

# Ethnic Group Differences

By S. D. PORTEUS

Until recently, memories of Hitler with his untenable racial theories and abhorrent practices were so fresh in people's minds that the further exploration of ethnic group differences was almost taboo. Even seriously-minded investigators who believed that the evidence for such differences was plain, hesitated to publicize these views lest they feed ammunition to the racial extremists.

Now that the emotional nausea has subsided, a new determination to sift available evidence on this controversial subject has arisen. Scientists should welcome this tendency, particularly in relation to evaluating proofs of certain mental and temperamental traits of importance to human adjustment.

Even before World War II, the subject had become, for certain social psychologists, a very tender one. The idea that all men of whatever racial constitution or skin color were born with equal individual potentialities was of course such a beautifully consoling illusion, that it was no wonder that it was defended with emotional fervor. It lay the whole world open to the wonderful designs and admirable efforts of missionaries, educators, social workers, reformers, and extreme environmentalists; in short to all those who are somewhat slightly referred to as "do-gooders." In our opinion this derogatory term has been applied solely because of the gap that exists between aims and performance. This gap exists because of the inevitable conclusion that men, either singly or in groups, are not of uniform mental status and potentialities. No assumptions by the egalitarians will make them so. This statement does not of course refer to the range of abilities. Very superior individuals may appear among the least favored groups, idiots among the most cultured.

As a first step towards clearer understanding it should be recognized that the desire to "do good" is one of the most laudable human attributes. Who would not wish to do good? The tragedy that is inherent in the situation is that we fail to do better. Scientific attempts to explore human inequalities are themselves an effort to do good. But we must recognize that both individual and group differences constitute one of the most inescapable facts of human evolution. It is distressing—but still a sober fact—that the individual is not at birth a *tabula rasa* on which the moving pencil writes what it may. The structure of the *tabula* helps to

determine what shall be written thereon, and pencils are both hard and soft. This we believe to be a more clearly self-evident fact than any noble affirmation of equality. However, it is a truism as much as regards social as ethnic group differences. We would prefer to forget altogether the question of superiority or inferiority in racial groups and devote our efforts to investigating differences.

But there still remains the difficult problem of how to measure these differences, whether natural or acquired, and here there is room for disagreement. In our opinion, the status of ethnic group differences is akin to that of differences between the sexes. No one, we think, would commit himself to the claim that one sex is generally superior to the other; but there are many questions of comparison unsolved. Do females learn slower or faster than men? Do they retain knowledge worse or better? Are they more systematic or more conforming? Are they more or less creative than men, and in what directions? Are they more prone to diseases of different types, and why? Are they more careful about details, more or less logical in reasoning? The questions are still open, mainly because of the dearth of reliable instruments and the difficulties of proper sampling of tested groups. The same problems arise in determining ethnic group differences, but sex comparisons seem to be happily free from emotional and prejudicial overtones.

One handicap to scientific investigation of ethnic group differences should be recognized at the outset of this discussion. The ordinary means of measuring mental differences were devised and applied by whites, and wherever they are dependent on facility in the English language are obviously unsuitable. Language is the vehicle of education, and many tests are very heavily weighted by knowledge of vocabulary, as well as computing ability, or general information, all of which are the prime interests of the educator. If the test is language free, it is still necessary to prove that its material is basically familiar to culturally various groups, and even more important, that the test is inherently interesting. The material may be "culture-free," but it is quite possible that it is *interest-free* also. Any investigator of the mentality of primitive peoples will soon find himself faced with this consideration.

Sometimes primitive peoples' indifference to, or even contempt for certain tests, is surprising. The building of simple designs with colored blocks, for example, was thought to be the kind of task that savages would find appealing. Australian aborigines were obviously not interested in such a task. To them it was merely child's play. Though they had a manual sign language, they held the Thurstone Hand Test, in which drawings of left and right hands are sorted according to the position of the fingers, in similar

contempt. To them it was so simple as to be meaningless. As to local cultural factors, their influence must also be considered. Children in Hawaii, where chimneys are rare, saw nothing incomplete in a picture of a house without a chimney.

It would seem obvious that tests of this character are useless in the attempt to measure ethnic group differences in mentality. To compare learning ability using the symbols that are common to white schooling is a futile procedure. Even pictorial representations common in our culture, such as using a sphere with radiating lines to represent the sun, may be meaningless to savages.

