.” Wallin described one of those individuals in greater detail.

Mr. A, 65 years old, faculties well preserved, attended school only about 3 years in the aggregate; successively a successful farmer and business man, now partly retired on a competency of \$30,000 (after considerable financial reverses from a fire), for ten years

president of the board of education in a town of 700, superintendent or assistant superintendent of a Sunday school for 30 years; bank director; raised and educated a family of 9 children, all normal; one of these is engaged in scientific research (Ph.D.); one is assistant professor in a state agricultural school; one is assistant professor in a medical school (now completing thesis for Sc.D.); one is a former music teacher and organist, a graduate of a musical conservatory, but now an invalid; one a graduate of the [teacher training] department of a college; one is a graduate nurse; two are engaged in a large retail business; one is holding a clerical position; all are high school graduates and all except one have been one-time students in colleges and universities.

. . . This man, measured by the automatic standards now in common use, would be hopelessly feeble-minded (an imbecile by the intelligence quotient), and should have been committed to an institution for the feeble-minded long ago. But is there anyone who has the temerity, in spite of the Binet "proof," to maintain, in view of this man's personal, social and commercial record, and the record of his family, that he has been a social and mental misfit, and an undesirable citizen, and should, therefore, have been restrained from propagation because of mental deficiency (his wife is still less intelligent than he)?<sup>4</sup>

Wallin urged his colleagues to join him in "completely rejecting the concept of the high grade moron as determined by the Binet scale from the standpoint of its moral and legal implications." A story in the Chicago newspapers provided Wallin with unexpected support. The papers revealed that Mary Campbell, a researcher in Chicago, had given the Goddard-Binet test to the mayor, his aides, and his opponents in the last election. Almost all of them were ranked as "morons." The American Psychological Association quickly resolved to discourage "the use of mental tests for practical psychological diagnosis by individuals psychologically unqualified for this work."

## CONNECTIONS

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Write a working definition of *intelligence*. Explain what the word means to you. Then add the meanings described in this reading. Record these definitions in your journal and add to them as you continue reading.

Alfred Binet wrote that "a French peasant may be normal in a rural community

but feeble-minded in Paris.” Is the reverse equally true? Might a person who is normal in Paris be feeble-minded in a rural community? What is Binet suggesting about the difficulties in defining the term *feeble-minded*? The word *intelligence*? In measuring either? What “moral and legal implications” are implicit in the Binet scale?

What is an intelligence test? How is it different from an achievement test? An aptitude test? In small groups, write an example of a test question for each type of test. Share your questions with the class. Which questions were the easiest to write? To answer? To evaluate? Which were the hardest to create? To answer?

What questions do Winkler and Sachs raise about Goddard’s methods? The authors describe their work with immigrants at Ellis Island. How do these experiences strengthen their arguments?

What does the word *normal* mean? *Average*? What assumptions is Goddard making when he directs his field workers to “pass by the obviously normal” immigrant and choose individuals from the great mass of “average immigrants” for testing? What assumptions do Winkler and Sachs make when they question his methods? What assumptions was Wallin making when he questioned the validity of the tests? What assumptions are reflected in his decision to test individuals whose history he knew rather than immigrants?

Winkler and Sachs use logic and personal experiences to challenge Goddard’s conclusions. Goddard claimed his experiment at Ellis Island was “scientific.” How does the very use of the word lend legitimacy and authority to a very unscientific survey? How does Goddard seem to define the word *scientific*? How do Winkler and Sachs define the term? How does Wallin seem to define it? What does it mean to you? To what extent does its use affect the way you regard a statement?

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1. Quoted in *The Mismeasure of Man* by Stephen Jay Gould. W.W. Norton, 1981, pp.153-154.
  2. “Mental Tests and the Immigrant” by H. H. Goddard. *Journal of Delinquency*, 1917, p. 266.
  3. Letter to the Editor, *The Survey*, November 10, 1917.
  4. “Who Is Feeble-Minded?” by J. E. Wallace Wallin. *Journal of Criminal Law and Criminology*, January, 1916.

## Revising the Test

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### Reading 4

Even as Wallace Wallin and others were questioning the validity of the Goddard-Binet test, Lewis Terman, a professor of education at Stanford University, was creating a new version that would be later known as the Stanford-Binet test. It offered eugenicists a more reliable, less costly, and more efficient way of measuring the mental abilities of large groups of people.

To avoid Henry Goddard's errors, Terman normed every question—that is, he determined whether an “average” person could answer it by testing it on about 1000 children between the ages of 5 and 14 and 400 adults in his own community. Terman had difficulty finding enough adults to survey. In the end, he decided to treat anyone over the age of 14 as an adult. His 400 “adults” included 150 “tramps,” 30 businessmen, 159 adolescent delinquents, and 50 high school students. Because the teenagers and the grown men got about the same number of items right on his test, Terman decided that “native intelligence, in so far as it can be measured by tests now available, appears to improve but little after the age of fifteen or sixteen years.”

All of the individuals Terman tested were native-born Protestant Americans of Northern European descent. He made no secret of the fact that he eliminated “tests of foreign born children” “in the treatment of results.” Commenting on the scores of immigrant children, Terman wrote:

The tests have told the truth. These boys are ineducable beyond the merest rudiments of training. No amount of school instruction will ever make them intelligent voters or capable citizens. . . . They represent the level of intelligence, which is very, very common among Spanish-Indian and Mexican families of the Southwest and also among Negroes. Their dullness seems to be racial, or at least inherent in the family stocks from which they come.<sup>1</sup>

At first Terman's test, like the Goddard-Binet test, had to be administered individually by a trained examiner. An important breakthrough came in the spring of 1917, soon after the United States entered World War I. With the help of Henry Goddard and psychologist Robert Yerkes, Terman quickly devised a new version of the Stanford-Binet test—one that an untrained examiner could administer to hundreds of individuals at the same time. They planned to use the new test to determine which of the thousands of men recently drafted into the army were candidates for officer training and which were unfit to serve at all. Between May and June of 1917, the testers created eight Alpha and seven Beta

tests. (Researchers often use the Greek letters alpha and beta to differentiate between two versions of the same test.) The Alpha tests were for draftees who could read English and the Beta for those who were illiterate or had little or no knowledge of English. While army officials were never completely convinced of the value of these tests, Terman, Goddard, and Yerkes had no doubts about their importance. They drew on the results of the so-called “army tests” again and again in their research. Yerkes wrote:

Most of us are wholly convinced that the future of mankind depends in no small measure upon the development of the various biological and social sciences. . . . We must . . . strive increasingly for the improvement of our methods of mental measurement, for there is no longer ground for doubt concerning the practical as well as the theoretical importance of studies of human behavior. We must learn to measure skillfully every form and aspect of behavior which has psychological and sociological significance.<sup>2</sup>

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**Test 8**

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Notice the sample sentence: People *hear* with the *eyes ears nose mouth*  
 The correct word is *ears*, because it makes the truest sentence.

