mittee will appoint a committee of one thousand educators in all parts of the United States to serve throughout this anniversary year in making known the achievements and purposes of the board. A report is to be made next April, it was announced, as to the advisability of incorporation. Many letters of congratulation have been received by the board, Secretary Fiske reported.

Dr. Fiske presented to the meeting advance sheets of the twenty-fifth annual report of the secretary. In the survey of the past quarter century, the report gives tables indicating for successive five-year periods the number of answer books written in each of the more important departments and the percentage of books rated sixty or higher. There are paragraphs on the contact of the board with secondary schools and with colleges and on the significance of sixty as a rating. Examinations were held last June at 316 centers and were attended by 13,775 candidates. The total of secondary schools sending candidates was 1,961, of which 855 were public schools and 806 were private schools. The financial statement for the past year showed total receipts of $204,000 and total disbursements of $186,680. The cost of the board's operations per candidate in 1925 was $13.32. The fee for examinations in 1926 will be $10.

Resolutions presented by Professor Corwin, chairman of the committee of review, were passed: (1) adopting the report of the commission appointed to prepare the definition of the requirement in Italian; (2) authorizing the committee to distribute the report of the Latin Commission with a view to final action by the board at the April 10, 1926, meeting; (3) adopting for 1929-31 the restricted English examination in English recommended by the National Conference on Uniform Entrance Requirements in English; (4) abolishing separate examinations in Latin 2, 3, and 4.

The following professors were appointed a commission to direct the preparation and scoring of the board's psychological tests to be held in June and September, 1926: Carl C. Brigham, Princeton; Roswell P. Angier, Yale; Andrew H. MacPhail, Brown; David C. Rogers, Smith, and Charles L. Stono, Dartmouth.

Reports were presented by Dr. Farrand, chairman of the committee on examination ratings; by President Pendleton, chairman of the committee on examination schedule; Mr. Marsh, chairman of the commission on new types of examinations, and by President Perry, chairman of the committee on nominations.

The following officers were elected for 1925-26:

**Chairman**: President Woolley.
**Vice-Chairman**: Mr. Penzey's.

Other members of the Executive Committee: Professor Corwin, Dr. Farrand, Professor Heer- man, Mr. Hill, Professor Jence, President Pendle- ton, Professor Taylor.

**Secretaries**: President Park.
**Secretary and Treasurer**: Professor Fiske.

**Swarthmore College**

RAYMOND WALKER

### EDUCATIONAL RESEARCH AND STATISTICS

#### A STUDY OF DIFFERENCES FOUND BETWEEN RACES IN INTELLECT AND IN MORALITY

This is the report of an investigation made at a definite time and place. I hope that it may have its small share, along with other studies, in pointing the way toward essential truths, but it certainly does not pretend to solve great general problems about race differences. The whole question of innate race differences is most complex. There will be no attempt here even to discuss such fundamental issues as those concerning the relative contributions of heredity and environment to human behavior, nor the matter of selection by immigration, which may bring one country's missionaries and another's convicts, or which may have given to one country's emigration a generation's time in which to adjust to new conditions before those of another country have arrived.

This report is presented with the belief that the conclusions here reached were true in the

The substance of this paper was presented at the annual meeting of the American Psychological Association in 1923. I wish here to acknowledge the assistance to this research of Mrs. Frances W. Brooks.

year 1923 of the inhabitants of the city and environs of Honolulu. The reader may judge for himself whether the differences found are significant of some permanent condition it is left to him to judge also to what extent the inhabitants of Honolulu are typical and therefore representative of the races from which they have sprung.

From an anthropological point of view the term "race" is here used loosely. The department of public instruction of the territory of Hawaii classifies its pupils under the headings here used. Because this classification was at hand and was already applied to the subjects used in this study, it was adopted.

This particular report does not cover the whole of my investigation, which will be published later. The purpose was to find what were the main differences between the most commonly represented races in Honolulu, according to the most intelligent and best-informed residents of the city, and to attempt to measure these differences by psychological tests.

To determine what was thus thought to be the main differences, and what their relative amounts, a tentative list of traits was drawn up, in consultation with six or seven persons who I considered to be best informed upon the matter. This list of traits was put into the form of a questionnaire, so arranged that each race should be rated in each trait upon a scale from one to five. This questionnaire was submitted to the members of the faculty of the University of Hawaii, to the members of the staff of the Bishop Museum and to prominent social workers of the city. With it went the request that additions to the list of given traits should be made in order to make a full list of the important racial differences in the community. The results from this questionnaire, giving opinions in both qualitative and quantitative terms, form one important aspect of the total investigation.

