

DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES
CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

INTELLIGENCE OF SCHOOL CHILDREN:
LOS ANGELES AS A CASE STUDY 1922-1932

Judith Raftery



HUMANITIES WORKING PAPER 113

© Judith Raftery May 1985

ABSTRACT

In an effort to construct the most advanced school system in the nation, Los Angeles school administrators and educators initiated a new scientific method of group intelligence testing. Almost immediately educators discovered serious limitations with the process and resisted its exclusive use.

This study examines the reception of this new technology in Los Angeles between 1922 and 1932. Many historians have seen those associated with I.Q. measuring as bulwarks supporting the hegemony of Anglo-Saxon upper-middle class society. While their criticism has brought some non-equitable aspects of twentieth-century public education to surface, it has not led to our understanding of how educators interpreted the tests. An analysis of the sources, including reports published in the Department of Psychology and Education Research Bulletin of the Los Angeles City Schools, the Teachers' and Principals' School Journal, and the Minutes of the Board of Education, provides insight into how Los Angeles educators viewed standardized testing.

INTELLIGENCE OF SCHOOL CHILDREN: LOS ANGELES AS A CASE STUDY

1922-1932

Judith Raftery

California Institute of Technology

This is a study of how the always controversial I.Q. testing became a tool for one of the nation's most advanced and progressive school systems, the Los Angeles public schools. I.Q. testing came under attack almost immediately as it was introduced in the early twentieth century. Some intellectuals criticized the hereditarian bias of the tests, others, less concerned with ideology, held they were not trustworthy evaluators of intelligence.¹ Educators who promoted testing were also condemned, either as the benighted who shifted American education from the democratic liberal tradition, or less benignly, as "social controllers" and perpetrators of inequality. With less bold strokes, but with vigor, teachers, administrators, and counselors were accused of purposefully using testing to segregate children by race.² These criticisms, however, neither explain what made testing possible within the public schools, nor contribute to our understanding of how educators interpreted the tests. These questions are best addressed within a narrower parameter. It is safer to generalize from at least one case study: the experience of Los Angeles

with I.Q. testing over a ten year period.³ Most of the data compiled for this study comes from reports published in the Department of Psychology and Educational Research Bulletin of the Los Angeles City Schools, the Teachers' and Principals' School Journals, and the Minutes of the Los Angeles Board of Education.

Los Angeles had a population of over half a million people in 1920. Its rapid rise made Los Angeles the premier center west of the Rockies and the fifth largest city in the nation. The city's leaders epitomized progressivism. They had by 1903 reorganized municipal government to include innovative procedures such as the initiative, the recall, and the referendum. By 1911 they took pride in seven settlement houses and a successful campaign for women's suffrage.⁴

Los Angeles wanted the best, the most progressive school district to parallel its image as a model city. To this end teachers, administrators, and Board of Education members -- Los Angeles school people -- along with other reformers had established social services programs within the schools. Penny lunch programs, after-hours playgrounds, day-care centers, and kindergartens aimed at offsetting the poverty in homes and retaining a sense of community as the city changed in size and demographic makeup. Establishing order in an industrializing, urbanizing society became the central task of community leaders throughout the progressive era.⁵

Until the first World War no one immigrant group dominated the city and the percent of foreign-born in the population had stood at nineteen for several decades. By the 1920's, however, the large number

of Mexicans who arrived in the city dwarfed all other arrivals. Discouraged by the chaos of their own revolution and encouraged by United States agricultural interests,⁶ they flocked to Los Angeles. Acutely aware of the Mexican presence, many teachers and administrators sought ways to integrate and accommodate Mexican children within the city schools. They turned to mental or I.Q. testing, terms used interchangeably at the time, because they hoped it would help them find a suitable curriculum to serve an increasingly diverse population.

Educators in Los Angeles hired the best people available to assist them. Lewis Terman taught in the city's Normal School. No single person in the United States is associated with I.Q. testing more than Terman. A native Hoosier, he received his Ph.D. in psychology from Clark University in 1905. Under the leadership of G. Stanley Hall, Clark University quickly became the center for psychological study and as a student of the reknown psychologist, Terman began his life-long interest in mental testing. During his studies, however, Terman contracted tuberculosis and like many other health-seekers came to Southern California. After a year in San Bernardino, he accepted a position at Los Angeles Normal School where his enthusiasm and innovative theories of intelligence measurement influenced the corps of students he trained. His students not only taught in the city's schools but also some held positions in the district's Department of Psychology and Educational Research. For instance, the department's statistician, Ellen Alice McAnulty, worked with Terman as his research assistant before she accepted her position. Also closely allied with Terman,

Dr. Arthur H. Sutherland directed the educational research for the Department of Psychology and Educational Research. In 1922 Sutherland outlined the workings of the department in a booklet, Intelligence Tests and School Organization. Terman, a member of the Commission on Revision of Elementary Education which prepared the booklet, wrote the preface.⁷

