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ANTHROPOLOGICAL AND ETHNOLOGICAL MISSION
TO MOZAMBIQUEPSYCHOTECHNICAL STUDIESINTELLECTUAL LEVEL OF SOME NATIVE TRIBESby Antonio Augusto

In the 1948 field-work season of the Anthropological and Ethnological Mission to Mozambique, 506 general intelligence examinations of adult natives were made, employing, as in the 1946 season, Yerkes's Point Scale, the well-known modification of the Binet-Simon Scale of tests.

As regards Yerkes's tests 15 (comprehension of questions) 17 (criticism of absurd statements), 19 (definition of abstract terms) and 20 (analogies), for some of his questions, which looked foreign to the native's mind, easier ones were substituted. Instead of asking the meaning of the abstract terms "charity" and "justice", those of "laziness", "falsehood" and "envy" were asked. Regarding the analogies of abstract terms, those of time, such as "Year is to month as week is to ..." were resorted to: and when this formula was not understood, this one was employed: "The year has months, and the week, what has it?" In the same way, as Yerkes's prescribed questions re "judging a person rather by what he does than by what he says" and "more readily forgiving an unkind act done in anger than one done without anger" were not apprehended by the natives, easier ones, within the reach of their minds, were put to them, such as:

What would you do:

a) if payment of the tax was required and you had no money?

b) if, on coming home, you found your wife very ill? or a hungry little son and nothing to give him?

c) if close by your house you saw on the ground a £5 bank note?

d) if with a £5 banknote you settled an account of £4 and were given 5s. too much in change?

e) if you damaged an object that someone had lent you?

f) if a friend, who had stolen a watch, fearing that it might be sought for in his abode, asked you to keep it for him?

* Test 18. (construction of sentences with three given words) could only be given to the natives who could read easily, and the percentage of those who passed it was therefore very low. To other natives, three "puzzles" were given: that of Binet (2) (for children 5 years old), that of Terman (3) (for children 10 to 11 years old) and still another added by the author, somewhat easier than Terman's (see fig. 1)

For the correct solution of the first, credit of 1 point was given, and of 2 points for the correct solution of each of the remaining ones.

Test 3. (comparison of lines and weights) is intended, in the Binet-Simon scale, for children 5 years old (in that of Yerkes, for those aged 5) and therefore only a few natives did not pass it. Tests 1. (aesthetic comparisons) 2. (missing parts) and 12. (copying a square and a diamond) are in the

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Binet scale for children 5, 6 and 7 years old (in that of Terman, for children aged 4, 5, and 6). But in Yerkes's Point Scale these tests are given to individuals of all ages, including adults; and thus it must be since the idiot does not exceed the mental level of a normal child of two years, and the imbecile, unable to understand what he reads and to write intelligibly, remains, according to Vermeulen, at the level of 6 to 10 years but according to Claparède (4) does not exceed that of 5 years

In order to measure the memory for words, sentences were constructed equivalent to those of Yerkes's scale, with 6, 12, 18 and 24 syllables, in the languages of each of the examined tribes. But in spite of our injunctions for a convenient syllabication, not always were these rightly followed by the persons who constructed the sentences.

Previously to the examinations, interpreters had to be trained for every tribe, and even for every circumscription. We began by testing each interpreter's intelligence, so that he might grasp what was wanted from him. Next we gave him directions about the way of putting the questions, lucidly, but avoiding to give any suggestions for the answers; about the unconcern with which he should receive the answers, without exteriorizing disappointment, approval or scorn; and about the need for accuracy in translating them. In the first examinations it was found difficult to secure the fulfilment of our injunctions.

In the region to the south of the river Save, where the disparity of the languages is slighter, it is possible to employ a single interpreter, which will render work easier and more accurate.

For a better appraisal of the general intelligence of the natives, it was obviously expedient, or rather essential to know the normal scores of the European adult, so that the average mental attainments and intellectual profiles of whites and blacks might be contrasted.

The author has therefore thought it advisable to undertake such a study in the mother country, where he asked leave to give his tests to a group of recruits in which normals and defectives, literates and illiterates, hereditary abnormal and genetically gifted, rurals and urban, cultured and uncultured, were found side by side.