In each of the sentences below you have four choices for the last word. Only one of them is correct. In each sentence draw a line under the one of these four words which makes the truest sentence. If you can not be sure, guess. The two samples are already marked as they should be.

---

SAMPLES	{ People <i>hear</i> with the <i>eyes ears nose mouth</i> France is in <i>Europe Asia Africa Australia</i>	
	1. The <i>apple</i> grows on a <i>shrub vine bush tree</i>	1
	2. <i>Five hundred</i> is played with <i>rackets pins cards dice</i>	2
	3. The <i>Percheron</i> is a kind of <i>goat horse cow sheep</i>	3
	4. The most prominent industry of <i>Gloucester</i> is <i>fishing packing</i> <i>brewing automobiles</i>	4
	5. <i>Sapphires</i> are usually <i>blue red green yellow</i>	5
	6. The <i>Rhode Island Red</i> is a kind of <i>horse granite cattle fowl</i>	6
	7. <i>Christie Mathewson</i> is famous as a <i>writer artist baseball player</i> <i>comedian</i>	7
	8. <i>Revolvers</i> are made by <i>Swift &amp; Co. Smith &amp; Wesson W. L. Douglas</i> <i>B. T. Babbitt</i>	8
	9. <i>Carrie Nation</i> is known as a <i>singer temperance agitator suffragist nurse</i>	9
	10. “ <i>There’s a reason</i> ” is an “ad” for a <i>drink revolver flour cleanser</i>	10
	11. <i>Artichoke</i> is a kind of <i>hay corn vegetable fodder</i>	11
	12. <i>Chard</i> is a <i>fish lizard vegetable snake</i>	12
	13. <i>Cornell University</i> is at <i>Ithaca Cambridge Annapolis New Haven</i>	13
	14. <i>Buenos Aires</i> is a city of <i>Spain Brazil Portugal Argentina</i>	14
	15. <i>Ivory</i> is obtained from <i>elephants mines oysters reefs</i>	15
	16. <i>Alfred Noyes</i> is famous as a <i>painter poet musician sculptor</i>	16
	17. The <i>armadillo</i> is a kind of <i>ornamental shrub animal musical instrument</i> <i>dagger</i>	17
	18. The <i>tendon of Achilles</i> is in the <i>heel head shoulder abdomen</i>	18
	19. <i>Crisco</i> is a <i>patent medicine disinfectant tooth-paste food product</i>	19

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Partial example of a Alpha test.

*Note:* The test pictured below is an example of a Beta test. Each picture has a part missing. Identify the missing part in as many pictures as possible within three minutes. (The answers appear on page 180.)

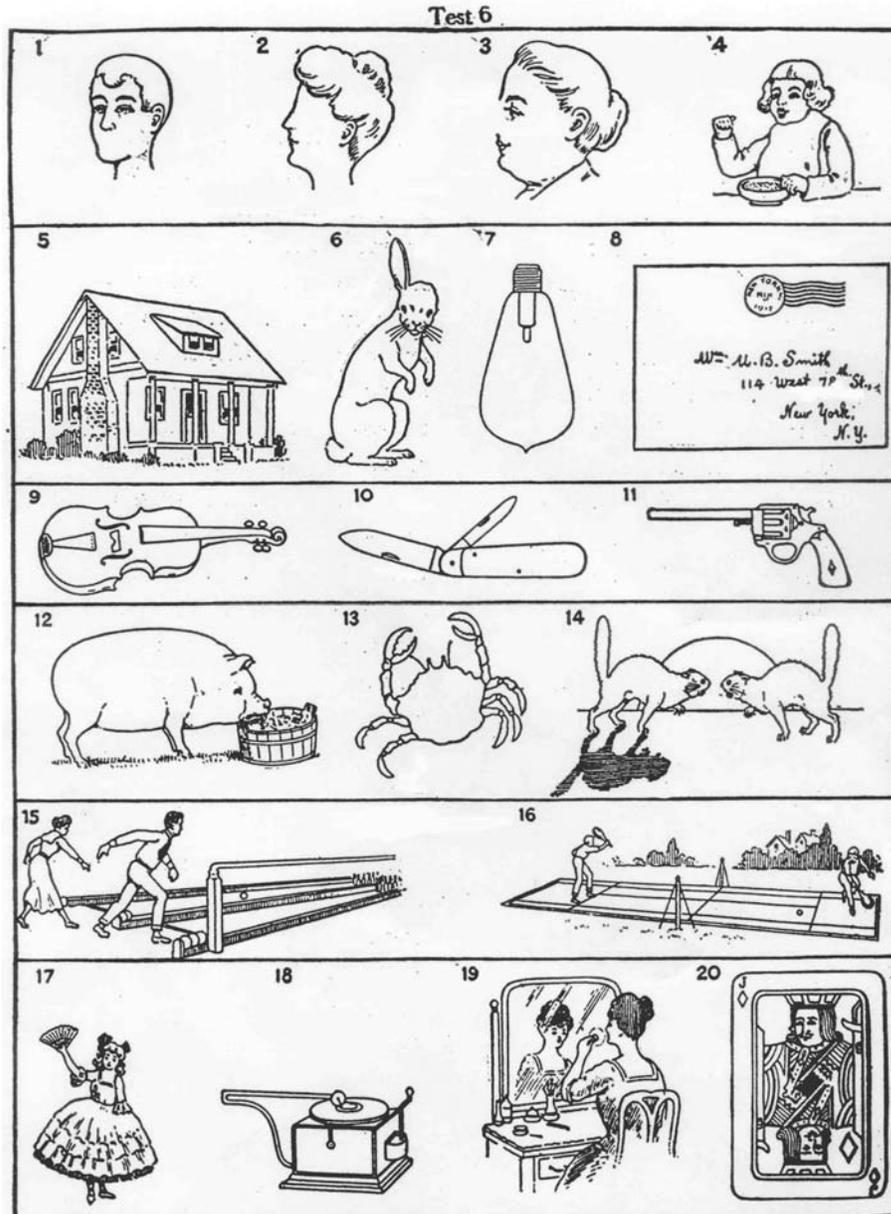


Fig. 63.—Group Examination Beta, Form 0, Test 6, Picture Completion.

Example of a Beta test taken by army draftees in 1917.