Terman began his work on the American version of the classical I.Q. test, the Binet, in Los Angeles and continued the project when he went to Stanford University in 1910. Thus Stanford's name was linked with that of Binet's to give the most widely known test its title.⁸ Terman first used the term "intelligence quotient" and expressed the numerical relationship of an individual's mental age to chronological age. The Stanford-Binet became the model for all other I.Q. tests including the achievement tests.⁹ Terman felt that heredity was the prime determiner of intelligence. He attributed mental retardation to "inferior mental endowment" and discounted irregular school attendance, the use of foreign language in the home, malnutrition, bad teeth, and adenoids as major causes of low I.Q. In his 1919 work, Intelligence of School Children, he announced that, contrary to some of the fuzzy theories of progressives, "Educational reform may as well abandon, once and for all, all effort to bring all children up to grade."¹⁰

The mechanism for Terman's mass testing program was put in order by Los Angeles School Superintendent Robert Shiels. A former New York commissioner, Shiels had been a consultant to the Los Angeles Board in 1915 and had written the Report which drew attention to some

of the deficiencies within the schools. In 1917 he established the Department of Psychology and Educational Research. The new department provided the testing program a base from which to operate and gave it the autonomy and resources it needed.¹¹

The ultimate outcome of the mass testing program depended on a curriculum revision to allow for the variations in mental abilities. To accomplish this task, the Board turned to the University of Chicago's J. Franklin Bobbitt. Bobbitt, known as the father of progressive curriculum, served as an Assistant Superintendent from January to April, 1922, and again for those same months in 1923. His view on education differed from many of the earlier curriculum reformers. He expressed a more pragmatic, less innocent approach, one that continued to hope for a better society, but one that depended on good management and left nothing to chance. In the 26th Yearbook of the National Society for the Study of Education he wrote, "The school is not an agency of social reform. Its responsibility is to help the growing individual continuously and consistently to hold to the type of living which is the best practical one for him."¹² Bobbitt was not a strict hereditarian. He felt that, after making allowance for the heredity factor, the education of any person was wholly determined by experience. He stressed the advantages of ability grouping. The Department noted that children progressed five to seven times as rapidly in equal groups as they did in unequal ones.¹³

There is no doubt that Los Angeles welcomed testing programs because they were scientific and science was playing an ever more

active role in post-war America. Most Americans popularly acclaimed science as the new gospel. The Nation expressed the views of the majority when it wrote in 1928, "A sentence that begins with 'science says' will generally . . . settle any argument in a social gathering or sell any article from toothpaste to refrigerators." Also, educators turned to science for guidance.¹⁴ Perhaps no area of science affected the attitudes and policies of Los Angeles schools more than the work of psychologists, particularly those who concentrated on the measurement of children's intelligence. Their testing program offered the ultimate in effectiveness and efficiency.

During the 1920s, Los Angeles school counselors tested nearly the entire school population. Some educators were satisfied with standardized I.Q. tests while others explored different avenues. Those who worked with immigrant children found I.Q. tests an inadequate gauge; many of them turned to achievement tests. Some educators administered tests in such diverse subjects as music, art, handwriting, as well as in the conventional subjects of reading, spelling, and arithmetic.

For instance, the schools went to great lengths to find suitable tests for non-English speaking children, particularly for Mexican children. In June 1924, Assistant Superintendent Emma Raybold reported on one of the earliest group tests on the Mexican population. This early test was not to assess intelligence but to determine the most reliable test for future measurements. During the previous fall, school counselors had administered a series of verbal and one non-

verbal intelligence test to two groups of "unselected" first graders in the San Fernando Valley schools. The groups consisted of Spanish-speaking, Mexican children at San Fernando and English-speaking children at Lankershim. The counselor had added the Kohs Block test because the nonverbal performance test required no fluency in English. It did require the children to group together blocks of various colors according to a set pattern.¹⁵

Correlation co-efficients for most of the test scores were quite high. However, the scores from the non-verbal Kohs tests of Mexican students correlated less well with their scores on verbal tests, such as the Detroit, the Binet, and the Pintner.¹⁶ Unfortunately, Raybold failed to report the range and standard deviation of any of the test scores. In addition she did not mention whether she performed statistical tests to determine if the differences between the correlation were quantitatively significant. And finally and most importantly, she failed to give the Kohs test to the Lankershim students, thereby obviating several valuable comparisons.

