A STUDY OF AMERICAN INTELLIGENCE

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INTRODUCTION

The question of the differences that may exist between the various races of man, or between various sub-species of the same race, or between political aggregations of men in nationality groups may easily become the subject of the most acrimonious discussion. The anthropologists of France and Germany, shortly after the close of the Franco-Prussian war, fought another national war on a small scale. It is difficult to keep racial hatreds and antipathies out of the most scholarly investigations in this field. The debate becomes especially bitter when mental traits are discussed. No one can become very indignant on finding his race classified by its skull dimensions, stature, or hair color, but let a person discover the statement that his race is unintelligent or emotionally unstable, and he is immediately ready to do battle.

Until recent years we have had no methods available for measuring mental traits scientifically, so that the literature on race differences consists largely of opinions of students who are very apt to become biased, when, leaving the solid realm of physical measurements, they enter the more intangible field of estimating mental capacity.

Gradually, however, various investigators using more or less refined psychological measurements commenced to assemble a body of data that will some day reach respectable proportions. The status of the psychological investigations of race differences up to 1910 has been admirably summarized by Woodworth.† Since 1910, we have witnessed

in this country a remarkable development in methods of intelligence testing, and these methods have been applied to the study of race differences. Scattered investigations report and compare the intelligence scores of children of white, negro, or Indian parentage, and sometimes the scores of various nationality or nativity groups. The results of these investigations are, however, almost impossible to correlate, for they have been made by different methods, by different measuring scales, on children of a wide variety of chronological ages, and above all, on comparatively small groups of subjects, so that conclusions based on the studies have no high degree of reliability.

For our purposes in this country, the army mental tests give us an opportunity for a national inventory of our own mental capacity, and the mental capacity of those we have invited to live with us. We find reported in Memoir XV of the National Academy of Sciences\(^1\) the intelligence scores of about 81,000 native born Americans, 12,000 foreign born individuals, and 23,000 negroes. From the standpoint of the numbers examined, we have here an investigation which, of course, surpasses in reliability all preceding investigations, assembled and correlated, a hundred fold. These army data constitute the first really significant contribution to the study of race differences in mental traits. They give us a scientific basis for our conclusions.

When we consider the history of man during the half million years which have probably elapsed since the time of the erect primate, *Pithecanthropus*, the temporary political organizations, such as Greece, Rome, and our modern national groups, become of minor importance compared with the movements of races and peoples that have occurred. The tremendous expansion of the Alpine race at the end of the Neolithic and the beginning of the Bronze

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Period, the submergence of this race by the Nordics in the 2000 years preceding the Christian era, and the subsequent peaceful re-conquest of Eastern Europe by the Alpine Slavs from the Dark Ages on, represent an historical movement in comparison with which the Great World War of 1914 resembles a petty family squabble.

If the history of the United States could be written in terms of the movements of European peoples to this continent, the first stage represents a Nordic immigration, for New England in Colonial times was populated by an almost pure Nordic type. There followed then a period of Nordic expansion. The next great movement consisted of the migrations of Western European Mediterraneans and Alpines from Ireland and Germany, a movement which started about 1840, and which had practically stopped by 1890. Since there is a considerable proportion of Nordic blood in Ireland and Germany, we should not regard the original Nordic immigration as a movement which stopped suddenly, but merely as having dwindled to two-fifths or one-half of the total racial stock coming here between 1840 and 1890. The third and last great movement consisted of migrations of the Alpine Slav and the Southern European Mediterraneans to this continent, a movement that started about 1890, and which has not yet ceased. Running parallel with the movements of these European peoples, we have the most sinister development in the history of this continent, the importation of the negro.

The army mental tests enable us to analyze the elements entering into American intelligence. The intelligence test records of the native born, the foreign born, and the negro are at our disposal. The records deserve the most serious study. But before considering the results of the army tests, a person should be well informed concerning the nature of the tests, and the manner in which they were constructed.
The army psychological tests included three types of examination:

(1) Group examination alpha, which included eight different sorts of tests, most of which involved the ability to read English.

(2) Group examination beta, which included seven different sorts of tests, none of which involved the ability to read English or to understand spoken English, the tests consisting of pictures, designs, etc., and being given by instructions in pantomime.

(3) Individual examinations of two types:
   (a) Those involving the use of English, the Stanford revision of the Binet-Simon scale and the point scale, and
   (b) Those involving no English, consisting of construction puzzles, etc., the instructions being given by gestures,—the “performance scale.”

When a detachment reported for psychological examination, the first step was that of separating the English-speaking and literate from the non-English speaking or illiterate. Those who were both English speaking and literate were given examination alpha. All others were sent to beta. At the close of examination alpha, all men who had made low scores were sent to beta. After examination beta had been given, the examiners tried to recall for individual examinations all men who had made a low score in beta. In the rush of examining it was impossible to recall all men for individual examinations who should have been given special examinations, and some men were graded on alpha who should have been graded on beta, and vice versa, but
most men were properly graded by the rough methods in use. In each one of the examinations the range of scores was so great that most men had an opportunity to score. The great contribution of the committee that first devised the army examining methods and of the men who subsequently developed additional methods in the army consisted of creating and standardizing group examinations alpha and beta. The methods of individual examining were already in existence, the Stanford-Binet scale being an elaboration of Binet's "mental age" scale, and the tests of the performance scale having been more or less completely worked out by other investigators. The task of examining men in large groups was first carried through successfully in the army. Before the war, many psychologists would have scoffed at the notion of examining two or three hundred men at once by giving them booklets containing different sorts of tests, but the large group examinations became matters of daily routine. Group tests have subsequently been tried out in schools and industries with excellent results from the standpoint of test administration. Indeed, when the army alpha examination was given at Ohio State University in October, 1919, practically the entire student body, 6000 in number, was tested by five examiners in eight hours. In the service, it was found that one examiner could control a group of 200 men with ease. The alpha instructions were read by the examiner, and the men ordered to start and stop at the proper time. Examination beta was more difficult to administer, and was given to smaller groups.