## CONNECTIONS

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Take the test on the previous page by filling in the missing part of each drawing or identifying it on a separate sheet of paper. There is only one right answer for each test item. (Answers are provided at the end of the chapter.) Check your answers and then compare your score with those of your classmates.

A portion of the Alpha test is shown on page 157. To what extent is it like the Beta test? What differences seem most striking? How do both tests create the impression of scientific objectivity?

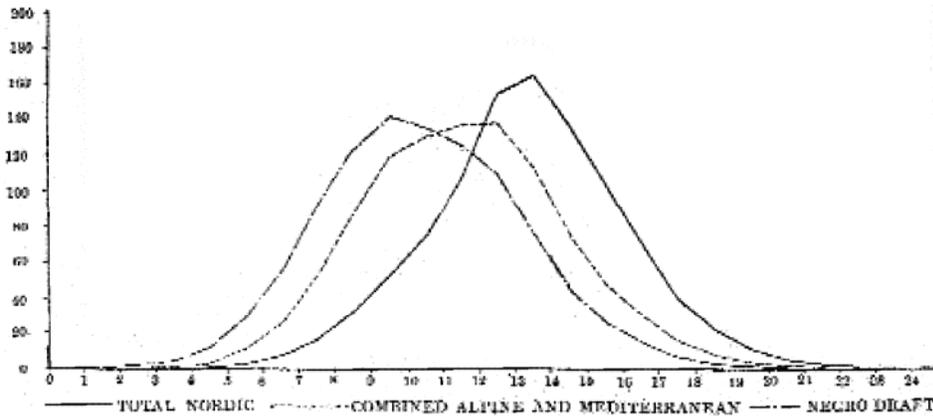
In Chapter 1, Martha Minow is quoted as saying, “When we simplify and sort, we focus on some traits rather than others, and we assign consequences to the presence and absence of the traits we make significant.” What were the consequences of the way Americans defined intelligence in the early 1900s? What are the consequences today? How does this test seem to define intelligence? That is, what do you need to know to answer questions correctly? How do you define intelligence? How would you design a test to measure intelligence based on your definition?

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1. *The Measurement of Intelligence* by Lewis Terman. Houghton Mifflin, 1916, p. 91.
  2. Quoted in *The Mismeasure of Man* by Stephen Jay Gould. W. W. Norton, 1981, p. 193.

## Fears of Declining Intelligence

### Reading 5

Lewis Terman, Henry Goddard, and Robert Yerkes believed that American intelligence was declining. They saw the army tests as an opportunity to prove their theory. After testing over 1,750,000 army recruits, they and other experts took a sample of 160,000 for further analysis. In *A Study of American Intelligence*, Carl Brigham summarized what they learned from that analysis. Published in 1923, the book had a profound effect on popular attitudes toward immigrants and African Americans. Brigham, an assistant professor of psychology at Princeton University at the time and later president of the American Psychological Association, concluded:



The vertical or "y" axis shows the number of individuals in 100,000s who took the army tests. The horizontal or "x" axis indicates the number of items they answered correctly.

According to all evidence available, then, American intelligence is declining, and will proceed with an accelerating rate, as the racial admixture becomes more and more extensive. The decline of American intelligence will be more rapid than the decline of the intelligence of European national groups, owing to the presence here of the Negro. These are the plain, if somewhat ugly, facts that our study shows. The deterioration of American intelligence is not inevitable, however, if public action can be aroused to prevent it. There is no reason why legal steps should not be taken which would insure a continuously progressive upward evolution.

The steps that should be taken to preserve or increase our present intellectual capacity must of course be dictated by science and not by political expediency. Immigration should not only be restrictive

but highly selective. And the revision of the immigration and naturalization laws will only afford a slight relief from our present difficulty. The really important steps are those looking toward the prevention of the continued propagation of defective strains in the present population. If all immigration were stopped now, the decline of the American intelligence would still be inevitable. This is the problem which must be met, and our manner of meeting it will determine the future course of our national life.<sup>1</sup>

In the 1920s, most Americans—including many educators, religious leaders, politicians, and scientists—accepted Brigham’s conclusions without question. After all, they confirmed what most of them already believed—some “races” were superior to others. Over the years, however, a number of researchers have challenged his conclusions. They point out:

1. From a sample of 160,000 army recruits, Brigham generalized to entire nations and ethnic groups.
2. Sample sizes varied among test groups. There might be 300 men in one group and 750 in another.
3. Testing conditions varied from one army camp to another. So did the instructions given to recruits. There were many zero scores, probably because soldiers did not understand the instructions.
4. There were discrepancies within and among groups. For example, African American recruits who lived in large cities in northern states tended to score higher than their southern, rural counterparts. Brigham said this resulted from a “better stock of Negro blood” in the North, but a simpler explanation might lie in the fact that African Americans in the North generally had more educational and economic opportunities than blacks in the South. (On the other hand, when Brigham found differences in scores between English-speaking and non-English-speaking Nordics, he attributed those differences to environment.)
5. Brigham offered no scientific definitions for how he determined who belonged to the Nordic, Alpine, Mediterranean, and Negro races. He simply adopted the conventional racist stereotypes that were used at the time.

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## CONNECTIONS

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What were Brigham’s conclusions? Why did many Americans accept them without question? How did Brigham’s conclusions reinforce prejudices?

Copies of *A Study of American Intelligence* are still available in many libraries. It

contains reproductions of several versions of the Alpha and Beta tests. Compare those tests to the ones in the previous reading. What questions does your research raise about the way Brigham used evidence? The conclusions he drew from that evidence? What experiences would you like to share with Brigham? What would you like him to know? What questions would you ask him?

Compare and contrast the way Brigham and Samuel Morton responded to discrepancies in their research (page 52). What similarities do you notice? How do you account for differences? What obstacles do scientists face in studying human beings? How might those obstacles be overcome? Why is it often so difficult to do so?

In response to those who argued that intelligence was declining and the nation needed more “geniuses,” essayist H. L. Mencken wrote:

The eugenicists constantly make the false assumption that a healthy degree of progress demands a large supply of first rate men. Here they succumb to the modern craze for mass production. Because a hundred policemen, or garbage men, or bootleggers are manifestly better than one, they conclude absurdly that a hundred Beethovens would be better than one. But this is not true. The actual value of genius often lies in its singularity.<sup>2</sup>

What does Mencken mean when he writes that value of genius often “lies in its singularity”? He also points out that composer Ludwig von Beethoven had a physical disability (deafness) and was “the grandson of a cook and the son of a drunkard.” What is he suggesting about the relationship between genius and heredity?