The test results caused confusion. Testers assumed that the Kohs test would be most suitable for non-English speakers. When Raybold found that Kohs scores of Mexican children correlated least with the verbal tests, she concluded that the Kohs test "was not as reliable with a primary group of Mexican children who cannot speak English as is a test involving language factors." On the other hand, the Detroit test correlated highly with the other verbal tests. Raybold noted that, "Mexican children actually understand the English

language more than we realize." In Los Angeles the Detroit test became the standard for testing Mexican children.¹⁷

By rejecting the Kohs test and selecting the Detroit test, because of its seeming reliability, the Board preserved the cultural and economic bias of the testing program. In this case they failed to realize that a nonverbal test should be expected to correlate less well with verbal tests than would another verbal test, and that the nonverbal test would provide a different but no less valid view of students' mental abilities.¹⁸

Satisfied with the Detroit test, the psychologists decided to use it with first graders at Belvedere school, an ethnically mixed school located east of the central city. They felt that the Detroit test pointed out individual differences better than either the Binet or the Pintner, and it lent itself more readily to a translation into Spanish. Belvedere counselor Edith Heim proposed that they administer the Spanish translation of the Detroit tests at Belvedere because she hoped that the translated test would determine whether language was the handicap or whether the children suffered from mental deficiencies.

The translated Detroit test probably did not correctly identify the children's abilities. Although it was in Spanish, it undoubtedly had been translated into standard Castilian, a form lacking in many idiomatic expressions common to the barrio. Some educators recognized the unreliability of translated tests and wrote their own. For example, Hershel Manuel and his staff in the Department of Education at the University of Texas developed and administered their own Spanish

version by 1931.¹⁹ As the Texas team found, a direct translation ignores cultural biases--those beyond the simple biases of language. Even if the children used Castilian, the same cultural partiality that existed in the English version would continue in the translation. For instance, a story about zoo animals in either English or Spanish requires prior knowledge of a zoo or animals. The same criticism applies more acutely to a non-verbal test. On a picture completion test, some of the pictures are easily completed while others rely on prior experience: one needs to be acquainted with a telephone in order to add a cord, as one must have some familiarity with an American hearth to add a screen, and one must have seen a live elephant or a picture of one to add a trunk. Heim felt that the Spanish translation had only one section where the Mexican children might be at disadvantage and that section involved marking "five things which we dig out of the ground." Whether that meant fruits and vegetables not familiar to Mexican children is not clear, but since this item was only one out of fifty, or one month out of the mental age, she decided that a wrong answer would not be much of a handicap.²⁰

Heim proposed an intermediary class between kindergarten and first grade as a holding place for children lacking proficiency in English, or until they reached a mental age of 6. The C1 class, already in operation on a limited basis, would avoid the problem in which "two or three semesters of either drifting or drowning result in indolent, uninterested pupils who become the problem and despair of even the best teachers."²¹

In many ways, the Department acted out of a sense of frustration. By trying to develop a test that would record a realistic score for non-English speakers, they demonstrated a sensitivity to the language problem, yet failed to understand that even though the Mexican school children in Los Angeles were becoming bilingual and bicultural, they had not acquired sufficient fluency in either language or culture to affect notably a test that was geared to English-speaking, middle-class Americans. Standard I.Q. tests translated into Spanish would not give any more realistic results than those in English. The real problem with the testing program, whether in English or in Spanish, was that the tests had been devised for a middle class population.

Heim and many others in the profession viewed a lack of English language proficiency as a manifestation of low mental ability instead of a lack of experience with a new language and culture.²² Yet she proposed intensive exposure to English in the C1 class to overcome English deficiencies. She stressed homogeneous grouping where the teacher concentrated on English. Heim's solution exemplifies the contradictory thinking of many Los Angeles educators. On the one hand she stated that English difficulties reflected low mental ability, and on the other she wanted to solve the problem by total immersion in special English classes.

In December of 1925 the schools directed another test at Mexican children. This time the test was in an integrated setting at the Palms school. The results appeared in the Bulletin and the title

indicates the community's response to the influx of Mexican children:

"The Mexican: An Educational Asset or an Educational Liability?"

Palm's principal, Mrs. Leo Gamble, refuting what she called the "feeling of unfairness of dubbing him 'lazy' or of feeling him a liability without first measuring his efforts . . .," chose to administer two different tests, one to measure intelligence and the other to measure achievement.²³

The school administered tests to two hundred and fifty children in the third through eighth grades, twenty-two of whom were Mexican. Gamble viewed the Mexican community as upwardly mobile; half owned their own homes and five had automobiles. Most of the children were American-born and not one had immigrated after the age of two. Many of the families spoke some English.

Nevertheless, the I.Q. test results were disappointing and tended to reinforce established biases. The average I.Q. in the school was 100.25, while Mexican children scored an average of 78.75. Not satisfied with the I.Q. results, Palm's counselors administered achievement tests, the achievement scores told another story. Mexican students consistently scored a higher percentage in achievement when compared to their I.Q. than the rest of the students tested.