Before going further a note should be made with regard to the word "race." Apparently anthropologists themselves disagree as to the value of the criteria commonly employed to differentiate races of mankind. The most extreme view is that the term has therefore no meaning. The Australians, for example, show a diversity of racial characteristics. They are long-headed, straight or wavy-haired, are of very dark, almost black skin color, are hirsute, have blood groupings very similar to Anglo-Saxons and are of medium to tall stature. Yet because these differences cut across some of the accepted criteria that distinguish races, there seems to be no good reason for denying that these people do constitute a separate race, one that has been cut off from the rest of mankind for possibly ten thousand years. Once Australian aborigines have been given this racial status, there seems to be no further point in arguing that race has no meaning. Geneticists did not invent the term and can hardly assume any right to restrict its usage.

A similar position has been taken up by the writer with regard to racial mental differences. Once they have been firmly established for the Australian race, the question of their reality is settled. Unfortunately, the evidence is scanty. Psychologists are certainly not very mentally alert or they would not have missed the great opportunity to explore and describe Australian aboriginal intelligence. Their neglect to do so is similar to missing the chance to investigate thoroughly the mental effects of lobotomy or surgery of the frontal lobes. With regard to what work has actually been done in this latter field, most psychologists are crassly ignorant. With the advent of tranquilizing drugs, lobotomies are rare, and the opportunity to investigate adequately their mental effects is almost completely lost.

As regards ethnic studies, it might be well to avoid difficulties of definition by speaking of racial types—Melanesians, Polynesians, Australoids, Chinese, Japanese, etc., members of each division sharing to a greater or less extent certain physical characteristics, so that they can be commonly recognized as belonging to the designated group. Obviously, there are few, if any, pure racial

types or groups, although peoples such as the Bushmen of the Kalahari and the Australian aborigines are very easily distinguishable. The concentration within the group of physical characters, such as extremely large supraorbital ridges in the Australian, or light yellow color, small stature and "triangular" faces among the Bushmen, is obviously due to intermarriage among a geographically isolated people. Throughout this paper we shall speak of ethnic groups in the above sense, without regard to racial intra-relationships. But as is the case with psychosurgery, the opportunities for investigating such a race as the Australians are fast diminishing. As regards South African Bushmen, they may be gone completely.

Most of the work done by the author in this field has been based on the Porteus Maze Test in its original form. Other tests such as form boards and specially devised tests including dot number estimations, recognition (from photographs) of footprints have been applied by him, but with considerable dubiety as to the value of the differences reported. The reasons for doubting the validity of these results have already been discussed, the main objection to their use being the unfamiliarity of primitive peoples with the test material, lack of interest and therefore effort in performance, the strange appearance and behaviour of the examiner. Communication between a white psychologist and a Kalahari Bushman might be as difficult as between a visiting Martian and ourselves, but it can be achieved. As one anthropologist puts it, communication is mainly "by signs and wonders," and it is strange that this may be still practically effective.

Actually, this partial block to communication may be due, not to distrust or fear, but to avid curiosity. The Bushman may be giving more attention to the stranger than to the test. In our experience, the sharp edge of curiosity is soon dulled, and once the white man has been well looked over and thoroughly discussed, anything of real interest that he presents to the native is eagerly experienced. Nor can it be assumed that the savage is impressed with his own inferiority. When the interpreter explained to the Bushmen that the white man could not speak their language, their kindly comment was, "Tell him we are very sorry for him."

To the experienced investigator some arm-chair criticisms are merely amusing. Some reviewers\* complained about the small number of subjects examined—25 male Bushmen and 120 male Australian aborigines—forgetting that these numbers represented, in both studies, one examinee or subject to at least 100 miles of arduous desert travel.

Another critic, in the pages of the august London *Times*

\* *Primitive Intelligence and Environment*. Macmillan & Company, New York, 1937.

*Literary Supplement* stated that the author's subjects were too sophisticated, and regretted that they did not include wild natives who took to the trees at the sight of white explorers. Unfortunately, the examiner was not an expert tree-climber.

Even a well-disposed critic such as Klineberg wondered how tests obtained from the author's tribal brothers who looked for help from the examiner, or examination data obtained from an aboriginal murderer wearing leg-irons and watched over by an armed trooper, could be representative. However, once the Arunta were told that they must solve the problem by themselves, they went at the task with avidity; Gurug, the murderer, was so pleased with his good performance that he wanted to do the tests all over again. Moreover, the aboriginal performances in these instances were excellent.