The second aspect was the making of objective measures, as far as could be done, of the traits gathered in the questionnaire. For this experimental study I chose as subjects twelve-year-old children from the public schools. Group tests were used, and they were numerous, including not only many standard tests, but also many original attempts to measure the traits gathered from the questionnaire returns. The testing program required about six hours to administer and was given to each group in three or four consecutive periods on each of three successive days.

Besides the tests, information was secured about each subject concerning many features of his school and social life and ratings of him were made by his teacher upon a standard scale for moral traits and also in each of the traits listed in the questionnaire described above. Needless to say, the teachers never were told that a race study was the purpose of the investigation, but simply that a study was being made of Honolulu's twelve-year-old school pupils. As most of the teachers had pupils of many races, the ratings of the individuals on each listed trait, it was hoped, would be made upon a single mental scale for all. The purpose of these ratings was not only for the additional light that they would throw upon race likenesses and differences, but also for the comparison that they would make possible between professors' judgments on race aspects as a whole and teachers' estimates of the same traits, in living representatives of these same races.

This present report represents only one aspect of the whole research. Here are reported, first, the results which have to do with measures of general intelligence; the estimate of general intelligence in the different races made by those who answered the questionnaire, the results of standardized verbal and non-verbal intelligence tests and the school status of the subjects as determined by the school grades they were in. With these measures of intelligence are also reported, for comparative purposes, measures of the social status of the subjects.

Secondly, I am reporting here results which seem to throw some light on race differences in morality. From the questionnaire traits, six were chosen for report here. Until the whole investigation is reported the reader can not judge whether the six best traits were chosen as representative of differences in morality. In fact, I must confess that these six were not chosen with that aim in view at all. Time pressed when my report was being prepared. I have not yet had time to analyze the traits.

I have chosen the ones in which I am most
interested, mainly because in these I expected, or saw by cursory inspection, that large race differences exist. It was only after these six traits had been studied that my apparent correlation with the following measures incidentally noted that it occurred to me to use them in conjunction with these others, to formulate some single measure of the comparative moral status of each race. These other measures are: the teachers' estimates in these same traits, an objective test of honesty, the average school mark of each pupil for one semester's work; and his rating on the Channell-Upton Citizenship Scale.

Besides the measures of intellect and morality, I am reporting here results that bear upon one special ability, music. Results are given for the report on the trait, musical ability, as listed in the questionnaire, for the teachers' estimates of this same trait and for an objective test of one aspect of musical ability.

Before presenting the results of the race differences I found, there are three points I wish to discuss in connection with the selection of my subjects: first, the urban versus the rural factor. I should have preferred to have made my whole study in city limits. It was almost so, the Anglo-Saxons, Chinese, Japanese (first group), Portuguese, Hawaiians, Anglo-Saxon-Hawaiians and Chinese-Hawaiians all being pupils in city schools. There were, however, enough Korean, Filipino and Porto Rican pupils of twelve years age in city public schools, so, in order to include these races in the study, I was forced to make up half of the Korean group and almost the entire Filipino and Porto Rican groups from schools in neighboring plantation towns.

Secondly, I wish to discuss the method of selecting city pupils. With the advice of the superintendent of schools and his assistant, schools were chosen which we believed would yield a group of children of each race which was as near as possible to that race as it exists in Honolulu, except in the case of Anglo-Saxons, by whom is meant subjects of North European ancestry. Most Anglo-Saxon children here are sent to private schools. I chose those who were in public schools, thus probably obtaining a group nearer to that race for the whole city in social status, but probably obtaining a group more nearly similar to average Anglo-Saxons in the whole United States. Within each school, either all or none of the twelve-year-olds of the desirable group were 

The social-economic factor was not allowed for in the selection of subjects in the city schools. I sought to include pupils representative of their race in this locality. To equalize for social differences in such a study would iron out some of the other differences I sought. For a knowledge of race differences in the locality studied it was necessary to take them as they came. But general intelligence, at least of the traits I studied, and the social-economic factor are highly correlated, and to neglect this second variable in generalizing from this study to wider applications of race differences would introduce grave error. If we knew surely that general intelligence was always causal of social status and not effect, it would be less unsafe to neglect it. We do not know this. In order to furnish a check on the importance of social status, I introduced one more group for study, Japanese country pupils, found, as were the Filipinos and Porto Ricans, in schools in plantation towns, and I arranged my results, as shown in Table I, so that the high correlation that exists among all the groups between general intelligence and social status is plainly seen.

In this table are given the means and sigmas for each race group in social-economic status, grade location, National Intelligence Test and Army Beta. Scores in social status are given on the basis of Tannegi's Scale. This is a scale of five steps, the lowest standing for unskilled labor and the highest for professional and big business group. It is very evident that there is a close correspondence between social status, as determined by the father's occupation, and each of these three objective measures of intelligence.