What Gamble failed to note, and what a careful examination of the tests might have revealed, was that even though the Palm's Mexican community seemed upwardly mobile, the tests continued to impose cultural biases against them. The fact that some of the parents spoke English, and that English dominated the school yard conversations did

not guarantee that the Mexicans knew enough English to perform well on a verbal I.Q. test. Another possible reason for lower test scores of the Mexican children was that they entered school a year or so later than the English-speaking children. In the first grade, Mexican children's average age was 8.5 years, while the average American child was only 6.9 years. The ratio of mental age to chronological age which defines the Stanford-Binet I.Q. would automatically favor the younger group. Nevertheless, Gamble's use of achievement tests to find a more reliable testing method for the Mexican students' ability showed a continuing sensitivity and suspicion of the tests adequacy.

Another indication of educators' reluctance to rely solely on I.Q. tests to gauge mental abilities appeared in the Bulletin in the fall of 1926.²⁴ Principal Joseph Kendall of the Lemona Grammar in Van Nuys, in rural San Fernando Valley, a newly constructed, completely segregated Mexican School, reasoned that little significance should be attached to the low intelligence scores because the measure used, the National Intelligence Test, presupposed reading ability in English. To make the teachers' work as effective as possible, Kendall had decided to find another method using the National Intelligence Test in Spelling, Arithmetic, and Reading Comprehension. The entire school personnel directed their efforts at improving the standard scores.

From the beginning the Lemona educators realized that non-standard procedures needed to be employed if they were to attain their goals. Actually, the school's scores ranked higher than some expected, considering the fact that so many of the pupils lacked fluency in

English. For example, in arithmetic they ranked almost at the city's norm; in reading comprehension they scored slightly less than a year below the norm, and in spelling, they were a little more than a year behind. However, since many of the children were older for their grade, the retardation rate was calculated at two and a half years. Their average I.Q. was 75.

The teachers saw their task clearly. Without allotting any extra time for fundamentals, yet not allowing any interference during that time, they went about their mission in their most creative manner. The staff combined standard materials with work that they had designed themselves. They obviously stimulated the children and the results pleased them. The collective I.Q. scores rose to 81, and Kendall noted that the change "was of course due to the fact that the added knowledge of the English language which the pupils had acquired and the greater reading ability caused them to register to a closer degree their real intelligence."²⁵ In the teachers' eyes the real gains came in achievement. In only seven months the students' overall gain amounted to fourteen months, or a 100 percent acceleration rate. In arithmetic they gained thirteen months, ten months in reading comprehension, and a remarkable twenty months in spelling.

Kendall imagined what progress could be made if the school was integrated. Although English was spoken in the classroom, on the playground the children spoke Spanish and "continued to think in the Spanish language."²⁶ Referring to the success the school achieved, he wrote, "If such results can be achieved with a group of foreign

children unleavened by the presence of English-speaking mates, what might we not expect if similar enthusiasm and equally efficient teaching methods were applied in schools where our foreign children have the added advantage of hearing English on the playgrounds and having associations with children skilled in the customs our schools must teach to our newer citizens?"²⁷ Later advocates of school integration would repeat Kimball's question.

Kendall viewed assimilation as the key solution to the country's problems as well as to the immigrants'. The study clearly shows that Kendall and his dedicated staff worked for the betterment of their pupils, at least the betterment in terms of higher scholastic achievement. They discouraged expressions of Mexican culture and the Spanish language -- expressions of biculturalism and bilingualism that many advocates of pluralism value in the 1980s -- because they had judged the road to success led through Anglo-American culture and the English language. Kendall was hostile toward the Mexican culture and language but not toward Mexican children. In true melting pot rhetoric, Kendall implied that once rid of their natural and linguistic baggage immigrants would be just like everyone else.

Los Angeles school educators also questioned the relationship between I.Q. scores and educational attainment. Teachers wondered why some students had successful school careers and others did not. In 1928, Winifred Murphy, a counselor at Belvedere Junior High, analyzed the problem to determine which factors led students to advance to senior high and which factors led only some of those to matriculate.

Obviously Murphy was weighing the merits of educating masses of children beyond eighth grade, yet her study presents some interesting insights into her own sensitivities to cultural differences within the immigrant community. Her study shows an awareness that various criteria need consideration in order to understand patterns for school achievement. She noted the influence of family expectations on continued schooling. Fifteen and sixteen year olds, for example, were expected to take care of their own needs, and this assumption led many to choose work over school. Murphy found that native capacity had little to do with whether or not students entered senior high, since the number of non-attendant pupils with low and high I.Q. scores formed a normal distribution curve. Also, correlations between I.Q. and matriculations were too low to be significant, as were age and grade marks. Correlations between effort and I.Q. and between cooperation and I.Q. proved insufficient also. The counselor had to conclude that since none of the criteria used correlated with each other, the test instrument was inadequate. Her remarks indicate the ambivalence that I.Q. testing had created, since test scores apparently gave little indication of a pupil's success or failure in senior high.²⁸

The Educational Research Bulletin in 1928 also printed a study on the methods used to classify students into groups. Questionnaires were sent to all elementary schools: regular, where the majority spoke English; semi-neighborhood, where 30 percent were non-English speakers; and neighborhood where 50 percent were non-English speakers. In the neighborhood schools only, principals' and teachers' judgments

received priority over test results in determining grouping.