Some criticisms were must less pleasant in tone. Reviewers here and there were indignant at the claim that these examinations represented a pioneer excursion into primitive psychology and at the same time they objected to the sparcity of the tests applied. The "pioneer" claim was substantiated by the fact that there were no other tests available. It is surely pioneer work when the investigator must forge his own tools. Others objected that the tests were too simple, being merely "baby plays and mazes." This, of course, reversed the usual complaint that the tests were too difficult and complex for primitive experience.

Other critics would sweep all the evidence under the mat as being inconsequential. Bruno Lasker, for example, stated "Instead of wishing this excellent book\* many editions, we may therefore hope rather that it will take its place at, or near the end of an immense quasi-scientific literature that has led into a blind alley." To this one might reply that to those who are unseeing, all alleys are blind.

In 1938, the criticism that the tests used were inconsequential might have been more justifiable than at present. The chief instrument used was the Porteus Maze, a graduated series of pencil and paper mazes through which, under standard conditions, the subject has to find his way. Though paper and pencil are new to savage experience, graving tools and geometrical designs are quite familiar to most primitive peoples. From Bushmen up, they take great interest in decorating implements and weapons with conventional designs. There was no doubt about their acceptance of the test as something worth spending effort and attention upon. The Australians especially engrave designs on their sacred *churinga* and the labor expended on finding their way through

\* *The Psychology of a Primitive People.*

the printed labyrinths was of the most concentrated type. The Bushmen also rescued test forms from the campfire and, using charred sticks, worked their way most diligently through the designs. Then they took them home to their villages "to show our women how clever we are."

One weakness in the research plan was not apprehended sufficiently by either the critics or the examiner—the lack of fore-practice in the test. This would have diminished the cumulative effect of local cultural differences, unfamiliarity with the examiner and the test, etc. Unfortunately, at that time there was only the original Maze series available. Any use of the easier mazes for demonstration and fore-exercise would have restricted the material needed for actual testing. Now we have three Maze series which, if used in succession, eliminate the effect of practice on scores.

The fact that of all tests in the psychologist's repertoire the Maze is the most consistently sensitive to operative damage to the frontal lobes had not in 1938, as now, been demonstrated over and over again by the most careful investigations such as the Columbia-Greystone Projects (1949 and 1951) and the New York Brain Study. Now it is generally accepted by all who have studied the evidence, that human adjustment particularly in regard to foresight, planning, and mental alertness is most consistently indicated by Maze Test performance, and this would apply to both civilized and primitive individuals. "Baby plays" do not give any such neurological and behavioral insights.

For these reasons the interpretation of Maze Test results no longer rests on the observation that low levels of performance are characteristic of retarded individuals, especially those who are least adaptable to civilized living. Now we have the added knowledge that the tests reflect a lowered capacity in directions that are basic to human survival at either civilized or primitive levels. We know, of course, that verbal reasoning, computing, ability to learn to read and write are not essential to survival, since man survived without them. All the evidence, however, now points to the conclusion that the abilities tested by the Maze, particularly mental alertness and capacity for planning ahead, are much more fundamental to survival than scholastic educability. Apparently, awareness is mediated by entirely different brain structures such as the reticular formations in the brain stem, whereas intellect as contrasted with practical intelligence is subserved by more recently evolved cerebral areas.

Actually the frontal lobes can suffer all kinds of surgical damage without any serious loss of scholastic educability. On the other hand, damage to the prefrontal brain, especially those areas with most direct relations with the brain stem and the reticular system,

results in blunted sensitivities and emotional indifference, with an impaired capacity to deal effectively with the environment.

As the books describing previous ethnic investigations using the Maze are out of print, it is necessary to present as briefly as possible the high points of these racial group studies.

In spite of all the arm-chair criticisms as to the unsuitability of the Maze Tests, the Australians did surprisingly well. The Central Australians, who live in an arid region where droughts are recurrent so that the small wandering tribes are often on the verge of starvation, scored at the relatively very satisfactory level of 12.08 years, or 1.6 years above the average North-western Australian natives who live in a well-watered though hot and humid area where food supplies are plentiful. In both contrasted regions there were mission schools and degrees of contact with whites were about equivalent.