The statistical methods of treating the results of the army tests used in this study are rather intricate, but the principles involved are easily understood. At the outset we must frankly admit that there were minor errors in the three types of examinations given. We can not correct the
type of tests that were used, but we can correct the method of scoring them. Most of the difficulties of scoring arise from the fact that different types of measuring scales were used. During the war, the different scales were converted into one general scale of letter grades (A, B, C+, C, C−, D and D−). This method was rough, and although it answered the purposes of the army at the time, it can not be used in any scientific interpretation of the results.

Examination alpha was scored by finding the score on each of the eight tests, adding to get a total, and then converting the total into a letter grade. Beta was similarly scored. It is apparent that some tests in alpha might be more difficult than others, that some tests in beta might be easier than any test in alpha, and that variations might have occurred which it was impossible to predict at the time the examinations were made. Recognizing these facts, then, the army statisticians worked out another method of scoring the results, which eliminates all of these sources of error. This method is known as the combined scale, a theoretical intelligence scale running from 0 to 25, into which the alpha, beta and individual examination scores may be converted, so that we finally have one measurement instead of three.

Psychological measurements involve much more than creating tests and giving tests. After all the results are in, we still have the problem of interpreting the results, and this interpretation is largely a statistical problem. Too much credit can not be given to the staff of the Psychological Division of the Surgeon General’s Office, who continued in the service long after the war was over, patiently studying and analyzing the results. The combined scale was very largely the work of two young psychologists, Carl R. Brown and Mark A. May, and their work on this problem, reported in Chapter 2, Part 3 of Memoir XV, is with-
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out doubt the greatest contribution that has yet been made to the statistical phases of the science of mental measurement.

The theory underlying the combined scale is simply that of regarding each test of alpha and beta as a separate measuring scale. One group of individuals including 1047 men born in English speaking countries, was examined on alpha, re-examined on beta, and if possible, examined again on the Stanford-Binet scale. This group of 1047 cases constituted the basis on which a method of combining the separate tests into a combined scale was empirically evolved.

From now on in the course of our study of the army test records, we must regard alpha and beta as two booklets containing, in all, fifteen different measuring scales of intelligence. The first step in the study consists of understanding the nature of each of the fifteen scales. In Part I, the fifteen tests have been reproduced (Plates I to XV), and the actual records of the 1047 men shown in each instance, so that the reader may see exactly how the tests worked.
SECTION X

COMPARISON OF OUR RESULTS WITH THE
CONCLUSIONS OF OTHER WRITERS
ON THE SUBJECT

In a very definite way, the results which we obtain by
interpreting the army data by means of the race hypothesis
support Mr. Madison Grant’s\(^1\) thesis of the superiority of
the Nordic type: “The Nordics are, all over the world, a
race of soldiers, sailors, adventurers, and explorers, but
above all, of rulers, organizers, and aristocrats in sharp
contrast to the essentially peasant and democratic charac-
ter of the Alpines. The Nordic race is domineering, in-
dividualistic, self-reliant, and jealous of their personal
freedom both in political and religious systems, and as a
result they are usually Protestants, Chivalry and knight-
hood and their still surviving but greatly impaired counter-
parts are peculiarly Nordic traits, and feudalism, class
distinctions, and race pride among Europeans are traceable
for the most part to the north.” (p.228.) “The pure Nordic
peoples are characterized by a greater stability and stead-
iness than are mixed peoples such as the Irish, the ancient
Gauls, and the Athenians, among all of whom the lack of
these qualities was balanced by a correspondingly greater
versatility.” (pp. 228–229.)

Our results based on the army data also support Mr.
Grant’s estimates of the Alpine race: “The Alpine race is
always and everywhere a race of peasants, an agricultural
and never a maritime race. In fact they only extend to
salt water at the head of the Adriatic and, like all purely

agricultural communities throughout Europe, tend toward democracy, although they are submissive to authority both political and religious, being usually Roman Catholics in western Europe. This race is essentially of the soil, and in towns the type is mediocre and bourgeois.” (p. 227.)

Our results also support de Lapouge in his contention that the Nordic type is superior to the Alpine. He says concerning the Alpine: “Il est le parfait esclave, le serf idéal, le sujet modèle, et dans les républiques comme la notre, le citoyen le mieux vu, car il tolère tous les abus.” (p. 233.)