As stated above, the Anglo-Saxons in this study represent a comparatively low social level for Honolulu. They probably do represent a fair average of the Anglo-Saxons throughout the whole United States, since those who emigrate west have been a selection of the most superior. These Anglo-Saxons correspond closely in score in the Army Beta test with Dr. Young's California study of twelve-year-old Americans of North European descent. The median of his North Europeans from San José is 68.30. Of his North Europeans from other places, 68.55. The median of our Anglo-Saxon group is 68.30. Compared also with the National Intelligence Test norms of October, 1929, our Anglo-Saxons are close to the median, being two months and five days advanced. It is especially important that we have some notion of how these Anglo-Saxons do compare with average Anglo-Saxons, if we wish to draw any general conclusions at all from this study beyond the locality limits, for it is with this race group that all the other races are compared in the following tables of results.

The most satisfactory means of making comparisons between groups, which will take account of the variability within each group as well as of its average, seems to be to show the amount of overlapping of one group upon another. I have therefore compared each race group in this way with the Anglo-Saxon. Table II gives the results for the measures of general intelligence. This table shows the percentage of each race group which overlaps the median of the Anglo-Saxon group on the National Intelligence Test and Army Beta. The verbal elements only of the National Intelligence Test and the non-verbal elements, also taken alone, have their results indicated in this table also. In obtaining these measures of overlapping, I have averaged the results of all tests and converted them into the 58.25 grid by multiplying the sigma of the distribution of each group by the reliability coefficient of the test used.

This method of presenting the results, of course, and necessarily, takes account of the differing variability of the races. The same facts are not shown as when central tendencies are compared. In score in the National Intelligence Test, for instance, the Japanese are much less variable than the Anglo-Saxon-Hawaiian. They exceed the Slavic's median score, as shown in Table I, but because they are less variable as a group they show considerably less overlapping of the Anglo-Saxon median.

I obtained the various reliability coefficients as follows: For the Army Beta test I used the reliability coefficient found for this test by Dr. Young in his study of twelve-year-old children, mentioned above. In obtaining the reliability coefficients for the National Intelligence Test, I used results found by Professor Symonds, of the University of Hawaii. He had given two forms of this test in a number of schools of Honolulu to pupils of about the same age and general intelligence as my subjects. From these he derived the standard errors of a score for each of the separate parts of Scale A and of Scale B, and for the total each of Scale A and of Scale B. In order to get the reliability coefficient for the whole scale, A and B taken together, I had first to determine the standard error of a score for the whole scale, and from that determined the reliability coefficient of the test.
this find the reliability coefficient from the formula, \( r = \sigma / \sqrt{N - n} \), in which \( \sigma \) is the standard error, and \( n \) is the standard deviation of the test scores. In order to obtain the reliability coefficients for the verbal and for the non-verbal elements of the National Intelligence Test, I again used Professor Symonds’s standard errors.

Inspection of this table shows that the Anglo-Saxons clearly excel all the other races in general intelligence measure, except the Orientals. Here the distinction is not so marked in non-verbal tests, the Japanese particularly showing up well in these. Forty-two per cent. of the city Japanese group exceeded the median of the Anglo-Saxon in the Army Beta test, and 50.0 per cent. of them in the non-verbal elements of the National Intelligence Test. (It is interesting to note that the Japanese subjects excel the Chinese in both measures that we have of non-verbal intelligence, but are excelled by them in both measures of verbal intelligence. That the bulk of Chinese immigrants came to the territory a generation earlier than the Japanese probably accounts wholly, or in part, for a difference in their ability to use English.) The Koreans, also, do considerably better in non-language than in language tests. In interpreting the results, it must be remembered that the reliability coefficients used for correcting for the unreliability of the tests are themselves only approximations of the true measures for these particular groups. This does introduce an error in the exact comparison of each group with the Anglo-Saxon, and probably accounts for some of the differences found between results in Army Beta and in the non-verbal portion of the National. Comparison between the other races is not so much affected by this error, and any one who wishes to re-calculate the amount of overlapping upon the Anglo-Saxon group, using other reliability coefficients, can do so by noting in the first line of Table II the cases that have been used.

One other known error, this in the administration of the tests, may account for one of the findings of this table. In the Army Beta test, one half of the city Japanese had the test given them with previously used demonstration charts, from which the lines drawn in had not been erased. I do not think that a large error was introduced by this, judging from an inspection of their scores on the particular parts of the Beta test, and from a comparison of this half of the country Japanese group with that half from whom there was no error in the administration of the test. It is possible, however, that if this error had not been avoided a slightly higher score might have been made on Beta by this group.