Actually, the Central Australians were only somewhat below the two ethnic groups with the best Maze performance, a Tamil group in India and the Ainu of Northern Japan. The Karadjeri in North-west Australia matched in performance the Senoi of the Malayan mountains and the Bajou, or sea-gypsies of the Sulu Archipelago. The lowest scores were achieved by the Negritos\* of the Zambali mountains in Luzon, the Sakai-Jeram of the Perak coast regions and the Bushmen of the Kalahari. These groups were three to four years below the average of the Central Australians. No operative factors which the investigators could detect would explain such a disparity in scores, and it must therefore be ascribed, at least in part, to ethnic group mental differences. In any case, environmental differences would not account for the inequalities in scores. As previously noted, fore-exercise and the use of the present forms of the Maze would undoubtedly have given more reliable results.

Fortunately since 1934, when most work was done with the Maze on primitive ethnic groups, there have been some rather marked developments in the tests with consequently greater applicability in the area of mental and temperamental differences. As previously mentioned, there are now three test series so that one can be used for practice; hence the primitive subject will be quite familiar with what is expected of him. Judging by the almost painful effort shown by such primitive groups as the Alorese (Dubois, 1944) and by the Central Australia Iliaura (Fry & Pulleine, 1931) there seems little danger of the subjects of such examinations losing interest in the testing.

\* One psychologist complained that results with Bushmen were not combined with those of the Negritos, thus making up a true pigmy racial group. The Bushmen are, of course, not pigmies.

The second development concerns what is called the qualitative scoring, or Q-score. The usual instructions are given before presenting the test, including warnings against lifting the pencil off the paper, crossing lines or cutting corners. These instructions could be translated into the native language, or, better still, conveyed by pantomime during the progress of the practice series.

A number of investigations throughout the U.S.A. have shown that weighted error scores\* are significantly higher for juvenile delinquents than for non-delinquent students of equal age, race and social and educational status. It would seem from these findings that delinquents are, as we should expect, more careless in execution, more impulsive and more neglectful of instructions than non-delinquents. These negative traits apparently lie in the temperamental field. The correlations of Q-scores with Maze Test ages are low, of the order of  $-.3$  or  $-.4$ . Considering that such temperamental factors as impulsiveness also enter into test age performance, these low correlations are surprising and indicate that the two measures are of a somewhat different nature.

That Q-scores are affected by environmental factors such as home and school control and delinquency rates in neighborhood areas seems extremely likely, judging by existing evidence. For example, three groups of Part-Hawaiians were contrasted, the first attending an excellent, well-endowed boarding institution, the Kamehameha Schools, the second, public high schools, the third, the Training Schools for delinquents at Koolau, Hawaii. These three groups represent the ultimate differences in educational environment. The results of the whole study show a spread of average scores in the expected direction.

We mention this point because of the objection commonly made that test scores may be affected by nurltal influences. This is certainly true as regards Q-scores, but from our point of view the fact is not of extreme relevancy. In the first place in such comparisons it is quite impossible to separate exactly what is due to nature and what to nurture. Whether Topsy was born or grew that way does not, for any practical reason, matter. Each individual's status among his fellows is the result of a very complex interplay of hereditary and social influences. Whether a person grows up to be careless, unsystematic, untidy, and a sloppy worker because he was not taught and disciplined to be otherwise, or whether he was born with strong tendencies to conform or to take easily the impress of environmental pressures, who can say? The psychologist who arrives at a determination of where the individual

\* See *The Porteus Maze Test and Intelligence*, 1950, p. 167 for instructions and scoring, or the later volume, *Porteus Maze Test and Clinical Psychology*, 1959.

stands in a Maze Test has no interest in the insoluble question of how to allot the proper weight to such natural or formative factors, but rather with the person as he is.

With regard to mental brightness, which is not synonymous with intelligence, the author confesses doubt and even impatience concerning present-day practices of arriving at what is mistakenly termed an "intelligence quotient" by means of an arbitrarily weighted hodge-podge of sub-tests which make up a Binet or a Wechsler-Bellevue score.