“Les états brachycéphales, France, Autriche, Turquie, sans parler de la Pologne qui n’est plus, sont loin d’offrir la vitalité des États-Unis ou de l’Angleterre. Cependant la médiocrité même du brachycéphale est une force. Ce neutre échappe à toutes les causes de destruction. Noiraud, courtaud, lourdaud, le brachycéphale règne aujourd’hui de l’Atlantique à la Mer Noire. Comme la mauvaise monnaie chasse l’autre, sa race a supplanté la race meilleure. Il est inerte, il est médiocre, mais se multiplie. Sa patience est au-dessus des épreuves; il est sujet soumis, soldat passif, fonctionnaire obéissant. Il ne porte pas ombrage, il ne se révolte point.” (p. 481.)

It must, however, be frankly admitted that our results, which show the Mediterranean race inferior to the Alpine, are in contradiction with those of most writers who have inferred the intellectual level of a race from its historical achievements. Mr. Grant, for instance, says: “The mental characteristics of the Mediterranean race are well known, and this race, while inferior in bodily stamina to both the Nordic and the Alpine, is probably the superior of both, certainly of the Alpines, in intellectual attainments. In the field of art its superiority to both the other European races

is unquestioned, although in literature and in scientific re-
search and discovery the Nordics far excel it.” (P. 229).

The apparent contradiction between our results and the es-
timates of other observers has a very obvious solution, viz.,
that those who draw their conclusions from historical data are
studying the Mediterranean race as it was at the period of its
greatest development, when it produced the civilizations of
Egypt, Mesopotamia, Phoenicia, and Crete, and, with a
Nordic predominance, gave the civilizations of Greece and
Rome, while our data sample this race group as it is at the
present time.

The sample we have taken as representative of the Medi-
terranean race, as it is now constituted, is drawn from im-
migrants in our army born, for the most part, in Greece,
Ireland, Italy, and Turkey, and inasmuch as the number
from Italy (4009) is so large, our Mediterranean sample
is heavily weighted (approximately 2/3) by this nativity
group.

In regard to the Irish, Mr. Madison Grant says: “In
spite of the fact that Paleoliths have not been found there,
some indications of Paleolithic man appear in Ireland, both
as single characters and as individuals. Being, like Brittany
situated on the extreme western outposts of Eurasia, it has
more than its share of generalized and low types surviving
in the living populations; and these types, the Firbolgs,
have imparted a distinct and very undesirable aspect to a
large portion of the inhabitants of the west and south and
have greatly lowered the intellectual status of the popula-
tion as a whole. The cross between these elements and the

1The quotations I have chosen from Mr. Madison Grant’s chapter on Racial
Aptitudes most certainly do not do justice to that author, but they seemed to
me to summarize his general position briefly. The entire book should be read to
appreciate the soundness of Mr. Grant’s position and the compelling force of his
arguments.
Nordics appears to be a bad one, and the mental and cultural traits of the aborigines have proved to be exceedingly persistent and appear especially in the unstable temperament and the lack of coordinating and reasoning power, so often found among the Irish. To the dominance of the Mediterraneans mixed with Pre-Neolithic survivals in the south and west are to be attributed the aloofness of the island from the general trend of European civilization and its long adherence to ancient forms of religion and even to Pre-Christian superstitions.” (pp. 202–203.)

The immigrants in this country from Italy come mostly from Southern Italy and Sicily. The following quotation from Ripley¹ concerning Sicily is significant:

“Commanding both straits at the waist of the Mediterranean, it has been, as Freeman in his masterly description puts it, ‘the meeting place of the nations.’ Tempting, therefore, and accessible, this island has been incessantly overrun by invaders from all over Europe—Sicani, Siculi, Fenicii, Greeks, and Romans, followed by Albanians, Vandals, Goths, Saracens, Normans, and last by the French and Spaniards. Is it any wonder that its people are less pure in physical type than the Sardinians or even the Calabrians of the mainland near by? Especially is this noticeable on its southern coasts, always more open to colonization than the northern edge. Nor is it surprising, as Freeman rightly adds, that ‘for the very reason that Sicily has found dwelling places for so many nations, a Sicilian nation there never has been.’” (p. 271.)

The secret of the whole dilemma is the intermingling of races around the Mediterranean littoral in the last 2500 years. It is beside the point to contrast our results obtained by the actual psychological measurements of living repre-

sentatives of this race with the attainments of the temporary civilizations that flared up in historical times. The whole question of the degeneration of these peoples has been discussed by Mr. Charles W. Gould,¹ and our results from the examinations of drafted men born in these regions support his position.

It is rather difficult to compare our results from the race groups with the various hypotheses erected by Professor William McDougall,² who, while he does not claim for the Nordic race "any general innate superiority" (p. 29), analyzes the mental constitution of this race and the other European races in such a way that an examination of his theories will be interesting. Professor McDougall's hypotheses, very briefly and inadequately stated are: that the Nordic is stronger in the instinct of curiosity, the root of wonder, than the Mediterranean; the herd instinct, the root of sociability, is stronger in the Mediterranean than in the Nordic; the Nordic is constitutionally introvert, the Mediterranean constitutionally extrovert; the instinct of self-assertion is strong in the Nordic; the Alpine is introvert but not so strongly introvert as the Nordic; the Alpine has a high degree of sociability, is perhaps relatively weak in curiosity, and strong in the instinct of submission.