A more comprehensive example of the growing suspicion about the adequacy of I.Q. tests as means for classifying students appeared in a 1929 Bulletin. The studies conducted in 1926, 1927, and 1928 were based on over half of the elementary schools in the city. The results proved predictable. The percentage of mentally retarded, with an I.Q. lower than seventy, was highest in the neighborhood schools, those with over 50 percent immigrant children, and lowest in the normal schools, those with less than 30 percent immigrant children. The percentage of children scoring above 130 was highest in the normal schools and lowest in the neighborhood schools. McAnulty, the Department's statistician, noted two factors that influenced her findings; the tests required a reading knowledge of English when a very large proportion of children in the city were foreign and a number of younger and brighter children had been promoted to senior highs, leaving the elementary schools in foreign neighborhoods bereft of their superior scores. McAnulty planned another study to determine to "what extent the use of groups tests have failed to predict the intelligence quotient (as later determined by individual Binets) for the various groups (foreign and native) found in our schools."²⁹

Another indication that the department found the testing results questionable appeared in a study done by McAnulty and Clara Schmitt in 1931. At this time they tested groups of eight and nine-year-old Mexican and American students whose I.Q.s ranged between 60 and 69. The testers wanted to find out whether Mexicans failed the

language test more often than Americans. They were not disappointed. American students succeeded 84 percent of the time while Mexicans only 57 percent. On the non-language sections, the results were very close. For example, Mexicans had success at counting from twenty to one 94 percent of the time, while the others succeeded 90 percent; Mexicans succeeded 88 percent of the time in finding likenesses, but the Americans only 72 percent. McNulty and Schmidt concluded that the six Binet tests "may be a test of racial differences, but examination of the items indicate that they are the ones most affected by language."³⁰ They decided that Mexican children have a mental age at least a year higher than is usually computed for them.

In comparison to Mexican children, blacks received less attention in the literature. For example, between 1923 and 1932 the Bulletin printed many studies of Mexican children and only one study of black children.³¹ One reason for their interest in Mexican children may have been the size of the Mexican population. Although the black community grew during the 1920s, it never reached the proportions of the Mexican. Blacks, like other Americans, lured by the promises of temperate climate and economic opportunity, flocked to Los Angeles during the decade following the war. The Census figures of 1910 reveal a black population of 7,599, the 1920 numerations stand at 15,579, more than 100 percent increase; and in 1930, 38,894 resided in the city. However, the black community's major growth came during the next decades.³²

Another reason the blacks received less attention in the

literature may be because educators found that they had few learning disabilities. Lawrence DeGraaf's study of Los Angeles's black population indicated that, until the 1930s, when poorer southerners migrated into the city, most of the black residents were part of a nascent middle class.³³ Two earlier studies tend to confirm DeGraaf's analysis. In both studies black children scored as well or better than their white counterparts. A Bulletin's study, published in 1923, reported on a test given to five hundred black children in five elementary schools. The results were compared to the results of other children from fifteen schools that the psychologists felt represented the city as a whole. Based on the scores of the National Intelligence Test, the black children's median score was 104.7, while the median score of the "representative" schools was 106.0. Scores from Achievement tests also compared favorably. Only on the sixty word spelling test did black children score almost a year below grade level, but as assistant supervisor Willis Clark noted, the situation was not materially different for the rest of the school population.³⁴ Ten years later McAnulty promised another study of black school children. It was part of a three-part query of Mexican, Japanese, and black school children to determine whether these minorities "measured up to the norm." McAnulty reminded the reader that the standardized tests had been devised for white children. She failed to mention that it was devised for middle-class white children.³⁵

Part of the study alluded to in the Bulletin may have been Hazel Whitaker's three-year survey of Los Angeles's black population

done in 1931. The first black to receive a regular teaching assignment at Los Angeles High, Whitaker used the files of the Department of Psychology and Educational Research when she found that Negro and white children from the same social and geographic area had similar I.Q.s. One difficulty Whitaker encountered was "to find one hundred gifted white children living in the community with blacks."³⁶ Most of the whites were recent immigrants and poorer than their black neighbors. They also scored lower on the tests.