In 1987, researcher James R. Flynn conducted a study of changes in IQ test scores over a 60-year period in such nations as Australia, Austria, Belgium, Brazil, Britain, Canada, China, Denmark, East Germany, France, Israel, Japan, Netherlands, New Zealand, Northern Ireland, Norway, Sweden, Switzerland, the United States, and West Germany. He discovered that IQ scores have not declined but increased in every country he surveyed, including the United States. No one knows why scores have gone up, but the changes have taken place too quickly to be attributed to evolution.<sup>3</sup> What questions does the so-called “Flynn effect” raise about the conclusions Brigham drew from the army tests? How does the “Flynn effect” challenge the idea that intelligence is simply a matter of heredity? Find out more about the “Flynn effect.” What other eugenic assumptions does it challenge?

Invite a math teacher to explain to your class how to calculate frequency

distributions. How do the mean, the median, and the mode differ from one another?

Use the illustration on page 160 to explain why a distribution of scores that clusters around the middle of a sample group is known as a “bell curve.” What is the significance of such a distribution?

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1. *A Study of American Intelligence* by Carl Brigham. Princeton University Press, 1923, p. 210.
  2. Quoted in *Human Biodiversity* by Jonathan Marks. Aldine de Gruyter, 1995, pp. 91–92.
  3. “Massive IQ Gains in 114 Nations: What IQ Tests Really Measure” by James R. Flynn. *Psychological Bulletin*, vol. 101 (1987), pp. 171-191.

## Racism and Intelligence Test Scores

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### Reading 6

For many people, Carl Brigham's *A Study of American Intelligence* confirmed their prejudices and therefore justified discrimination. By 1924, writes psychologist Fred Kuhlman, intelligence tests now had "an extra-scientific interest." "They decide the fate of thousands of human beings every year and are intimately related to social welfare in general." The tests were increasingly used to identify, segregate, and shame not only individuals but also entire groups of people. For example, Henry Fairfield Osborn, a trustee of Columbia University and president of the American Museum of Natural History, summarized the conclusions he and others drew from those data:

We have learned once and for all that the Negro is not like us. So in regard to many races and subraces in Europe we learned some which we had believed possessed of an order of intelligence perhaps superior to ours were far inferior.<sup>1</sup>

In an article in the *Atlantic Monthly*, another writer noted that 89 percent of African Americans had tested as "morons." She made no mention of the fact that so did the mayor of Chicago and much of his staff (Reading 3). Instead she concluded that the "education of the whites and colored in separate schools may have justification other than that created by race prejudice."<sup>2</sup> Journalist Walter Lippmann challenged those who reached such conclusions:

Without offering any data on all that occurs between conception and the age of kindergarten, they announce on the basis of what they have got out of a few thousand questionnaires that they are measuring the hereditary mental endowment of human beings. Obviously this is not a conclusion obtained by research. It is a conclusion planted by the will to believe. It is, I think, for the most part unconsciously planted.<sup>3</sup>

Sociologist W. E. B. DuBois, the first African American to earn a Ph.D., was also outraged by those who claimed that the tests "proved" that blacks were inferior:

For a century or more it has been the dream of those who do not believe Negroes are human that their wish should find some scientific basis. For years they depended on the weight of the human brain, trusting that the alleged underweight of less than a thousand Negro brains, measured without reference to age, stature, nutrition,

or cause of death, would convince the world that black men simply could not be educated. Today scientists acknowledge that there is no warrant for such a conclusion and that in any case the absolute weight of the brain is no criterion of racial ability.

Measurements of the bony skeleton followed and great hopes of the scientific demonstration of racial inferiority were held for a while. But they had to be surrendered when Zulus and Englishmen were found in the same . . . class.

Then came psychology: the children of the public schools were studied and it was discovered that some colored children ranked lower than white children. This gave wide satisfaction even though it was pointed out the average included most of both races and that considering the educational opportunities and social environment of the races, the differences were measurements simply of the ignorance and poverty of the black child's surroundings.

Today, however, all is settled. "A workably accurate scientific classification of brain power" has been discovered and by none other than our astute army officers. The tests were in two sets for literates and illiterates and were simplicity itself. For instance among other things the literates were asked in three minutes "to look at each row of numbers below and on the next two dotted lines write the two numbers that should come next."

3	4	5	6	7	8	.....	.....
8	7	6	5	4	3	.....	.....
10	15	20	25	30	35	.....	.....
81	27	9	3	1	1/3	.....	.....
1	4	9	16	25	36	.....	.....
16	17	15	18	14	19	.....	.....
3	6	8	16	18	36	.....	.....

Illiterates were asked, for example, to complete pictures where the net was missing in a tennis court or a ball in a bowling alley!

For these tests were chosen 4730 Negroes from Louisiana and Mississippi and 28,052 white recruits from Illinois. The result? Do you need to ask? M. R. Trabue, Director, Bureau of Educational Service, Columbia University, assures us that the intelligence of the average

southern Negro is equal to that of a 9-year-old white boy and that we should arrange our educational program to make “waiters, porters, scavengers, and the like” of most Negroes!

Is it conceivable that a great university should employ a man whose “science” consists of such utter rot?<sup>4</sup>

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## CONNECTIONS

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How are Lippmann’s remarks similar to Frederick Douglass’s description of Samuel Morton and other “race scientists” as reasoning “from prejudice rather than from facts”? (page 52) What do both men suggest about the difference between “good” and “bad” science?

Douglass went on to say: “It is the province of prejudice to blind; and scientific writers, not less than others, write to please, as well as to instruct, and even unconsciously to themselves, (sometimes,) sacrifice what is true to what is popular. Fashion is not confined to dress; but extends to philosophy as well—and it is fashionable now, in our land, to exaggerate the differences between the Negro and the European.” To what extent do Lippmann’s comments suggest that scientific writers in the early 1900s continued to “sacrifice what is true to what is popular”? How do those writers perpetuate myths and misinformation about “race”?

Based on the test questions cited by DuBois, how do you think the testers defined intelligence? How does DuBois seem to define it? To what extent does the Beta test shown in Reading 4 support DuBois’s conclusions about the inadequacies of the test?

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1. Quoted in *The Mismeasure of Man* by Stephen Jay Gould. W. W. Norton, 1981, p. 231.

2. *Ibid.*, p. 231.

3. *Ibid.*, p. 174.

4. “Race Intelligence” by W. E. B. DuBois. *Crisis*, July 1920, pp. 1181–1183. ©1920 *Crisis*.