In discussing innate differences in instinctive endowment, psychologists are still more or less in a speculative realm, but the field is open to experimental attack, and a body of knowledge based on experimentation is gradually growing. At the present time we must rely on concensus of opinion rather than experiment. A census of text-books on psychology would show "curiosity" usually listed as an instinctive

tendency. If we follow Professor Thorndike\(^1\) in his analysis, and eliminate many tendencies that others include, we shall still have left the instincts of multiform mental and physical activity as the potent movers of men’s economic and recreative activities. (p. 144.) If any instinctive tendency finds expression in the tasks assigned by the army tests, it is this instinct for multiform mental activity, more vaguely termed “curiosity.” Our tests, however, measure the end result of such a tendency and not the tendency itself, and it is only in this vague way that our results showing the definite intellectual superiority of the Nordic race can be taken as substantiating or contributing to Professor McDougall’s hypothesis.

It is difficult to check our results from the analysis of the foreign born white draft by country of birth (reported in Section VI) with the results of other investigators, on account of the different tests that were used, and the different methods of selecting subjects. Miss Murdoch\(^2\) examined, by means of the Pressey group point scale, 500 Jewish children and 500 Italian children at one school in New York City, and 500 American children and 230 negro children at another school. The American and Jewish children tested about the same. About 15% of the Italians equalled or exceeded the median of the Jews, and about 30% of the negroes equalled or exceeded the median of the Jews. The investigation equalizes the environmental factor by selecting, in one instance, Italians and Jews from the same school and consequently from the same general neighborhood (East 110th St. near 2nd Ave.), and, in the other instance, by selecting native white and negro chil-


dren from the same general neighborhood (West side, 8th Ave., near 140th St.), but the American children living in this neighborhood can not be taken as typical of the country as a whole.

Miss Arlitt\(^1\) concludes from her examination of 343 children, (191 native born Americans, 87 Italians, and 71 negroes), by the Stanford-Binet scale, that “there is a marked difference in the distribution of intelligence in groups of the same race but different social status,” and states that “race norms which do not take the social status factor into account are apt to be to that extent invalid.” (p. 183.) This position seems to ignore the observation, repeatedly confirmed by experiment, that children from the professional, semi-professional and higher business classes have, on the whole, an hereditary endowment superior to that of children from the semi-skilled and unskilled laboring classes. Terman\(^2\) states “It has in fact been found wherever comparisons have been made that children of superior social status yield a higher average mental age than children of the laboring classes. . . . However, the common opinion that the child from a cultured home does better in tests solely by reason of his superior home advantages is an entirely gratuitous assumption. Practically all of the investigations which have been made of the influence of nature and nurture on mental performance agree in attributing far more to original endowment than to environment. Common observation would itself suggest that the social class to which the family belongs depends less on chance than on the parents’ native qualities of intellect and character.” (p. 115.)

One frequently hears the opinion expressed in scientific circles that differences found between racial groups cannot be attributed to race unless the individuals examined are drawn from the same social milieu. Miss Arlitt finds native born white children of inferior and very inferior social status above the Italian and negro children in intelligence, but attributes the larger differences found between the entire native white group and the Italian and negro groups to the fact that three eighths of the native white children come from homes of superior and very superior social status. In the same way, Miss Murdoch finds Jews living near East 110th St. and 2nd Ave. in New York City not very inferior to native born whites living in the mixed white and negro section around 8th Ave. and 140th St. The equalization of the environmental factor is a necessary control in certain phases of scientific experiments on race differences, but conclusions as to the intelligence of racial groups must be drawn from samples taken at random from the entire country. These conditions are more nearly met by the army sampling of individuals in the draft. Our samples of 81,465 native born individuals in the white draft, of 12,492 foreign born individuals, and 23,596 negroes are drawn impartially from every section of the country. If we selected our native born Americans from those who live in the same squalid conditions in which we find most of our negro and foreign born population, we would not have a fair sample.

It is unfortunate that our army data classify foreign born individuals only by country of origin, so that we have no separate intelligence distributions for the Jews. According to the 1910 census, about 50% of the foreign born population reporting Russia as their country of origin spoke Hebrew or Yiddish, about 25% spoke Polish, less than 3% spoke Russian, and the rest spoke Lithuanian, Lettish,
German, Finnish, Ruthenian and other tongues. From the immigration statistics showing aliens admitted classified according to race or people, we find about 10% (arriving between 1900 and 1920) reported as Hebrew. It is fair to assume that our army sample of immigrants from Russia is at least one half Jewish, and that the sample we have selected as Alpine is from one fifth to one fourth Jewish.

Our figures, then, would rather tend to disprove the popular belief that the Jew is highly intelligent. Immigrants examined in the army, who report their birthplace as Russia, had an average intelligence below those from all other countries except Poland and Italy. It is perhaps significant to note, however, that the sample from Russia has a higher standard deviation (2.88) than that of any other immigrant group sampled, and that the Alpine group has a higher standard deviation than the Nordic or Mediterranean groups (2.60). If we assume that the Jewish immigrants have a low average intelligence, but a higher variability than other nativity groups, this would reconcile our figures with popular belief, and, at the same time, with the fact that investigators searching for talent in New York City and California schools find a frequent occurrence of talent among Jewish children. The able Jew is popularly recognized not only because of his ability, but because he is able and a Jew.