With the question whether such misleading developmental labels remain constant, we have even less concern. We would, however, point out that the Maze Test is not a hodge-podge but a graduated test of a single complex of mental traits clustered about the capacity of mental alertness in planning. Test quotients are sometimes reckoned but are kept in reasonable perspective. Under the latest scoring only a maximum T.Q. of 135 is obtainable. No one can possibly boast of an I.Q. of 170 or above as is sometimes quoted, quite absurdly, for tests of so-called "general intelligence." The school of thought represented by Terman, who held that eminent men *must* have high I.Q.s, and when it was impossible to determine the test level, blithely assigned a very elevated figure, is declining in favor. The Binet based I.Q. has been sadly over-emphasized.

A third development which is based on Maze material but which constitutes an entirely new approach is that described in a recent issue of *The Mankind Quarterly*. This is a non-intellectual measure of what seems to be an important temperamental trait, namely, the tendency to conform to self-established patterns of behavior, or, conversely, to vary that behavior in detail. One important point in relation to this measure is that it is new, and therefore as novel in application to whites as to others.

Obviously this measure belongs to the field of personality rather than that of mental ability; an important consideration, since measures of mentality are legion, while reliable tests of personality development are rare. Some of the most interesting, such as the Rorschach test, are very difficult to interpret, and the validity of their results is in serious question.

Since the C.F. (conformity-flexibility) scores are based on a comparison of performances of one Maze design (Year XI) when the test has been repeated, and considering the acceptance of the Maze Test by primitive groups, it would seem to be a natural choice for inter-ethnic group comparisons. One advantage of the new and unique nature of the test is that no one can possibly approach the study with any preconceived notions or prejudices with regard to superiority or inferiority of performance. The

application of the test may however present scientific evidence as to the validity of many theories of temperamental differences that are at present mere assumptions.

This rather long discussion has been thought necessary to clear the way of misconceptions and objections. It is not based on any endeavor to prove white superiority; actually, in regard to the Maze, extremely primitive people such as the Arunta and Luritcha of Central Australia made relatively excellent scores. One Luritcha native, who had never seen a pencil and paper and only one other white man in his life, made an excellent performance, thus proving that the range of Maze scores was the same for these aborigines as it is for white high school students. Furthermore, we recognize the principle that testing should not begin until natives are quite familiar with the appearance and ordinary behavior of a foreign examiner. This we believe to be even more important in affecting performance than mission or native schooling. The ability to add a column of figures, to speak a little restricted English, even to read a primer, has very little to do with ability to deal successfully with a maze. Otherwise there would be a close correlation between scholastic ability and the Maze, which all experience contradicts.

As regards the study reported hereafter, there were no educational inequalities among subjects. All were pupils in the tenth grade of intermediate high schools in Honolulu and were thus of equivalent age. The groups consisted of Japanese males (N183) and Japanese females (N198); Chinese males (N42) and Chinese females (N57); Part-Hawaiian males (N99) and Part-Hawaiian females (N82). These comparisons were made on the basis of mean Maze Test ages, mean qualitative scores (Q-scores), and Conformity-Flexibility (C-F) scores. It should be repeated that Q-scores represent errors in technical execution such as crossed lines, cut corners of the Maze design; hence the lower total error score, the better performance.

As regards C-F scores, there are at present no judgment values possible; all we can say is that high scores indicate a neater, more systematic style of response with greater tendency to self-conformity. There is evidence (Porteus, Barclay, Culver & Kleman, 1960) that a tranquilizing drug tends to fixate the type of response. We theorize that scores in the extreme ranges indicate faults of personality and that normal, well-adjusted people score in the middle ranges. Since the approach is entirely new, with no right or wrong responses, no one's pride can be hurt by ethnic group comparisons.

Sex differences in Maze Test ages are evident. In 12 independent studies known to the writer, males have excelled females.

but in none of these is the difference large enough to reach significance. But the unlikelihood of such a consistent advantage being due solely to chance is extreme. Any relay track team that can beat another 12 times in succession would be considered undoubtedly superior. These studies have all been described in the literature and illustrate the value of the repeated experiment.

It is also noteworthy that Drs Joseph and Murray (1951) report that Chamorros and Carolinian males on Saipan excel females in the Porteus Maze at every age level. This supports Porteus's observations (1931) as regards the superior test ability of Australian aboriginal males.

As regards average Maze Test ages our study did not reveal any significant ethnic group differences. This result was entirely to be expected, as high school students represent an educationally selected group. It also illustrates the futility of basing ethnic group comparisons on college or high school students. Only a comparative study throughout the whole range of ability would be meaningful.