Yet during those years Los Angeles began segregating black students. The I.Q. tests played little or no part in their decision. There is ample evidence to prove the Board bowed to community pressure and began deliberate segregation of blacks during the late 1920s. In the case of Jefferson High, and later of Jordan High, the Board re-drew some school boundaries, and in others, school staff directed black students into vocational education classes.³⁷

The city's Japanese students, the only other sizeable non-white group, apparently posed no particular educational problems. Testers found the I.Q.s of Japanese students on a par with whites. The January 1932 Bulletin showed that test results of Japanese and white I.Q.s averaged 105. McAnulty noted that the results appeared unusually high for both groups, but she did not question it further.³⁸

Despite anti-Asian legislation in 1913 and 1924, there is no data to suggest that Japanese children were labeled defective. Teachers praised the scholastic aptitude of the Japanese pupils. A librarian from the Boyle Heights branch of the city library remarked,

"The Japanese are not to be forgotten. We have many of them, and the Japanese children are great readers. The children are good students and make the most of their opportunities."³⁹ Yet at the same time that teachers and librarians commended Japanese students, other school administrators opened their facilities to the Anti-Asian League sponsored events. Nonetheless, the Board refused to succumb to community pressure and did not segregate Japanese students.

By the mid-twenties, Los Angeles educators openly criticized the biases of the tests. Ethelda Drake, principal at Ann Street school, a tireless worker in Americanization, first at Ann Street and later at Ivanhoe, expressed her disapproval in the form of a satirical letter published in the School Journal. Drake, as keen an observer of human foibles as one can find, wrote:

Dear Fellow-Principals:

. . . .

On the long stretch through the Indian Ocean I conceived the brilliant idea of giving mental tests to the children of the various countries wherein I might visit. Fortunately, I was supplied with samples both for group and for individual tests. Through the ship interpreter I have had them translated into the different languages -- Chewrashee Tchuk-cha, etc., and have had the necessary numbers printed in each language. It is true that a translated test cannot be considered truly valid; yet it is analogous to the situation that confronts a foreign child in American schools, and we all know that test results under such circumstances are infallible.

I have just finished with the children of Krasnovodka. It is difficult for me to write without sympathetic tears. Every child I tested is definitely feeble minded.

Such a simple task as writing the word that makes the sentence comprehensible in "A _____ is made up _____ an engine and

coaches"; "Mother _____ doughnuts," in every instance remained unattempted. Fancy a child, as I found out by subsequent questions, had never seen a train or a doughnut! It is sad in away to think that actual mentality depends on such fortuitous circumstances.

I shall continue this testing as I travel leisurely from country to country, for however disheartening it may be when one considers those benighted lands, it is wonderfully inspiring to know that American children have such measurably higher intelligence quotients than any foreigner can possibly have.

Yours in the interest of research,

Ethelda Drake. 40

Another indication that the testing movement was under assault came from Superintendent Susan M. Dorsey. Addressing the National Congress of Parent and Teachers in Oakland in the spring of 1927, Dorsey stated:

In the first place, the test does not measure intelligence, but achievement. It does not measure brain matter nor brain capacity so much as brain opportunity. It is a test of mental experience, rather than mental ability. For example, a child born in the mountains, when questioned about wharves, piers, and fishing shacks, might display but little intelligence, but if the questions were directed toward forest trails and rangers, to mountain lakes and woodcraft, he might be found to be 100 percent intelligent.⁴¹

One of the most far-reaching statements appeared in the United States Office of Education Bulletin in 1933. Anne Reynolds, a teacher at Hollenbeck Junior High,⁴² prepared a federal study of Spanish-speaking students in five southwest states. She called for specialized training for teachers who taught Spanish speakers and for an increase in the number of Mexican teachers within the schools. She

noted that few Mexican children finished high school and, therefore, few qualified for college training to become teachers. She also mentioned an experiment in New Mexico where children were taught Spanish for one period a day and she noted that the preliminary results seemed encouraging.⁴³ Her remarks on I.Q. testing reflected the growing tendency of Los Angeles education to question the test results, especially when applied to Mexican children. She called for all results to be interpreted in light of economic and social status and school attendance.

To insure that Los Angeles had the most progressive school system, educators sought ways to achieve more homogeneity within the schools and within society. They hired experts to teach new methods and new techniques. They expanded the Department of Psychology and Education Research in 1917 and five years later developed a massive I.Q. testing program. Yet the testing program created more problems than school people had bargained for. Educators had hoped to solve the dual issues of reaching the slow learners and of enriching the curriculum for the gifted. They sought to overcome the dilemma of mass education and of children who were not conforming to their preconceived mold. They have been accused of using testing for exploiting Anglo-Saxon perceptions of superiority. Many undoubtedly thought that intelligence tests measured differences between races and nationalities, but others did not. Yet the schools continued to rely on the tests to solve the problems imposed by mass education, immigration, and industrialization. Educators were left with the hope

that the tests would provide scientific answers to questions of educational efficiency.