Our results showing the marked intellectual inferiority of the negro are corroborated by practically all of the investigators who have used psychological tests on white and negro groups. This inferiority holds even when a low intellectual sampling of whites is made by selecting only

\[1\text{There is no serious objection, from the anthropological standpoint, to classify-}\
\text{fying the northern Jew as an Alpine, for he has the head form, stature, and color}\
\text{of his Slavic neighbors. He is an Alpine Slav.}\]
those who live in the same environment, and who have had the same educational opportunities. Professor Ferguson, who has studied the problem most carefully, concludes that in general 25% of the negroes exceed the median white. Our figures show a greater difference than he estimates, less than 12% of the negroes exceeding the average of the native born white draft. Professor Ferguson also estimates that 20% of pure negroes, 25% of negroes three quarters pure, 30% of the true mulattoes, and 35% of the quadroons equal or exceed the average score of comparable whites.

The discrepancies between data from various investigators as to the amount of difference between negroes and whites probably result from different methods of selecting whites. If we compare negroes only to those whites who live in the same neighborhood, and who have had the same educational opportunities, our differences are smaller than those obtained by comparing samples of the entire white and negro populations.

Some writers would account for the differences found between white and negro by differences of educational opportunity alone. The army tests showed the northern negro superior to the southern negro, and this superiority is attributed to the superior educational opportunities in the North. The educational record of the negro sample we are studying shows that more than half of the negroes from the southern States did not go beyond the third grade, and only 7% finished the eighth grade, while about half of the northern negroes finished the fifth grade, and a quarter finished the eighth grade. That the difference between the northern and southern negro is not entirely due to school-

ing, but partly to intelligence, is shown by the fact that
groups of southern and northern negroes of equal schooling
show striking differences in intelligence.

The superior intelligence measurements of the northern
negro are due to three factors: first, the greater amount of
educational opportunity, which does affect, to some ex-
tent, scores on our present intelligence tests; second, the
greater amount of admixture of white blood; and, third,
the operation of economic and social forces, such as higher
wages, better living conditions, identical school privileges,
and a less complete social ostracism, tending to draw the
more intelligent negro to the North. It is impossible to
dissect out of this complex of forces the relative weight of
each factor. No psychologist would maintain that the men-
tal tests he is now using do not measure educational oppor-
tunity to some extent. On the other hand, it is absurd to
attribute all differences found between northern and south-
ern negroes to superior educational opportunities in the
North, for differences are found between groups of the same
schooling, and differences are shown by beta as well as
by alpha.

At the present stage of development of psychological
tests, we can not measure the actual amount of difference
in intelligence due to race or nativity. We can only prove
that differences do exist, and we can interpret these differ-
ences in terms that have great social and economic signifi-
cance. The intellectual superiority of our Nordic group over
the Alpine, Mediterranean, and negro groups has been
demonstrated. If a person is unwilling to accept the race
hypothesis as developed here, he may go back to the
original nativity groups, and he can not deny the fact that
differences exist.

When our methods of measuring intellectual capacity
have been perfected, we will be in a position to determine
quantitatively the amount of race differences. Rough group
tests of the type we are now using will indicate the fact
that differences exist. However, while scientists are perfect-
ing their methods of examining, it would be well for them
to perfect their logic at the same time. Particularly mis-
leading and unsound is the theory that disregards all dif-
fences found between racial groups unless the groups
have had the same educational and environmental oppor-
tunities.

This theory in its most extreme form is set forth by
Garth\(^1\) as follows:

"The elements in a study of racial mental similarities or
differences must be these: (1) Two so-called races \(R_1\) and
\(R_2\), (2) an equal amount of educational opportunity, \(E\),
which should include social pressure and racial patterns of
thought, and (3) psychological tests, \(D\), within the grasp
of both racial groups. We should have as a result of our
experiment \(R_1 \cdot E \cdot D\) equal to, greater than, or less than \(R_2\)
\(E \cdot D\). In this experiment the only unknown elements should
be \(R_1\) and \(R_2\). If \(E\) could be made equal the experiment
could be worked.

"This element of educational opportunity-nurture, is the
one causing most of the trouble in racial psychology as an
uncontrollable element. It does not offer quite so much
difficulty in the study of sex differences, yet it is there
only in smaller degree than in racial differences, and as it
is controlled the 'sex differences' tend to disappear. Since
this element of education, or nurture, cannot be eliminated
it would be safer to take for comparison such racial groups
as have had as nearly the same educational opportunity as
is possible having any disparity of this sort well in mind
when we interpret the results of the experiment. Having

\(^1\) T. R. Garth, *White, Indian and Negro Work Cures*, Journal of Applied Psy-
chology, 1921, 5, 14–25.
done this, we first take the complete distributions on the scale of measurement for the groups as statements of the true facts of the case, race for race. We then combine these distributions into a total distribution of accomplishment of all the races taken together to see if we have multimodal effects. Should we find these effects we may conclude that we have evidence of types, or racial types, and there should in this case be one mode for each racial group. But should the combined distribution for the several racial groups reveal only one mode we may conclude that the test reveals no types—no real racial differences but rather similarities.” (p. 16.)