## Limiting Opportunity

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### Reading 7

By the 1920s, intelligence tests were increasingly used to determine who was “worthy” of a variety of educational and employment opportunities. As early as 1922, educator John Dewey warned against any test “which under the title of science” reduces “the individual to a numerical class; judges him with reference to capacity to fit into a limited number of vocations ranked according to present business standards; assigns him to a predestined niche and thereby does whatever education can do to perpetuate the present order.” His warning was largely ignored. Companies continued to use them to determine which applicants to hire. Colleges and universities like Oberlin, the University of Illinois, Brown, Purdue, and Southern Methodist in Dallas depended on them to screen incoming freshmen. So did a number of high schools.

As mentioned earlier, between 1880 and 1920, school enrollment in the United States increased by more than 600 percent, from about 200,000 students in 1880 to over 1.5 million by 1920. Much of the increase was a direct result of state laws that required children to attend school until at least the age of 14.

As the number of students increased seven-fold, school officials struggled to educate youngsters with diverse abilities from a wide variety of backgrounds. Many schools used test scores to assign students to particular classes. In practice, this meant keeping immigrant and African American students from courses that might prepare them for higher education and educating them only for unskilled, low-paying jobs. For example, Ellwood Cubberly, a professor of education at Stanford and an eugenicist, wrote in 1916:

Our schools are factories in which the raw products are to be shaped and fashioned into products. . . . The specifications for manufacturing come from the demands of 20th century civilization, and it is the business of the school to build its pupils according to the specifications laid down. This demands good tools, specialized machinery, and continuous measurement of production.<sup>1</sup>

Although not every one accepted these ideas, they shaped the way thousands of communities across the nation allocated funds for education. They also reinforced old myths about race and ethnicity that fed prejudice, limited opportunity, and undermined self-esteem. Poet Paisley Rekdal writes:

At sixteen, my mother loads up red tubs of noodles, teacups



Illustration from the *American School Board Journal*, 1922.

chipped and white-gray as teeth, rice clumps that glue themselves to the plastic tub sides or dissolve and turn papery in the weak tea sloshing around the bottom. She's at Diamond Chan's restaurant, where most of her cousins work after school and during summer vacations, some of her friends, too. There's Suzy at the cash register, totaling up bills and giving back change, a little dish of toothpicks beside her and a basket of mints that taste like powdered cream. A couple of my mother's cousins are washing dishes behind the swinging kitchen door, and some woman called Auntie #2 (at her age, everyone is Auntie and each must take a number) takes orders at a table of women that look like Po Po's mah-jongg club. They don't play anymore. They go to the racetrack.

The interior of Diamond Chan's restaurant is red: red napkins, red walls, red carp in the tank and in signature seals on the cheap wall hangings. Luck or no luck, it's like the inside of an esophagus. My mother's nails are cracked, kept short by clipping or gnawing, glisten only when varnished with the grease of someone else's leftovers. Still she keeps working here, it is repetitive action, the chores that keep her from thinking. The money my mother earns will soon

get sucked into the price of a pink cashmere sweater for Po Po's birthday, along with a graduation photo of herself, also in a pink sweater, pearls, her face airbrushed fog-rose at the cheeks and mouth.

Graduation? Unlike her brothers, she knows she's going to college. Smith, to be exact, though without the approval of the school counselor. "Smith is . . . expensive," the counselor told my mother only yesterday, which is why my mother is slightly irritated now, clomping around under the weight of full tubs of used dishes. "Smith is not for girls like you." What does she plan to be when she grows up? "A doctor?" my mother suggests. Um, no. "Nursing. Or teaching, perhaps, which is even more practical. Don't you think?"

My mother, who is practical above all things, agreed.

So it's the University of Washington in two years with a degree in education. Fine. She slams down full vials of soy sauce onto each table. . . . Smith is not for girls like her. . . .

It is not, my mother would argue, that she could be denied the dream of Smith so much that someone should tell her that she could be denied it. My mother knows the counselor was hinting at some limitation my mother would prefer to ignore. Still, she is whiter than white, should intelligence be considered a pale attribute. Deep down she understands she has a special capacity for work; she likes it, she's good at it, she excels at school and its predictable problems. Here is a discipline entirely lacking in the spirits of whatever loh fan may sneer or wonder at her in study hall; to be told by a fat, dyed-blond guidance counselor she may be inferior? The monkey calling the man animal.<sup>2</sup>

Malcolm Little was also a top student in his high school in Lansing, Michigan. He kept his grades high even though he too held a part-time job in a restaurant. He worked as a dishwasher. In his autobiography, Little recalls a conversation with one of his teachers.

Somehow, I happened to be alone in the classroom with Mr. Ostrowski, my English teacher. He was a tall, rather reddish white man and he had a thick mustache. I had gotten some of my best marks under him, and he had always made me feel that he liked me. . . .

He told me, "Malcolm, you ought to be thinking about a career. Have you been giving it thought?"

The truth is, I hadn't. I never have figured out why I told him, "Well, yes sir, I've been thinking I'd like to be a lawyer." Lansing

certainly had no Negro lawyers—or doctors either—in those days, to hold up an image I might have aspired to. All I really knew for certain was that a lawyer didn't wash dishes, as I was doing.

Mr. Ostrowski looked surprised, I remember, and leaned back in his chair and clasped his hands behind his head. He kind of half-smiled and said, "Malcolm, one of life's first needs is for us to be realistic. Don't misunderstand me now. We all here like you, you know that. But you've got to be realistic about being a nigger. A lawyer—that's no realistic goal for a nigger. You need to think about something you can be. You're good with your hands—making things. Everybody admires your carpentry in shop work. Why don't you plan on carpentry? People like you as a person—you'd get all kinds of work."

The more I thought afterwards about what he said, the more uneasy it made me. It just kept treading around in my mind.

What made it really begin to disturb me was Mr. Ostrowski's advice to others in my class—all of them white. Most of them told him they were planning to become farmers. But those who wanted to strike out on their own, to try something new, he had encouraged. Some, mostly girls, wanted to be teachers. A few wanted other professions, such as one boy who wanted to become a county agent; another, a veterinarian; and one girl wanted to be a nurse. They all reported that Mr. Ostrowski had encouraged what they had wanted. Yet nearly none of them had earned marks equal to mine.

It was a surprising thing that I had never thought of it that way before, but I realized that whatever I wasn't, I was smarter than nearly all of those white kids. But apparently I was still not intelligent enough, in their eyes, to become whatever I wanted to be.

It was then that I began to change—inside.<sup>3</sup>

Malcolm Little is better known today as Malcolm X. In 1952, he changed his name when he converted to Islam.