One other comment is pertinent. We have included a group termed Part-Hawaiians who of course are not a true ethnic group. We believe that if any individuals of mixed ethnic ancestry are segregated for mental comparisons they should, if included at all, be classified with the people of their main blood lines. It seems strange to classify a person with one-sixteenth or less Hawaiian blood as Part-Hawaiian. However, many people in Hawaii prefer to claim Hawaiian descent. The case with regard to Negroes\* in the U.S.A. stands differently. Why should not individuals be classified as whites if their ancestral background is mainly white?

Turning now to qualitative scores which reflect temperamental traits, the differences seem clear-cut. Sex differences are only significant with regard to Japanese males, and work out at the .01 level of confidence. It is, however, the ethnic differences that are most interesting, since they support the prediction which the author made in 1927 that temperamental traits more than mental abilities differentiate ethnic groups. At least they are easier to demonstrate.

The Chinese had excellent Q-scores—males 20.5 points, females 19.6 points. With the sexes combined the means were Chinese 20, Japanese 26.5 and Part-Hawaiians 30.7 points. In the last two groups females had a slight advantage. This trend is reversed when delinquents are compared. In other words, if a girl is in serious trouble, her temperamental defects are usually

\* The use of the capital letter in this word is a concession to racial sensitivity. Actually the use of the designation "negro" is no more derogatory than is characterizing the Caucasians as "whites." Hereafter in this paper lower case letters will be used for both.

very apparent. Here then is an ethnic group difference that is as well-attested or even better attested than sex differences.

The best light we can throw on the meaning of these observed differences comes from the fact that high scores are related to delinquency. This has been proved by a number of independent investigations (Porteus, 1942; Wright, 1944; Grajales, 1948; Doctor & Winder, 1954; Fooks & Thomas, 1957).

One illuminating study by the author of delinquents and non-delinquents was reported in 1959. Cases were matched by sexes, chronological age and Maze Test ages. Normal boys scored 22 points, delinquents 43 points; normal girls scored 25 points, delinquent girls 56 points. Obviously high Q-scores distinguish delinquents, though there is some overlap.

In connection with our present study we compared two groups of cases, one on attendance at Kamehameha Schools, an excellently endowed, well-run boarding institution for Part-Hawaiians, the other, inmates of the Training Schools for delinquents. We included only children with good Maze Test ages of 15 years or above.

Non-delinquent males (N42) averaged 24 Q-score points; delinquents (N23) averaged 49 points. Non-delinquent girls (N39) averaged 22 points; delinquent girls (N50) 40 points. Thus, in order to institute the severest Q-score comparison we could devise, we eliminated all cases with low Maze Test age performances. The cases with many unsuccessful trials naturally have more chances to amass qualitative errors. In other words, delinquents with the best Maze records commit almost twice as many qualitative errors as non-delinquents of equal test ages.

### Summary

The main conclusion that is warranted by this present study is that significant ethnic group differences do occur in the temperamental traits reflected by the Porteus Maze Test qualitative scores. The importance of these differences is proved by the fact that the mean performances of delinquent groups are on the average almost twice as bad as those of non-delinquents. Our results apply only to Japanese, Chinese, and Part-Hawaiian high school students of equivalent age and scholastic standing in Honolulu.

It would seem that white and negro temperamental differences in this direction should also be carefully investigated. As this inquiry would not be concerned with mental test ages but solely with temperamental trends, no special sensitivities based on ethnic ancestry would be involved. We would also suggest that this investigation would apply to full-blooded individuals only. If mixed bloods are involved, then the predominant physical charac-

**TABLE I**  
**MAZE Q-SCORES FOR THREE ETHNIC GROUPS COMPARED**

GROUP	N	MEAN	S.D.	GROUPS	DIFF.	SIGNIF.*
Japanese	381	26.45	20.37	Jap.-Chin.	6.38	.01
Chinese	99	20.07	14.98	Chin.-P.H.	10.70	.001
Pt-Hawn	181	30.77	19.79	Jap.-P.H.	4.32	.02