FOOTNOTES

1. Hamilton Cravens, The Triumph of Conservatism: American Scientists and the Heredity-Environment Controversy 1940-1941 (Philadelphia: University of Pennsylvania Press, 1978) pp. 249-250; John Dewey, "Mediocrity versus Democracy," New Republic 33 (December 6, 1922):36; Walter Lippman, "A Future for the Tests," New Republic 33 (November 29, 1922):10. For a discussion of I.Q. testing by teachers and administrators in England, see Gillian Sutherland, "Measuring Intelligence: English Local Education Authorities and Mental Testing, 1919-1939," J. V. Smith and D. Hamelton, eds., The Meritocratic Intellect: Studies in the History of Educational Research, (Aberdeen University Press, Aberdeen, Scotland, 1980) pp. 79-95. Mental testing challenged English concepts of class rather than race at a time when England had few non-white residents.
2. Gilbert Gonzales, "The System of Public Education and its Function within Chicago Communities, 1920-1931," Unpublished Doctoral Dissertation, Los Angeles: University of California, 1974.
3. Los Angeles public schools multi-racial and multi-national population provides a rich area for investigation. Most of the data compiled comes from reports published in the Department of Psychology and Educational Research Bulletin of the Los Angeles City Schools and from the Teachers' and Principals' School Journals.

4. Walton Bean and James J. Rawls, California: An Interpretive History, (New York: McGraw-Hill Book Company, 1983), p. 264; Robert A. Woods and Albert J. Kennedy, Handbook of Settlements, (New York: Charities Publication Committee, 1911) pp 153-157.
5. Judith Rosenberg Raftery, "The Invention of Modern Early Schooling: Los Angeles, 1885-1941," Unpublished Doctoral Dissertation, Los Angeles, University of California, Los Angeles, pp. 7-43.
6. The 1920 U.S. Census (Fourteenth Census of the United States VIV Population pp. 729-731) notes the number of Mexicans in Los Angeles at 21,653, a rise from 5,632 in 1910. Many scholars find these figures low but they indicate the dramatic rise in the Mexican population in ten years. See Albert Camarillo, Chicanos in a Changing Society: From Mexican Pueblo to American Barrio in Santa Barbara and Southern California, 1848-1930 (Cambridge: Harvard University Press, 1979) pp. 200-201. For a discussion of the agricultural interests recruiting Mexican workers, see Mark Reisler, By the Sweat of their Brows: Mexican Immigrant Laborers in the United States, 1900-1940 (Westport Connecticut: Greenwood Press, 1976).
7. Dictionary of American Biography, Supplement 6 (1956-1960), s.v. "Lewis Madison Terman," by Robert R. Sears, pp. 626-627. Lewis M. Terman, Virgil E. Dickson, A. H. Sutherland, Raymond H. Franzen, C. R. Tupper, and Grace Fernald, Intelligence Tests and School Reorganization, (Yonkers-on-Hudson, New York: World Book Company,

- 1922); Bulletin, 8, (1):13.
8. Daniel J. Kevles, "Testing the Army's Intelligence: Psychologists and the Military in World War I," Journal of American History 55:565-581.
 9. The earliest work in Achievement Tests was done by E. L. Thorndike. Achievements tests ran the gamut: Arithmetic, first introduced in 1908, Spelling, 1910, Handwriting and Drawing, 1913, Reading, 1914, and Language Ability, 1916.
 10. Lewis Terman, Intelligence of School Children (Boston: Houghton Mifflin Company, 1919), p. 73.
 11. Los Angeles Board of Education, Minutes to the Board; 18:399. Walter Jessup and Albert Shiels, Report of the Advisory Committee to the Board of Education (Los Angeles: Board of Education, 1915).
 12. Lawrence Cremin, The Transformation of the School: Progressivism in American Education (New York: Alfred A. Knopf, 1961), p. 200. In Cremin's opinion, Bobbitt typified the change in progressive education in the 1920s.
 13. Los Angeles Board of Education, Department of Psychology and Educational Research Bulletin 2 (4):4; (2):2.
 14. Daniel J. Kevles, The Physicists (New York: Random House, 1979), p. 174. Lawrence Cremin has shown the relationship of progressive education to science when he wrote, "If science promised nothing else, it promised efficiency; this ultimately was the plum the educational scientists dangled before the taxpaying public."

Cremin, Transformation of the School, p. 192.

15. Bulletin, 4(7):8

16. Ibid.

17. Ibid.

18. Raybold expressed surprise that the San Fernando students understood more English than the counselors imagined and yet, instead of taking this new found information and using it in a more constructive manner, the testers misinterpreted it. The children probably were what educators now call "limited English speakers," which means that they had an English vocabulary of about one hundred words.