KATHARINE MUNDOCH,
TRACIUS COLLEGE,
COLUMBIA, (To be concluded)

THE PROBLEM OF SCIENCE IN TEACHING IN THE SECONDARY SCHOOLS

Pastour, whom the French nation has repeatedly voted the greatest of all Frenchmen, expressed the following judgment:

"In our century science is the soul of the prosperity of nations and the living source of all progress. Undoubtedly the tiring discussions of politeness seem to be our guide—empty appearances. What really leads us forward is a few scientific discoveries and their applications."

But possibly Pasteur, himself a scientist, saw his own field a little out of perspective. Let us therefore assign to him a discount value and seek the less naturally biased judgment of a man of letters. H. G. Wells writes as follows:

When the intellectual history of this time comes to be written, something, I think, will stand out more strikingly than the empty gulf in quality between the superb and richly fruitful scientific investigations that are going on, and the general thought of other educated sections of the community. I do not mean that scientific men are, as a whole, a class of supernumerary, dealing and thinking about everything in a way altogether better than the common run of humanity, but that they think and work with an intensity and integrity, a breadth, a boldness, a patience, thoroughness, fruitfulness, excepting only a few artists, which puts their work out of all comparison with any other human activity. In these particular directions the human mind has achieved a new and higher quality of attitude and gesture, a veracity, a self-abnegation, and self-sustaining vigor of criticism that tends to spread out and must ultimately spread to every other human affair.

But Wells has never been famous for his cold, judicial temperance. He has been a man of enthusiasms. Let us therefore assume that he, too, needs to be discounted and consult the philosopher and the educator. In the volume of Herbert Spencer's "Essays on Education" in the Everyman's Series you will find an introduction by Charles W. Eliot in which, in reviewing with approval what the great philosopher had to say, he writes:

"Herbert Spencer concluded that for discipline, as well as for guidance, science is of chiefest value. He answers the question, what knowledge is of most worth? with the one word 'science.'"

But all these are more or less academic judgments, and the world sometimes refuses to take academic men at their own estimates of themselves. Hence I turn to the latest pamphlet issued by a group of business men and philanthropists, the General Education Board, and find this as the first sentence of the second section:

"The outstanding feature of modern intellectual life is the development of science and scientific method."

Now, if these judgments are all discounted fifty per cent, and thus are only half truths, they yet are so significant as to make a consideration of what the secondary school in the United States is doing now to instill the spirit and the method of science into the coming generation as supreme a question as can come before this or any other body of directors of secondary school education.

Unfortunately, I can not myself approach this theme from the viewpoint of a superintendent. I have never been one. My credentials for discussing it, which I wish to present so that you may make your
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a request for the title of "some good new book in education" for unspecified use or "for use in a teacher's discussion group" he will quite certainly mention this book as one which a person engaged in any phase of educational service may read with profit.

AUSTIN B. GATES

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

SOCITIES AND MEETINGS

A NATIONAL CONFERENCE ON MODERN PARENTHOOD

A conference on modern parenthood, national in scope and representation, was held in New York City, October 26-28, with free attendance ranging from 1,000 to 1,500 at the day sessions and with more than 800 diners and an overflow gallery audience at the banquet on the closing night. The conference was conducted by the Child Study Association of America concerning which Dr. O. W. Kimmins, of the London Child Study Society, said in his address at the banquet, "After thirty-five years of work it has achieved a standard in this conference which should be an ideal for child study organizations throughout the world to aim at."

There were six morning and afternoon sessions and a dinner, all held in the grand ball room of the Hotel Waldorf Astoria, and these were followed by an institute for parents, teachers and social workers at the headquarters of the Child Study Association, 54 West 74th Street, from October 29 to November 7, when thirteen meetings and demonstrations of child study groups were held.

The program of the conference was as follows:


October 26, Afternoon. Theme. "The family and the community." Chairmen: Mrs. Mary Kingsbury Hinkmitch, director of Greenwich House; "The nursery school: a response to new needs," Dr. Helen S. Woolery, formerly director of Merrill-Palmer School, Detroit, now of Teachers College; "Getting away from the family—The adolescent and his life plans," Dr. Ida S. Hellingworth, assistant professor of education, Columbia University; "The family as coordinator of community forces," Dr. Ernest E. Groves, professor of social science, Boston University.

October 27, Forenoon. Theme. "Parents and the new psychology." Chairmen: Mrs. Howard Gans, president, Child Study Association. "The importance of the early years," Dr. A. A. Thur, director, Division of Mental Hygiene, Massachusetts State Department of Mental Disease, Boston; "From childhood to youth," Dr. Bernard Glueck, physician, psychiatrist; "Confronting the world—the adjustments of later adolescence," Dr. Frank E. Williams, medical director, National Committee for Mental Hygiene.