\* Fisher t-Test

**TABLE II**  
**TEST AGES AND SEX DIFFERENCES—THREE ETHNIC GROUPS**

GROUP	N	MEAN	S.D.	MALE X	N	FEM. X	N	DIFF.
Japanese	381	15.67	1.27	15.80	183	15.54	198	M= +.26
Chinese	100	15.80	1.55	15.99	42	15.66	58	M= +.36
Pt-Hawn	181	15.09	1.77	15.38	99	14.74	82	M= +.64*

\* Significant at the .02 level

**TABLE III**  
**SEX DIFFERENCES—CONFORMITY-FLEXIBILITY SCORES**

GROUP	N	MEAN	S.D.	GROUP	N	MEAN	S.D.	DIFF.	SIGNIF.*
Jap.-Males	50	9.70	4.18	Jap.-Fem.	49	12.67	4.99	2.97	<.001
Chin.-Males	35	10.06	3.98	Chin.-Fem.	42	12.77	5.28	2.71	.02
P.H.-Males	53	10.25	3.86	P.H.-Fem.	54	11.19	5.00	0.94	<.10

\* Fisher t-Test

teristics should determine the ethnic classification. However, exclusion of part-negroes or part-whites would avoid any such difficulty.

As regards the larger issue of racial differences, the writer believes that the means of measurement have been extended and improved in the 31 years that have elapsed since the main field work on this question was done. At least this is true of the test series that is most applicable—the various forms of the Maze. Moreover, through the results of psychosurgery the test results have been invested with new meaning and validity. The inadequacies of the earlier approach can now be avoided. It is noteworthy that in spite of these acknowledged defects, no psychologist in the last quarter of a century has produced results that in any way contradict these findings. They have been disregarded, but never refuted.

Considering the importance to the world of ethnic differences, we propose that UNESCO undertake the sponsorship of an unbiased investigation of this subject. Surely a committee could arrange such questions as choice of subjects, testing approaches, sampling, and could forecast the lines of possible interpretation of results.

In the writer's opinion no country or ethnic type of subjects offers such opportunity for study as the center and north-west of the Australian continent. Admittedly, the number of individuals suitable for investigation is diminishing, and the cost of expeditions has risen, but on the other hand, the means of travel and sustenance of field work, together with the measuring tools, have improved. Other workers besides psychologists should be represented on the team of investigators, but the crux of the inquiry should be the mental and temperamental differences.

We sincerely believe that if UNESCO were to initiate and financially support the scheme a great contribution to the scientific knowledge of mankind could be made, one which would save years of fruitless, often acrimonious debate. The statement sometimes heard that the question of racial or ethnic group differences has been settled is completely untenable.

# Pictorial Languages of China and Japan

By A. C. HYDE LAY

The speculative question might be, and has been asked, whether the written Chinese language, being so "cumbersome," has been an important factor in retarding the development of China, while, on the other hand, the modern Japanese language has enabled Japan to go faster ahead.

There are 44,449 characters, hieroglyphics or symbols in the authoritative dictionary of the Emperor K'ang Hsi, who ascended the throne at the age of 8, in 1662, and reigned until 1723. It is a massive work, with prestige almost equivalent to that of the Authorised Version of the Bible.

The meteoric rise of Japan to the status of a first-class Great Power, with her victories in the Sino-Japanese War of 1894-5, and the Russo-Japanese War of 1904-5, stunned the world. Two colossal continental countries, fighting against island "dwarves," as the Chinese were wont to speak superciliously of the Japanese, had been defeated within a decade.

The more recent, remarkable, material advancement of China, under Communism, and her achievement, in fact, of the position of a Great Power, although not represented in the United Nations, while tiny territories which have suddenly required sovereignty are members of that "exclusive club," has been attained, ironically, at the expense of that freedom of speech for which the Chinese people have been distinguished for centuries, despite the "cumbersome" nature of their beautiful pictorial language.

It is a vast subject, and only a few aspects of it can be compressed into a short article, by a process of elimination.

In practice only 7000 or 8000 of these 44,449 characters were employed. No scholar ever knew them all thoroughly, without reference to the dictionary. It is a striking parallel that Dr Johnson's famous lexicon which was almost contemporaneous and only slightly post-dated that of the Emperor K'ang Hsi also contained about 50,000 words, while modern dictionaries in England and America can contain up to half a million words. At the same time and at the opposite extreme we have Basic English which with 800 words can convey crudely what Shakespeare expressed so much more richly.