If intelligence counts for anything in the competition among human beings, it is natural to expect that individuals of superior intelligence will adjust themselves more easily to their physical and social environment, and that they will endow their children not only with material goods, but with the ability to adjust themselves to the same or a more complex environment. To select individuals who have fallen behind in the struggle to adjust themselves to the civilization their race has built as typical of that race is an error, for their position itself shows that they are, for the most part, individuals with an inferior hereditary endowment.

In the same way, our educational institutions are themselves a part of our own race heritage. The average negro child can not advance through an educational curriculum adapted to the Anglo-Saxon child in step with that child. To select children of equal education, age for age, in the two groups, is to sample either superior negroes or inferior whites.

The scientific problem is that of eliminating from the tests used as measuring instruments those particular tests which demonstrably measure nurture, and to measure,
with genuine tests of native intelligence, random or impartial samples from each race throughout the entire range of its geographical and institutional distribution.
CONCLUSIONS

Our study of the army tests of foreign born individuals has pointed at every step to the conclusion that the average intelligence of our immigrants is declining. This deterioration in the intellectual level of immigrants has been found to be due to two causes. The migrations of the Alpine and Mediterranean races have increased to such an extent in the last thirty or forty years that this blood now constitutes 70% or 75% of the total immigration. The representatives of the Alpine and Mediterranean races in our immigration are intellectually inferior to the representatives of the Nordic race which formerly made up about 50% of our immigration. In addition, we find that we are getting progressively lower and lower types from each nativity group or race.

In the light of our findings in Sections IV and IX, it is possible to re-draw our curve (Figure 33) representing increase of intelligence score with increasing years of residence and to represent it truly as in Figure 46, which shows the decline of intelligence with each succeeding period of immigration.

It is also possible to make a picture of the elements now entering into American intelligence. At one extreme we have the distribution of the Nordic race group. At the other extreme we have the American negro. Between the Nordic and the negro, but closer to the negro than to the Nordic, we find the Alpine and Mediterranean types. These distributions we have projected together in Figure 47.

Throughout this study all measurements have been made in terms of averages and variability about the average. In interpreting averages, we must never forget that they stand
Figure 16. The decline of intelligence with each succeeding period of immigration. The apparent increase of intelligence with increasing length of residence, as shown in Figure 33, has been proved to be a progressive decrease in the intellectual level of immigrants coming to this country in each succeeding five-year period since 1902. The evidence indicates that the immigrants prior to 1902 were intellectually equal to the native born white draft. The army sample of "native born" includes, besides native born of native parentage, the native born of foreign or mixed parentage. It is perhaps possible that the native born of native parentage might have tested higher than 13.77. The position of the white draft born in England is shown above. Although the true position of the native born American may be a matter of speculation, there is no doubt that the more recent immigrants are intellectually closer to the negro than to the native born white sample.
Figure 47. The constituent elements of American intelligence. The distributions of the intelligence scores of the entire Nordic group, the combined Mediterranean and Alpine groups, and the negro draft. The process of racial intermixture cannot result in anything but an average of these elements, with the resulting deterioration of American intelligence. About 85% of the Nordic group exceed the average negro. About 75% of the Nordic group exceed the Alpine and Mediterranean. About 35% of the Alpine and Mediterranean groups are below the average negro.
for an entire distribution. Careless thinkers are prone to select one or two striking examples of ability from a particular group, and then rest confidently in the belief that they have overthrown an argument based on the total distribution of ability. The Fourth of July orator can convincingly raise the popular belief in the intellectual level of Poland by shouting the name of Kosciusko from a high platform, but he can not alter the distribution of the intelligence of the Polish immigrant. All countries send men of exceptional ability to America, but the point is that some send fewer than others.

Our distribution curve of intelligence includes ability as well as defect. The English speaking Nordic group, for instance, averages 13.84, and furnishes at one extreme about 40 men in 1000 who are above the average white officer, while at the other extreme, the group furnishes about 8 in 1000 who are below an estimated “mental age” of eight. A distribution further down the scale contributes more to the lower orders of intelligence. The distribution of the intelligence scores of the negro draft, for instance, indicates that they contribute only 4 in 1000 above the average white officer, while they give us 100 in 1000 below the approximate “mental age” of eight. The Alpine and Mediterranean races give us only 5 or 10 in 1000 above the average ability of the white officer, and about 40 in 1000 below the “mental age” of eight. About 350 in 1000 of the Alpine and Mediterranean types are below the average negro.

The intellectual characteristics of the immigration to the United States as measured by the samples in the draft have been reported in this study, first by country of birth, and second by race. Parallel with the measurements of intelligence, the figures on immigration have been presented. To complete the picture, there is presented in Table 38 the population of the United States according to the 1920
<table>
<thead>
<tr>
<th>Population of the United States in 1920</th>
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<tbody>
<tr>
<td>Native White of Native Parentage: 58,421,957</td>
</tr>
<tr>
<td>Native White of Foreign Parentage: 15,694,639</td>
</tr>
<tr>
<td>Native White of Mixed Parentage: 6,991,665</td>
</tr>
<tr>
<td>Total Native White: 81,108,161</td>
</tr>
<tr>
<td>Foreign Born White: 13,712,754</td>
</tr>
<tr>
<td>Negro: 10,463,131</td>
</tr>
<tr>
<td>Indian: 244,487</td>
</tr>
<tr>
<td>Chinese: 61,639</td>
</tr>
<tr>
<td>Japanese: 111,010</td>
</tr>
<tr>
<td>All others:</td>
</tr>
<tr>
<td>Filipinos: 5,603</td>
</tr>
<tr>
<td>Hindus: 2,507</td>
</tr>
<tr>
<td>Koreans: 1,224</td>
</tr>
<tr>
<td>Hawaiians: 110</td>
</tr>
<tr>
<td>Malays: 19</td>
</tr>
<tr>
<td>Siamese: 17</td>
</tr>
<tr>
<td>Samoans: 6</td>
</tr>
<tr>
<td>Maoris: 2</td>
</tr>
<tr>
<td>Total all others: 9,488</td>
</tr>
<tr>
<td>Total Population: 105,710,620</td>
</tr>
</tbody>
</table>