October 28, Afternoon. Theme. "The parents' outlook on life." Chairmen: Dr. John Lovejoy Elliott, headworker of鸿达 Guild, New York City; "Is religious unity or separatism?" Dr. G. A. Coo, professor of education, Teachers College, Columbia University; "Parents the constant and inevitable teachers of their children," Anna Garib, Spencer, lecturer and author.

October 28, evening. Dinner. Theme. "Pro- dem of the child—What does it mean?" Chairman: Professor David Suttile Murray, of Columbia University, Speakers: Dorothy Canfield Fisher, Miriam Van Waters, Dr. C. W. Kimmins and Dr. Milton O. Maye.

The climax of the conference was the dinner, at which the interest and enthusiasm which marked all the sessions reached their greatest height. In his introductory words, Professor Murray touched upon the success of the conference and the "painless and wholesome influence" of the Child Study Association. Dorothy Canfield Fisher declared:

"What is it we are trying to do? What is it which export educators, psychologists, social workers, doctors and parents have been trying to do about child-life for perhaps the last thirty years? They have been trying harder and harder to use intelligence as well as good intentions in bringing up children. Isn't that it? They have been trying to understand what sort of life healthy children need, to keep them growing, and to develop the best capacities they have.

In answering the question, What have they found out? Mrs. Fisher listed in her "illlary" these declarations: that "children need activity;" that "they thrive a great deal more if they are doing something they find interesting and worth while;" that "what untailed child is bad for another;" that "some form of creation is indispensable for children's happiness." She suggested in closing, the possibility that quite unconsciously we are working for better living conditions for all human beings when we fight against living conditions we know to be bad for our own children; the possibility that every blow we strike for freedom and variety and flexibility and creative activities for our children at home and in school, is a blow struck for the idea that just these things are needed in any human life, far more than many things we are currently profiting.

Dr. Van Waters began by expressing her appreciation of what she had gained from the conference. To the question, What does freedom of the child mean? she said that it meant nothing more than the application of scientific method to the life of the child. The new knowledge has produced a change in the attitude toward us toward itself. Youth is adventuous and independent but it is also helpless and dependent. The child should be emancipated from his parents. Citing the saying of Jesus "Lo, I am with you always, even unto the end of the world," Dr. Van Waters said that, "If we can give our children this feeling toward us, there is no danger of their getting really away."

Dr. C. W. Kimmins brought the greetings of the Child Study Society of London and praised the work of the Child Study Association of America. "Freedom is a glorious thing. Freedom need not result in lack of discipline," he said. "There is no want of discipline in our schools on the Dalton Plan. We have between 2,000 and 3,000 of these schools in England. We owe them to an American, Miss Helen Parkhurst, who is present to-night and to whom I want to pay our English tribute."

Dr. Mayo, the last speaker, declared that "The world of the child is very different from that of the adult. It does need much help from the parents. Children need assurance of safety. Fear is near the surface in the minds of all savages and children. Only by the help of the right kind of parent can the child find emancipation. Education is the only road to freedom. In the task of education the parent must always share."
Voolker's tests. The subjects were given blanks with circles scattered about at uneven intervals. They were instructed to put a dot inside of each circle with their eyes closed. Five trials were given and each subject recorded his own score after each trial. The directions were such that the subjects were urged to improve at each trial and were led to believe that improvement was expected. As improvement could occur only by chance, cheating could be detected by noting rises in the score. Cheating could take place either by opening the eyes, or by falsifying the score. The reliability for this test was found for the pupils in two of the schools.

The formula for the tetrachoric "r" was used, for the nature of the test was such that it seemed best to take account of only two categories, "honesty" and "dishonesty." In order to get a measure of reliability two measures were obtained for each pupil by taking Trial 1 minus Trial 2 in place of Trial 5 minus Trial 1, this division of the five trials being made because special emphasis had been put upon improvement in the last trial, the fifth. A score of a minus quantity, or a zero score, was put into the "dishonesty" category and any positive score into the "honesty" one. Some pupils, of course, claimed much more improvement than did others because of different methods of scoring their successes, but this factor we did not wish to measure. We avoided it by our method which marked as "dishonesty" any claim of improvement. Since chance, of course, would bring improvement in nearly half the cases, a large element is introduced which acts to lower the resulting reliability coefficient. This being the case, it is not surprising that the tetrachoric "r" was only .09, the correlation which was found to exist between Trial 1 minus Trial 1 and Trial 2 minus Trial 2. When this was corrected by Brown's formulas, the reliability coefficient for the whole test was found to be .365. This is very low, but the fact that it is positive makes it possible to use, since Kelley's method is used for correcting the difference found between groups for the unreliability of the tests. Also, we will look a little ahead now in the discussion of results and say that the validity of this "honesty" test seems to be shown by the fact that the correlation between the relative standing of the means in the honesty test and in the weighted average for all the moral traits is .53. (This correlation was found by use of the Spearman rank.)