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## CONNECTIONS

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How does Rekdal express her mother's anger at the guidance counselor? How is it reflected in her statement that her mother is "whiter than white, should intelligence be considered a pale attribute"? In her description of counselor as "the monkey calling the man animal"?

In a famous study, an educational psychologist randomly selected a number of elementary-school students. The psychologist told the children's teachers that the tests showed these students were likely to do better in school the coming year than they had ever done before. By the end of the year, the students had indeed done better, as measured by the grades they received and by their teachers' comments. They did better, the psychologist concluded, because their teachers expected them to do better. Charles Davenport believed that teachers ought to have "a record of inherited capabilities or performances of close relatives" in order to better predict the abilities of each child. What does this study suggest about drawbacks of such a system? What does the study suggest about the relationship between what others expect of us and what we become?

After his encounter with Ostrowski, Malcolm X recalls, "It was then that I began to change—inside." What kinds of changes might such an incident inspire? How did a similar incident seem to shape the identity of Paisley Rekdal's mother? How do you like to think you would react to such an incident?

After interviewing writer Maya Angelou for a television series on creativity, journalist Bill Moyers reflected on the importance of having people in our lives who have faith in us, even when we lack faith in ourselves. Angelou told him of a trauma that left her silent and described how she eventually regained her voice thanks to her grandmother's love and the compassion of a neighbor. In assessing what these two women meant to the child, Moyers states:

For the inner life to flourish everyone needs to be touched by someone. . . . With Maya Angelou, it was a grandmother who loved her vastly and a radiant black angel who read Dickens to a little girl not quite turned eight. They signified her worth, they said, "You matter," they turned her suffering rage upward and brought the poet to life. It is not a scientifically certifiable fact that with each child born into the world comes the potential to create. It is rather a statement of faith. But I can't imagine any declaration more important for our society to make.<sup>4</sup>

What do the accounts written by Paisley Rekdal and Malcolm X suggest happens when a society fails to make such a statement of faith?

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1. *Public School Administration* by Ellwood Cubberly. Houghton Mifflin, 1916, p. 338.
  2. *The Night My Mother Met Bruce Lee* by Paisley Rekdal. Copyright © 2000 by Paisley Rekdal. Used by permission of Pantheon Books, a division of Random House, Inc.
  3. *The Autobiography of Malcolm X* as told to Alex Haley. Ballantine, 1965, pp. 35–37.
  4. Interview with Maya Angelou. *Creativity* with Bill Moyers. Public Affairs Television.

## Challenging Racial Assumptions

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### Reading 8

In the early 1900s, scholars like Carl Brigham routinely used racist stereotypes in their work. As a result, their research bolstered old myths and misinformation by offering “scientific proof” that intelligence is related to morality; that some races are superior to others; and that African Americans “are intellectually inferior to whites and can only be educated within clear limits.” The few who dared to ask questions often had difficulty getting heard. African Americans had a particularly difficult time. It was no accident that W. E. B. DuBois’s criticism of the Army tests was published only in *Crisis*, the journal of the National Association for the Advancement of Colored People (NAACP).

In 1924, Horace Mann Bond, the director of education at Langston University, reviewed Carl Brigham’s *A Study of American Intelligence*. His review was also published in *Crisis*. He wrote:

The manner in which these tests and their results are being regarded should cause serious concern on the part of the Negro Intellectual, for in many cases they have ceased to be scientific attempts to gain accurate information and have degenerated into funds for propaganda and encouragement for prejudice. It should therefore be the aim of every Negro student to be in possession of every detail of the operation, use and origin of these tests, in order that he might better equip himself as an active agent against the insidious propaganda which like its prototypes, seeks to demonstrate that the Negro is intellectually and physically incapable of assuming the dignities, rights and duties which devolve upon him as a member of modern society. . . .

Why should Negroes from Northern states possess larger increments of intelligence than Negroes from Southern states? Mr. Brigham says that this is because the more intelligent have immigrated northward; a very pretty explanation, but not one which can be taken to justify the fact. There is only one obvious explanation; the Negro from the North, because of infinitely superior home, civil, and above all school conditions, has been favored by environment in just as great a degree as his Southern brother has been deprived of the same. . . .

Thus with the list of other “inferiorities” so confidently affirmed by Mr. Brigham and others of his school. Invariably a perusal of those nationalities whom he classes as inferior will be found to have

a close correlation existing between the sums of money expended for education and their relatively low standing. . . .

Only recently an investigator working from the University of Texas proclaimed the fact that he found the Negro children possessed but 75 per cent of the average intelligence native to whites. Further investigation revealed the following facts: In that special locality, the whites, with a school population of 10,000, were expending on an average \$87 per capita for the education of their children. The Negro children received a per capita of \$16; and yet this Texas psychologist believes he has unearthed a brief for Negro inferiority. . . .

No, it is not with Intelligence Tests that we have any quarrel; in many ways they do represent a fundamental advance in the methodology of the century. It is solely with certain methods of interpreting the results of these tests that we, as scientific investigators, must differ. So long as intelligence tests are administered, correlated, and tabulated solely with the subjective urge subdued, and with a certain degree of common sense as to their interpretation, we can never criticize them.

But so long as any group of men attempts to use these tests as funds of information for the approximation of crude and inaccurate generalizations, so long must we continue to cry "Hold!" To compare the crowded millions of New York's East Side with the children of some professional family on Morningside Heights indeed involves a great contradiction; and to claim that the results of the tests given to such diverse groups, drawn from such varying strata of the social complex, are in any wise accurate, is to expose a fatuous sense of unfairness and lack of appreciation of the great environmental factors of modern urban life.<sup>1</sup>

With no funding from charitable foundations and no support from the academic community, the studies were too small to alter the "conventional wisdom." They did, however, encourage other scholars. Otto Klineberg, a psychologist and a student of anthropologist Franz Boas (Chapter 3) was among the first to seek evidence in support of Bond's criticisms. In his *A Study of American Intelligence*, Carl Brigham had used the results of the Army tests to argue that "Nordics" [Northern Europeans] are mentally superior to "Mediterranean" and "Alpine" peoples. To test that claim, Klineberg administered performance tests in ten of the "purest" Nordic, Mediterranean, and Alpine villages he could find in Europe. The three groups showed no significant differences in the kinds of abilities the test measured.

Next Klineberg turned his attention to differences between the scores of black and white Americans. In Europe, he noticed that people who lived in cities did better on the tests than those who lived in rural areas. In the United States, blacks who lived in large cities scored higher on the average than both black and white groups in rural communities in the South. Brigham and other eugenicists explained the phenomenon by arguing that people in urban areas scored higher because the more intelligent people tended to leave rural areas for the city.