NOTE: Clinton Stoddard Burr in *America's Race Heritage* (New York: The National Historical Society, 1922, pp. 327) estimates that in 1920 there were 44,698,278 descendents of the old Colonial white stock.
census. We have with us approximately 15 7/10 millions of individuals of foreign parentage, 7 millions of mixed parentage, 13 7/10 millions of foreign born, and 10 ½ millions of negroes. Roughly, in every 100 of our population, 55 are native born of native parentage, and the other 45 foreign born, or of foreign, mixed, or colored parentage. The group of native born of native parentage includes many children of the immigrants coming to this country prior to 1890.

Our immigration figures show a very decided shift from the Nordic in favor of the Alpine. The immigration between 1820 and 1890 probably never contained more than 50% or 60% Nordic blood, and prior to 1820 there was very little immigration. The earliest settlers were almost pure Nordic types, and we may assume the existence by 1820 of a race as predominantly Nordic as that of England. This recent change was, of course, reflected in the cross section of the foreign born population taken at 1910, and which constitutes the basis of our present immigration act restricting immigration to 3% of the nationals then resident here. A rough estimate of the racial composition of the quotas from various countries admissible under the new law shows about 35% Nordic blood, 45% Alpine blood and 20% Mediterranean blood in the annual stream of approximately 1/3 of a million that may enter.

There can be no doubt that recent history has shown a movement of inferior peoples or inferior representatives of

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1Too much reliance can not be placed on the census returns for the foreign born white population. The 1910 census shows the foreign born white population as 13,845,545, while the 1920 census shows that population as 13,712,754, which gives a net increase of 367,791. On the other hand, the figures of the Commissioner General of Immigration show by actual count at the ports 5,725,911 aliens admitted and 2,146,994 aliens departed, leaving a net increase of 3,578,917 for the same period covered by the two censuses (1910 and 1920). Inasmuch as the enumerators could not have missed three million, they are probably counted among the native white.
peoples to this country. Few people realize the magnitude of this movement or the speed with which it has taken place. Since 1901, less than a single generation, it may be estimated that about 10,000,000 Alpine and Mediterranean types have come to this country. Allowing for the return of 1/3 or 3/8 of these, and using our army estimates of intellectual ability, this would give us over 2,000,000 immigrants below the average negro.

We may consider that the population of the United States is made up of four racial elements, the Nordic, Alpine, and Mediterranean races of Europe, and the negro. If these four types blend in the future into one general American type, then it is a foregone conclusion that this future blended American will be less intelligent than the present native born American, for the general results of the admixture of higher and lower orders of intelligence must inevitably be a mean between the two.

If we turn to the history of races, we find that as a general rule where two races have been in contact they have intermingled, and a cross between the two has resulted. Europe shows many examples of areas where the anthropological characteristics of one race shade over into those of another race where the two have intermixed, and, indeed, in countries such as France and Switzerland it is only in areas that are geographically or economically isolated that one finds types that are relatively pure. The Mongol-Tatar element in Russia is an integral part of the population. The Mediterranean race throughout the area of its contact with the negro has crossed with him. Some of the Berbers in Northern Africa show negroid characteristics, and in India the Mediterranean race has crossed with the Dravidians and Pre-Dravidian negroids. The population of Sardinia shows a number of negroid characteristics. Turn where we may, history gives us no great exception to the general rule
that propinquity leads to opportunity and opportunity to intermixture.

In considering racial crosses, Professor Conklin\(^1\) states that "It is highly probable that while some of these hybrids may show all the bad qualities of both parents, others may show the good qualities of both and indeed in this respect resemble the children in any pure-bred family. But it is practically certain that the general or average results of the crossing of a superior and an inferior race are to strike a balance somewhere between the two. This is no contradiction of the principles of Mendelian inheritance but rather the application of these principles to a general population. The general effect of the hybridization of races can not fail to lead to a lowering of the qualities of the higher race and a raising of the qualities of the lower one." (pp. 50-51.)

And as to the possibility of a cross between races in the future, Professor Couklin writes: "Even if we are horrified by the thought, we cannot hide the fact that all present signs point to an intimate commingling of all existing human types within the next five or ten thousand years at most. Unless we can re-establish geographical isolation of races, we cannot prevent their interbreeding. By rigid laws excluding immigrants of other races, such as they have in New Zealand and Australia, it may be possible for a time to maintain the purity of the white race in certain countries, but with constantly increasing intercommunications between all lands and peoples such artificial barriers will probably prove as ineffectual in the long run as the Great Wall of China. The races of the world are not drawing apart but together, and it needs only the vision that will look

ahead a few thousand years to see the blending of all racial currents into a common stream.” (p. 52.)