The method of obtaining all the other measures indicated in Table III already has been explained, except that of getting the reliability coefficients for each test which are shown in the first line of the table. For the school mark, the reliability coefficient was inferred from investigations made by Dr. Walter Petitto and Dr. Franklin O. Smith. Dr. Petitto found the average mark in high school to correlate with the average mark for the first year in college, by an amount of .63. Dr. Smith found the same to be .58. I have used the average of the two for the reliability coefficient for the school mark. Probably this is too low, and if so accounts for some of the differences found between Anglo-Saxons and others in this trait, in Table III. This and several other coefficients unfortunately were not the best obtainable. They do not just fit my data because the range of subjects differs. For the Classen-Upton Citizenship Scale, I used the correlation given by the writers as being the average correlation found between two forms of their scales when one teacher marked both forms. For the teachers' estimates on the six traits—ambition, perseverance, trustworthiness, self-assurance, sensitivity to public opinion, and control of emotion—I derived the reliability coefficient from a research of Professor T. L. Kelley. In a study of his quoted in his "Educational Guidance," he found correlations between judgments on various traits made by two teachers. I have used the average of these correlations as the reliability coefficient for the teachers' estimates. For the questionnaire traits, the actual correlations were found for each trait between judgments of one half of the professors and those of the other half, and corrected by Brown's formulas for the total. That they are so very high, ranging from .92 to .99, indicates that in spite of the small number of returns (only 24) they yielded very accurate results of the opinions of this group.

The manner of presenting the results in terms of the overlapping of one group upon another perhaps rather distorts those results which are
obtained from the questionnaire study. The difference in what is measured must be borne in mind. In this part of the study, a measure of overlapping does not mean that in the opinion of the professors there was much overlapping of the race groups. They passed judgments only on the group as a whole; it gave measures of what they believed was its central tendency and made no judgments as to its variability. What are here recorded as measures of overlapping from the questionnaire returns are measures of the variability of the professors as to their opinions of the central tendency of these races.

Before discussing the results on these measures, it will be interesting to note the correlations that were found for the six traits studied between the professors' opinions about the races and the estimates the teachers made upon actual individual members of the same races. Those, as worked out by the Spearman foot-rule, were found to be: for ambition, .40; perseverance, .91; trustworthiness, .53; self-assertion, .40; sensitivity to public opinion, .65; control of emotions, .65. The size of these correlations indicates that there is a considerable amount of validity in the judgments of both teachers and professors. It is interesting to compare them and to note how much more they are in agreement as to perseverance than as to any of the other traits.

In interpreting the results found in Table III, it must be said for the Anglo-Saxon group that all of them came from one school, so that the teachers who judged them, although they were instructed to rate them upon a scale which should apply to all pupils, yet probably made their own mental scales with Anglo-Saxon children primarily in mind. Children from other races attend this school also, the requirement for attendance being ability to speak English easily, but in the main the school is attended by Anglo-Saxons, and it is quite possible that their teachers rated these children more severely than would have been the case had they had children of many races to rate, as did the teachers of all the other schools except that which was attended by the country Japanese.

As the table stands, the Oriental race, especially the Chinese, clearly stand high in almost all these measures. If negative self-assertion is a positive virtue, there are only two measures shown in the table in which the city Japanese and Chinese do not exceed the Anglo-Saxons; one is that the Japanese and Chinese are equal in trustworthiness, and the other is the test of "honesty" the overlapping of the city Japanese of the Anglo-Saxon median is 99.9, of the country Japanese it is 99.9—interesting findings when we remember the nature of that test. The position of the city Japanese who stand in first and second places in the two measures of ambition, which trait we might expect to form a stimulus to dishonesty in the objective test of that trait, and yet whose rating in that test is so very high, is worth considering as an effect to their raising the questionnaire returns for trustworthiness.

The Chinese, however, stand in the most enviable position of all. Out of the fifteen traits the Chinese stand highest in eight, including the school manuscripts, two of the least subjective of our measures. The Portuguese group shows up the worst in these results for moral traits. In no one of the measures, unless indeed we should consider negative self-assertion as a virtue, does the average of this group reach the Anglo-Saxon median.

In this trait of self-assertion, Anglo-Saxons clearly stand supreme! According to the opinions of the professors, they have no rivals within hailing distance, the Japanese being nearest with a group overlapping of only 20 per cent. If we form our opinions from the teachers' estimates of twelve-year-old children, we will not feel that the race difference here is quite so great, Portuguese, Chinese-Hawaiians and Anglo-Saxon-Hawaiians all showing more than a 30 per cent. overlapping of the Anglo-Saxon median.