To test that idea, Klineberg examined school records of black children in three southern cities to determine whether those who went north were brighter than those who stayed behind. He also gave IQ tests to southern-born African Americans who had lived in New York City for various lengths of time to see if the environment made a difference. In 1935, Klineberg wrote:

The superiority of the northern over the southern Negroes to approximate the scores of the whites, are due to factors in the environment, and not to selective migration. The school records of those who migrated did not demonstrate any superiority over those who remained behind. The intelligence tests showed no superiority of recent arrivals in the North over those of the same age and sex who were still in southern cities. There is, on the other hand, very definite evidence that an improved environment, whether it be the southern city as contrasted with the neighboring rural districts, or the northern city as contrasted with the South as a whole, raises the test scores considerably; this rise in "intelligence" is roughly proportionate to length of residence in the more favorable environment.<sup>2</sup>

As Klineberg and others challenged racist assumptions in one study after another, a number of psychologists and other social scientists began to doubt their findings. In 1928, Henry Goddard admitted that a person who has an IQ in the 70s was probably not a "moron." He also acknowledged that many people who did poorly on his tests were able to learn, grow, and even improve their scores. In time, he even backed away from his claim that the "feebleminded" were a grave threat to the general public.

In 1930, Carl Brigham also had second thoughts about his work. In a public retraction of the conclusions he reached in *A Study of American Intelligence*, he stated, "Comparative studies of various national and racial groups may not be made with existing tests. . . . One of the most pretentious of these comparative racial studies—the writer's own—was without foundation."<sup>3</sup>

## CONNECTIONS

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What does an intelligence test measure? What do the results reveal? Why does Bond call Brigham's interpretation of the IQ tests "propaganda"? Why did he believe it was important for African American students to know the details of the "operation, use, and origin" of these tests? How important was it that other students also know those details?

How did Klineberg's research challenge the "conventional wisdom" about racial differences? About the relationship between heredity and intelligence? About the relationship between environment and intelligence?

What kind of evidence does Bond use to challenge Brigham's conclusions? What evidence does Klineberg use? From your own experience, what kinds of proofs are most likely to alter perspectives? Inspire a reassessment of a long-held belief?

What questions does this reading raise about the importance of dissent? How did dissident voices make their views known then? How do they make their views known today? Is it enough to just speak out?

In the late 1800s, a group of German anthropologists tried to determine whether there were racial differences between Jewish and "Aryan" children. After studying nearly seven million students, the society concluded that the two groups were more alike than different. According to historian George Mosse, the survey should have ended racist thinking in Europe. Instead, he concludes, "The idea of race had been infused with myths, stereotypes, and subjectivities long ago, and a scientific survey could change little. The idea of pure, superior races and the concept of a racial enemy solved too many pressing problems to be easily discarded."<sup>4</sup> What do Mosse's comments suggest about the difficulty of overcoming myths about race? How do his comments support the view that what people believe is true is often more important than the truth?

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1. "Intelligence Tests and Propaganda" by Horace Mann Bond. Copyright © *Crisis*, June, 1924 (vol. 28, #23).

2. Quoted in *In the Name of Eugenics* by Daniel Kevles. Harvard University Press, 1995, p. 138.

3. "Intelligence Tests of Immigrant Groups" by Carl Brigham, *Psychological Review* 37, 1930, p. 165.

4. *Toward the Final Solution: A History of European Racism* by George Mosse. Fertig, 1978, p. 92.

## Intelligence Testing Today

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### Reading 9

Journalist Walter Lippmann was one of the earliest critics of intelligence testing. He was not sure whether the test measured “the capacity to pass tests or the capacity to deal with life, which we call intelligence.” Regardless, he wrote, the examiner “is testing the complex result of a long and unknown history, and the assumption that his questions and his puzzles can in fifty minutes isolate abstract intelligence is, therefore, vanity.”

In the 1920s, many researchers dismissed Lippmann’s criticism as uninformed because he was not a psychologist. They also ignored scholars like Horace Mann Bond and Otto Klineberg. Today scholars are not as quick to discount such critiques. Wendy M. Williams, an associate professor of human development, explains why.

With no formal schooling to speak of, [my grandfather] could build anything, from a dollhouse to a real house, from scratch, without plans. He also could fix anything—kitchen appliances, cars, children’s toys, radios, televisions, you name it. He even published a book of his poems when he was in his 70s. He was not clever, however, at taking I.Q. tests, which he confronted in grade school, in the military, and when he looked for a job when he was in his early 20s. He hated taking the tests; he was made anxious by the clock ticking as he worked, and he found it confusing and unnatural to think in terms of abstractions, be they mathematical, pictorial, or verbal.

Because of his performance on tests, my grandfather did not consider himself very intelligent. Neither did the teachers, military recruiters, and job-placement personnel who used the test scores: They reduced my grandfather’s intelligence to a simple, relatively low number on a page and labeled him “slow.” The I.Q. tests that my grandfather took in the 1930s—versions of which are still in use today—were created to determine which children failing in school were doing so because of low intelligence, and which were failing for other reasons. Through questions about the meaning of words or paragraphs, mathematical problems, visual patterns, and so forth, these tests measured intelligence in terms of the number of problems a person could solve, compared with the average for other people of the same age.

Throughout our society, we still use I.Q. tests, and their close surrogates such as the SAT [the Scholastic Aptitude Test], in the belief

that they provide a meaningful measure of a person's innate intelligence and capacity for success in intellectual tasks. We all know the considerable weight these tests are given throughout education, as well as in hiring and promotion decisions in the workplace. But scholars still have not explained how, if I.Q. tests tell us the most important things we need to know about a person's intelligence, we can account for my grandfather and the many others like him, who are competent and successful in so many domains in the real world.

This is the issue that my colleagues and I have studied in our attempt to democratize the concept of intelligence, by including in it more and different types of abilities and talents. While we have been conducting our research, other scholars working in the same area have demonstrated that I.Q. tests' reputation as an ultimate seal of approval was premature.

For example, consider the work of James Flynn, a political scientist at the University of Otago, in New Zealand. He proved that I.Q. scores have risen sharply over the past 60 or more years in all 20 nations for which data exist. In fact, a person born in 1877 whose score put him or her in what was then the 90th percentile on a widely used reasoning test would, with exactly the same number of correct answers, rank in only the 5th percentile of people born in 1967. (Flynn proved this by examining the raw numbers of correct answers on the same tests used over time. Most researchers rely on "normed scores," which are adjusted to keep the average score on a test constant from year to year, and which thus cannot accurately be compared over time.) . . .