If we frankly recognize the fact that the crossing of races in juxtaposition has always occurred in the past, what evidence have we that such crosses have had untoward consequences? Our own data from the army tests indicate clearly the intellectual superiority of the Nordic race group. This superiority is confirmed by observation of this race in history. The Alpine race, according to our figures, which are supported by historical evidence, seems to be considerably below the Nordic type intellectually. However, our recruits from Germany, which represents a Nordic-Alpine cross, are about the same as those from Holland, Scotland, the United States, Denmark, and Canada, countries which have on the whole a greater proportion of Nordic blood than Germany. Again, the Nordic and Alpine mixture in Switzerland has given a stable people, who have evolved, in spite of linguistic differences, a very advanced form of government. The evidence indicates that the Nordic-Alpine cross, which occurred in Western Europe when the Nordics overwhelmed the Alpines to such an extent that the type was completely submerged and not re-discovered until recently, has not given unfortunate results.

This evidence, however, can not be carried over to indicate that a cross between the Nordic and the Alpine Slav would be desirable. The Alpines that our data sample come for the most part from an area peopled largely by a branch of the Alpine race which appeared late and radiated from the Carpathian Mountains. It is probably a different branch of the Alpine race from that which forms the primitive substratum of the present population of Western Europe. Our data on the Alpine Slav show that he is intellectually inferior to the Nordic, and every indication
would point to a lowering of the average intelligence of the Nordic if crossed with the Alpine Slav. There can be no objection to the intermixture of races of equal ability, provided the mingling proceeds equally from all sections of the distribution of ability. Our data, however, indicate that the Alpine Slav we have imported and to whom we give preference in our present immigration law is intellectually inferior to the Nordic type.

The Mediterranean race at its northern extension blends with the Alpine very considerably, and to a less extent with the Nordic. At the point of its furthermost western expansion in Europe it has crossed with the primitive types in Ireland. Throughout the area of its southern and eastern expansion it has crossed with negroid types. In this continent, the Mediterranean has crossed with the Amerind and the imported negro very extensively. In general, the Mediterranean race has crossed with primitive race types more completely and promiscuously than either the Alpine or the Nordic, and with most unfortunate results.

We must now frankly admit the undesirable results which would ensue from a cross between the Nordic in this country with the Alpine Slav, with the degenerated hybrid Mediterranean, or with the negro, or from the promiscuous intermingling of all four types. Granted the undesirable results of such an intermingling, is there any evidence showing that such a process is going on? Unfortunately the evidence is undeniable. The 1920 census shows that we have 7,000,000 native born whites of mixed parentage, a fact which indicates clearly the number of crosses between the native born stock and the European importations.

The evidence in regard to the white and negro cross is also indisputable. If we examine the figures showing the proportion of mulattoes to a thousand blacks for each twenty year period from 1850 to 1910, we find that in 1850
there were 126 mulattoes to a thousand blacks, 136 in 1870, 179 in 1890 and 264 in 1910. This intermixture of white and negro has been a natural result of the emancipation of the negro and the breaking down of social barriers against him, mostly in the North and West. In 1850, the free colored population showed 581 mulattoes to a thousand blacks as against 83 in the slave population. At each of the four censuses (1850, 1870, 1890 and 1910) the South, where the social barriers are more rigid than elsewhere, has returned the smallest proportion of mulattoes to a thousand blacks. The 1910 census showed 201 in the South, 266 in the North and 321 in the West, and the West has returned the highest proportion at each of the censuses except 1850.

We must face a possibility of racial admixture here that is infinitely worse than that faced by any European country to-day, for we are incorporating the negro into our racial stock, while all of Europe is comparatively free from this taint. It is true that the rate of increase of the negro in this country by ten year periods since 1800 has decreased rather steadily from about 30% to about 11%, but this declining rate has given a gross population increase from approximately 1,000,000 to approximately 10,000,000. It is also true that the negro now constitutes only about 10% of the total population, where he formerly constituted 18% or 19% (1790 to 1830), but part of this decrease in percentage of the total population is due to the great influx of immigrants, and we favor in our immigration law those countries 35% of whose representatives here are below the average negro. The declining rate of increase in the negro population from 1800 to 1910 would indicate a corresponding lower rate to be expected in the future. From 1900 to 1920 the negro population increased 18.4%, while the native born white of native parents increased 42.6%, and the native born white of foreign parents increased 47.6%. It is
impossible to predict at the present time that the rate of infiltration of white blood into the negro will be checked by the declining rate of increase in the negro blood itself. The essential point is that there are 10,000,000 negroes here now and that the proportion of mulattoes to a thousand blacks has increased with alarming rapidity since 1850.

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

The steps that should be taken to preserve or increase our present intellectual capacity must of course be dictated by science and not by political expediency. Immigration should not only be restrictive but highly selective. And the revision of the immigration and naturalization laws will only afford a slight relief from our present difficulty. The really important steps are those looking toward the prevention of the continued propagation of defective strains in the present population. If all immigration were stopped now, the decline of American intelligence would still be inevitable. This is the problem which must be met, and our manner of meeting it will determine the future course of our national life.