In order to obtain some composite measure of moral traits, I have found a weighted average for all the measures in the first fifteen columns of this table, which appears in the last column. This weighting was made by earring the measures for the ambiguous "self-assertion"; giving double weight to the measures for the "honesty" test, school marks, Citizenship Scale and the two measures of trustworthiness; and giving single weight to all the other measures.

The results indicate, I think, high moral traits in the Orientals, especially the Chinese. It must be remembered that the Korean group and the country Japanese are hardly comparable with the pupils from the city schools. Anglo-Saxons and Chinese-Hawaiians do not overlap with the Hawaiians and Anglo-Saxon-Hawaiians are low, Portuguese are lower still.

TABLE IV

<table>
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<tr>
<th>Measure of Musical Ability</th>
<th>Percentage of Each Race Group which Overlaps the Anglo-Saxon Median. (Correlated signs are used.)</th>
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<tbody>
<tr>
<td>Musical ability</td>
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<td></td>
<td>Test of</td>
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<tr>
<td></td>
<td>Teachers' Estimation</td>
</tr>
<tr>
<td>Anglo-Saxon</td>
<td>59</td>
</tr>
<tr>
<td>Anglo-Saxon Hawaiian</td>
<td>65</td>
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<tr>
<td>Chinese</td>
<td>59</td>
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<tr>
<td>Japanese</td>
<td>71</td>
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<tr>
<td>Portuguese</td>
<td>61</td>
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<td>Korean</td>
<td>59</td>
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<tr>
<td>Chinese-Hawaiian</td>
<td>59</td>
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<tr>
<td>Hawaiian</td>
<td>66</td>
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<tr>
<td>Country Japanese</td>
<td>61</td>
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</table>

Table IV gives results for pitch discrimination and for estimates of musical ability. Several of the Seashore tests of musical ability were given to the subjects, but as it seemed probable that the scores were greatly affected by the low intelligence of some of the pupils, only one is here reported. In this one, the test for Pitch Discrimination, I believe that the effects of differences in intelligence are eliminated by the method of presenting the results. Each race is represented only by those of its members who made scores of .85 or more on the first twenty trials of the test. The first twenty trials are very easy.

The reliability coefficient for this test was determined by finding the correlation between the scores given on the long form and on the shorter form of the test, constructed as before by Brown's formula. For the teachers' estimates of the trait, musical ability, the questionnaire returns, reliability coefficients were found as for the moral time odd columns and scores on the even columns for pupils from three of the schools and correcting this as before by Brown's formula. For the teachers' estimates the trait, musical ability, the questionnaire returns, reliability coefficients were found as for the moral time odd columns and scores on the even columns for pupils from three of the schools and correcting this as before by Brown's formula.

The agreement between the opinions of the professors and the actual estimates of the teachers is very low in regard to musical ability, the correlation between them being only .18. They agree, however, in placing the Hawaiians high, also the Anglo-Saxon-Hawaiians. The Chinese-Hawaiians are placed very high by the teachers, but only average by the questionnaire. The results of the test for pitch discrimination do not show marked ability in this trait either the Hawaiians or the part Hawaiian groups. The pure Hawaiian group, in fact, is lower than the Anglo-Saxon. Only the Chinese-Hawaiians who were judged to be so high by their teachers excel the Anglo-Saxons.

One point in musical ability does seem to stand out clearly, i.e., that the particular gift which Hawaiians apparently do possess in music is not pitch discrimination in any great degree. They are evidently superior even in this specific musical ability to Orientals whose entire musical ability the questionnaire findings place very low, and also in this special ability they are superior to the Portuguese, but not to the Anglo-Saxons.

The question of mixed races in Honolulu is one upon which these results should throw some light. Two such race groups were studied, Anglo-Saxon-Hawaiians and Chinese-Hawaiians. Opinion there is that the differences between these two crosses are very great indeed. It is only partially reflected in Table III, where the questionnaire returns on the twelve moral traits can be compared between the two groups.

The opinion of the community seems to be that in every desirable trait, intellectual as well as moral, Chinese-Hawaiians are vastly superior to Anglo-Saxon-Hawaiians. How they actually stand in the abilities and traits reported
here can be seen from all the tables. A summary of their results in intelligence measures is given here. The average of the percentage of overlapping of each race upon the Anglo-Saxon median of the four measures of general intelligence as shown in Table II, is: Anglo-Saxon-Hawaiians, 13.67; Chinese-Hawaiians, 8.16. For the three parent races, the average results are: Anglo-Saxon, 59; Chinese, 23.59; Hawaiian, 5.32. We assume that test units are all equal, the conclusion from these results can be drawn that mixed races stand between the parent races in general intelligence, but that they stand considerably nearer to the inferior race. No superiority in general intelligence of Chinese-Hawaiians over Anglo-Saxon Hawaiians is shown.