We learned two things from Flynn's work: First, a high I.Q. score does not necessarily mean intelligence, nor does a low score mean stupidity. Second, whatever the test measures is highly mutable. Flynn is fond of saying that, if we take I.Q. scores seriously as meaningful predictors of intelligence, our grandparents would have been unable to understand the rules of baseball. Given the rapidity of the changes Flynn reported, genetics could not be responsible, and so researchers have focused on aspects of culture, as well as on health and nutrition, in attempting to explain why people today are markedly outscoring their ancestors.

One possible cultural factor is that people are increasingly familiar with the material on certain types of I.Q. tests. My grandfather's generation rarely encountered anything in their everyday lives even remotely resembling the items on such tests. Today, however, mazes, puzzles, and other games that are thinly disguised versions of

items from actual I.Q. tests appear on cereal boxes and on place mats at fast-food restaurants. People play with toys such as Rubik's Cube. Some computer screen-saver programs are strikingly similar to other kinds of intelligence tests: The complex patterns dancing around the screen closely resemble the . . . most popular test of reasoning ability. Is it any wonder that today's kids outperform my grandfather's generation?

But the more important question is: Does this greater exposure to material similar to that on the tests make today's children and adults smarter in any meaningful way than earlier generations of test takers? I think not. The intellectual accomplishments of people in past eras are awe-inspiring, and the challenges and hardships that they had to overcome were extraordinary. Looking back on these accomplishments should make us cautious in interpreting the significance of I.Q. scores as predictors of likely success in the real world.

Perhaps the reason that so many individuals with low or moderate I.Q.'s, such as my grandfather, are so successful in their daily lives can be found in recent research that has broadened the concept of intelligence. Researchers today are demonstrating empirically the importance of many abilities that are not measured on I.Q. tests. Consider studies that my colleagues and I have conducted to assess practical and creative thinking in business, the military, and elementary and middle schools.

We wanted to know why some business managers with M.B.A.'s from prestigious graduate schools alienate their subordinates virtually overnight, why some military leaders lose the respect of their soldiers and subordinate officers by adhering to formal doctrines even in situations where they are not adequate, and why some bright children hand in boring compositions after the deadline and then react with surprise when they receive low grades. We found that all of these people lack practical intelligence—an ability essential to success that differs from the more "academic" intelligence measured by I.Q. tests, and which is largely independent of it.

We learned that practical intelligence consists of three types of abilities—managing oneself, managing others, and managing the organization or environment in which one works, such as a school, corporation, or hospital. Each ability is important in a unique way, and each contributes to real-world success. People may be strong in one type of practical intelligence and weak in another, although, generally, being savvy about managing organizations builds on the abilities to manage oneself and others. Importantly, traditional measures of

I.Q. tell us little about who has and does not have the three types of practical intelligence.

Where are scientists headed in our search to understand intelligence? Increasingly, we think in terms of types and facets of intelligence that lead to success in specific contexts: social intelligence, emotional intelligence, creative intelligence, and practical intelligence. We look at people's ability to manage their lives by motivating and organizing themselves to perform effectively. We consider people's ability to get along with their employees, peers, supervisors, and teachers. Often, it is those types of intelligence, as much as I.Q. scores, that determine success or failure in education and in the workplace, especially among people with a similar range of I.Q. scores.

Historically, a person's intelligence was reduced to a single number. Today, that number still holds sway in many admissions offices, but the realization is growing that we need to characterize and measure more of the abilities that are important to adult success. We owe the next generation a broader and more relevant battery of tests, designed to measure the many varied abilities that contribute to success in the real world. Better tests will lead to the admission of applicants with a wider variety of skills, thus diversifying further the pool of talent available to our society.

As we look ahead to the demographic changes under way and recognize the need to distribute educational and employment opportunities fairly and broadly, it becomes even more essential for us to assess people's capabilities accurately. We need a conception of intelligence that encompasses my grandfather's talents. The most successful leaders in business, the professions, and other enterprises know how to define workable goals and motivate themselves to accomplish them; they know how to "read" and motivate other people; and they know how to distinguish solutions that work in the real world from ones that work only in books—all abilities that current I.Q. tests do not measure.

This is not to say that success on an I.Q. test does not provide meaningful information; it is just that other types of success matter, too. It should not escape us that the technological developments on which our society depends may require types of intelligence—practical and creative, for example—that are different from those emphasized in our standardized tests. The science of understanding intelligence thus may progress farther and faster by recognizing the wisdom of our grandparents.<sup>1</sup>

## CONNECTIONS

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If IQ tests tell us the most important things about a person's intelligence, asks Williams, how do we "account for my grandfather and the many others like him"? How does she answer her own question? How do you think Goddard or Brigham would answer it? How would you answer it?

What does the work of James Flynn add to our understanding of intelligence? How does it undermine the belief that intelligence is a matter of genes?

Scientist Jacob Bronowski writes that "every judgment in science stands on the edge of error, and is personal." How does Williams's account illustrate that idea? What is the difference between viewing one's work as "on the edge of error" as opposed to "on the edge of truth"?

Chapter 1 raised the question of what do we do with a difference. How does Williams seem to answer that question? How does her answer differ from the way eugenicists answered that question? What do your answers suggest about what it means to "democratize" intelligence?

In 1999, a Princeton molecular biologist inserted in mice a gene that codes for a protein in brain cells associated with memory. Because the experimental animals performed better than the control mice on tests of learning, the media claimed that the researcher had located "the smart gene" or the "IQ gene." How did the reporters seem to define intelligence? How important is that definition?

Write a definition of *intelligence* based on the working definition you created as you read this chapter. Research recent efforts to define the term and use your findings to revise or expand your definition. You may want to focus on the work of such scholars as James Flynn, Daniel Goleman, who stresses the importance of emotional intelligence, or Howard Gardner, who writes of multiple intelligences. How does their work deepen your understanding of intelligence? What new questions does their research raise?

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1. "Democratizing I.Q." by Wendy M. Williams. Copyright ©1998 by *The Chronicle of Higher Education*, May 5, 1998. Permission granted by author.

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Answers to Beta test, page 158.

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|------------|-------------|--------------------|---------------------|
| 1. Mouth   | 6. Ear      | 11. Trigger        | 16. Net             |
| 2. Eye     | 7. Filament | 12. Tail           | 17. Forearm         |
| 3. Nose    | 8. Stamp    | 13. Leg            | 18. Horn            |
| 4. Spoon   | 9. Strings  | 14. Shadow         | 19. Arm (in mirror) |
| 5. Chimney | 10. River   | 15. Ball (in hand) | 20. Diamond         |