19. The concept of intelligence quotient had been used by the German psychologist, William Stern, but Terman introduced the term into the language. (Kevles, In the Name of Eugenics: Genetics and the Use of Human Heredity, New York: Alfred A. Knopf, 1985, p. 79.) In 1935 Hershel T. Manuel, professor of Educational Psychology at the University of Texas, published his finding on the "Spanish and English Editions of the Stanford-Binet in Relation to the Abilities of Mexican Children" in the university's Bulletin. Manuel's interest in school performances of children of Mexican heritage in Texas had made him sensitive to some of the difficulties the children had in the often hostile environment of public schools. Manuel and his staff, including George I. Sanchez, one of the first Mexican Americans to criticize the conclusions drawn from conventional testing, had rejected the two

commonly used Spanish translations of the 1916 Stanford Revision because neither fit the needs of their subjects. They felt that their translation closely followed the English version, but they allowed for some changes. Because the two languages were not always parallel, some of the idioms differed and their translation better fit the dialect used by Mexicans living in Texas.

The Texas university staff administered the Spanish and English editions of the Stanford-Binet in 1931-1932 to Spanish speaking children in San Antonio. The findings reinforced the assumptions made by Los Angeles school people on the relationship of intelligence, language ability, socio-economics and years spent in school. In most cases, the Spanish version yielded higher mental ages and intelligence quotients than did the English edition. In grades two to five, the average I.Q. was 82.5 on the Spanish edition and 80.5 on the English.

After careful analysis, Manuel concluded that the lower scores represented a lack of training or experience. He speculated:

On account of their generally low cultural level and their retardation in school their experiences are greatly restricted. It is possible that this is reflected in such tests as the giving of differences between a president and a king and perhaps even in arranging the weights. . . . The parents of 10 out of 14 children in the fifth grade said that their children had never had toys such as blocks or puzzles."

Hershel T. Manuel, "Spanish and English Editions of the Stanford-Binet in Relation to the Abilities of Mexican Children,"

- University of Texas Bulletin, 3532 (August 22, 1935):30.
20. Bulletin, 5(2):13.
 21. Ibid. Until at least 1931, the schools continued to use translated tests. See Bulletin, 10(5):4.
 22. In the Bulletin Heim stated, ". . . language difficulty is often indicative of mental deficiency . . .," Bulletin 5(2):13.
 23. Ibid., 5(4):9.
 24. Ibid., 6(3):10-13, 15.
 25. Ibid., p. 13.
 26. Ibid.
 27. Ibid., p. 15.
 28. Ibid., 7(6):13-15.
 29. Ibid., 8(7):8.
 30. Ibid., 11(3):40-42.
 31. Ibid., 8(7):8.
 32. U.S. Thirteenth Census, 1910, 1 (Population):54-55; U.S. Fourteenth Census, 1920, 4 (Population):729-731; U. S. Fifteenth Census, 1930, 2 (Population):287; U.S. Sixteenth Census, 1940, (Population).
 33. Lawrence DeGraaf, "Negro Migration to Los Angeles, 1930-1950," Unpublished Doctoral Dissertation (University of California, Los Angeles, 1962), and "The City of Black Angels," Pacific Historical Review 39 (August, 1970).
 34. Bulletin, 3 (2):2-3.
 35. Ibid., 11(1):65.

36. Commodore Wynn, Ed., Negro Who's Who in California (Los Angeles: Negro Who's Who in California, 1948), p. 128; Irving C. Hendrick, principle investigator, "Public Policy Toward the Education of Non-White Minority Group Children in California, 1849-1970," (Unpublished Report, National Institute of Education Project No. NE-G-003-0082. University of California, Riverside, 1975). Whitaker recommended encouraging talented blacks rather than dissuading them. She found the school's practice of admonishing bright blacks against advancing academically one of the "most reprehensible . . . to be found among educators." Hazel G. Whitaker, "A Study of Gifted Negro Children in the Los Angeles City Schools," Unpublished Master's Thesis, (University of Southern California, 1931), p. 82
37. Some of the classes fitted blacks into subservient occupations; for example, no other high school except Jefferson offered vocational training to become a maid. For a comprehensive account of black school segregation see Hendricks, "Public Policy Toward the Education of Non-White Minority Group Children in California," and Bessie Averte McClenahan, The Changing Urban Neighborhood (Los Angeles: University of Southern California, 1929), p. 92. Community groups pressured the Board through their Petitions; See Los Angeles Board of Education Minutes to the Board of Education 31:433.
38. Bulletin, 11(5):65: U.S., Fifteenth Census, 3 (part 1):266. The Japanese community had grown from just a few at the turn of the century to over 35,000 in 1930.

39. School Journal, 15 (January 17, 1927):30.
40. *Ibid.*, 32 (April 27, 1925):34-35.
41. Los Angeles Examiner, 27 May 1927, sec. 1, p. 3.
42. U.S. Department of Interior, Office of Education, "The Education of Spanish Speaking Children in Five Southwestern States," by Anne Reynolds, Bulletin VII (Washington D.C.: Washington Printing Office, 1933) pp. 46-47.
43. *Ibid.*, pp. 46-47. Reynolds may have been familiar with the work of educators at the University of Texas.