When the comparison of the two cross races is made in moral traits, which can easily be done from the last column of Table III, some interesting facts are seen. Chinese-Hawaiians stand in morality as they do in intelligence, between the parent races. Anglo-Saxon-Hawaiians, however, stand actually lower than either parent race. That this fact is not simply a reflection, through the weighting of the questionnaire returns, of community opinion about this racial cross, is indicated from the fact that the teachers rate Hawaiians higher than they do Anglo-Saxon-Hawaiians in all desirable traits. Evidently the opinion of the community as to the lack of desirability of this racial cross is justified so far as their moral traits are concerned.

On the whole, what light this research throws upon the results of race crossing are not encouraging, the crossed races being in every case more like the inferior than the superior race of the two from which they have sprung.

**SUMMARY**

This study was made in the city and outlying districts of Honolulu in the territory of Hawaii. The conclusions reached apply directly to this locality only.

The investigation here reported consists of two parts: (1) A questionnaire on racial traits; (2) An experimental study of school children of twelve years of age.

The results here reported are based upon results from this questionnaire which was answered by twenty-four professional people, resident in Honolulu, and upon the following sources of results of the experimental study: information as to grade location of each subject, school mark and father's occupation, teachers' estimates on various traits and their ratings on the Ginn-Burt Test of Intelligence, Test of Pigeon Discrimination, and Test of Pigeon Discrimination, and results from the following tests: National Intelligence Test, Army Beta, Strength Test, Test for Pigeon Discrimination, and a test for honesty.

In the treatment of results, race groups are compared by showing the percentage of each race which reaches or exceeds the median of the Anglo-Saxon after each measure of overlapping has been corrected for the error caused by the unreliability of the test used.

The results suggest the following interpretations:

(1) Social status correlates highly with general intelligence. The very different Japanese groups emphasize this. Social status should not be equalized for, but the results emphasize the necessity for care in the selection of subjects within the locality studied and for caution in generalizing to other localities.

(2) In general intelligence, the Anglo-Saxons probably excel the Orientals and clearly excel all the other races.

(3) The Oriental races, especially the Japanese, do comparatively much better in nomenclature than in language intelligence tests.

(4) Teachers' estimates, school marks, results from the questionnaire and one objective test, when taken together, indicatehigh moral traits in the Oriental races, particularly the Chinese.

(5) Teachers' estimates and the questionnaire agree in placing the musical ability of the Hawaiians high. The objective measure shows that in pitch discrimination Hawaiians do not greatly excel. Evidently their musical capacity is more centered in some other specific ability.

(6) Race-crossing produces offspring with mental abilities between those of the parent races, but more nearly like those of the inferior race.

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**TEACHER PARTICIPATION IN THE DETERMINATION OF ADMINISTRATIVE POLICIES**

A minister passed three stone-cutters at their work. To the first he said, "What are you doing, my good man?"

"Oh, chopping a stone," he replied enthusiastically.

"And what are you doing?" he said to the second.

"I'm building a cathedral," he replied.

Building institutions, not cathedrals, is a first interest of the American people. Much of American life goes on through the work of the institutions they maintain and have created. In the main the business of institution building has three phases which are worthy of our attention.

First, we are concerned with the preservation, further development and improvement of certain traditional institutions which we have inherited from the past.

Some of the more important of these are the home, the church, the governmental system, our national and state constitutions, our law courts, and the like. Many of these are closely bound up with the preservation of the American level of living and American ideals. They have come down to us from our progenitors as the most cherished and best of our racial inheritances. It is one of our first duties as a people to preserve them and to make them function fully and completely in our present-day life and among future generations. We are also charged with the duty of improving them. Even a thing so holy as American home life at its best can be improved. The spiritual element in our American life and system of education can be made more effective. Even the national constitution may be evolved gradually into an instrument more completely useful and capable of giving a higher and better political life to all our people. So, as a nation of people we have a great work to do in the preservation and further development of these great institutions that have evolved in the making of the history of the race.

The second phase of our national project of institution building is one which gives evidence of our creative genius as a nation. It has to do with the creation of a great series of institutions which have resulted from our economic development and through which much of our economic progress has taken place. I mean the institutions of American business. Of course great business and economic institutions existed before America began, but the type of nation-wide organization doing business on a world scale with which we are so familiar in our day that it has become commonplace is a creation of the American people. Just as the modern skyscraper in our great metropolitan cities has been a contribution to the architecture of business buildings, so these great nation-wide organizations serving the public, contributing immeasurably to the ease and fulness of American life, have grown out of the composite creative genius of the people of the United States of America.