Owing to the kindness of Captain José Simoes Martinho, a former cooperator in the work of the Anthropological Mission and of Lieutenant Domingos Antonio Diniz and other officers of the second group of the "Companhia de Saúde", of Coimbra, all facilities and help were given to the author, who thus was able to examine 100 recruits (at first somewhat reluctant as they feared they were being chosen for an expedition to Africa) coming from all parts of the country, from north to south and from east to west.

- 1) Yerkes - a Point Scale for Measuring Mental Ability, Warwick and York, Baltimore, 1915
- 2) Binet e Simon - La mesure du developpement de l'intelligence chez les jeunes enfants. Paris 1917
- 3) Terman - The measurement of Intelligence - London 1919
- 4) Claparède - Comment diagnostiquer les aptitudes chez les écoliers. Paris 1924, P. 211, 212

The outstanding data upon these 100 Europeans were as follows:

Maximum intellectual level	98	(1)
Minimum	"	" 44
Average	"	" 79.0

With the same facilities as were accorded to the African natives in tests 15, 17, 19 and 20, that average would have risen to 81.5.

The diagram of Fig. 1 shows the intellectual profile of the series of 100 soldiers (2)

With properly standardized tests, normality must fluctuate between 70% and 80% of the highest possible score to be attained on every test. The Europeans we examined exceeded 80% on many tests, and only remained below 70% in the description of pictures (test 7) free association (test 13) definition of abstract terms (test 19) and analogies (test 20). The dotted lines in the respective diagram indicate the percentages obtained when they were given the same facilities as had been accorded to the African natives.

In the diagram of Yerkes, reproduced by Gaupp (3), to the 20 year old New York adult the average total score of 90 points is ascribed, but this average must have been obtained by testing college students. Claparede admits, like Binet, that the upper limit for the medium adult is that of the 12 years old child, and points out that the results of the psychological examination of U.S.A. recruits during the army mobilization for World War I revealed that the mental level of the American soldier (only white soldiers were examined) was that of Age XIII.

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- (1) The general intelligence level is the sum total of all scores attained in the 20 tests.
 - (2) The intellectual profile (or physiognomy) devised by Rossolino in 1909, is a curve connecting the levels of the several abilities tested.

In order to determine the profile of a group or series of individuals, the points scored for the items of every test are added, and the percentage is computed of this total score to the maximum score for the same test. In this way the maximum score for test 4 (memory for numbers) being 5 points, to our group of 100 Europeans, if they had attained that maximum, $5 \times 100 = 500$ points should be ascribed. But as the total score actually attained was only 365, the percentage was but of $\frac{365}{500} \times 100 = 73$

- (3) Gaupp - Psicologia del Nino, 4th edition, Barcelona, page 241

The average total score attained by our adult, 79, is neither so high as that recorded by Yerkes in his diagram, nor so low as that of Age XIII assigned to the American soldiers. We must not forget that the examination of those soldiers by means of Alpha and Beta tests was intended not only to establish their general intelligence level, but also, and above all, to know their aptitudes for every one of the special services that were going to be committed to them.

As regards education, the attainments of the 100 soldiers examined by us were:

Trained in Commercial schools	2
Trained for male-nurse	1
With full secondary education	1
With Sec. Ed. up to the 3rd form	1
Elementary school, 4th grade	37
" " 3rd grade	17
Could read and write	38
Could read but not write	1
Illiterate	2

Our mental level examinations were carried out, in the 1948 season, among the tribes mentioned below and with the results stated for each tribe:

A. M A C U A S.

During the 1948 field-work season, general intelligence tests were given to 189 male Macuas, who, together with the 15 Macuanas and 46 Metos examined in 1946, from a group of 250 individuals who attained the following total scores :

92; / 90; 86, 2 c.; / 84, 2 c.; 82; 81; / 78, 2 c.; 77, 4 c.;
76, 2c.; / 75, 2 c.; 74; 73; 72, 7 c.; 71, 5 c.; / 70
8 c.; 69 9c.; 68, 4.c.; 67, 5 c.; 66, 13 c.; / 65, 7 c.;
64, 7 c.; 63, 10 c.; 62, 9 c.; 61, 5 c.; / 60, 8 c.; 59, 10 c.;
58, 14 c.; 57, 16 c.; 56, 11 c.; / 55, 7 c.; 54, 8 c.;
53, 7c.; 52, 9 c.; 51, 9 c.; / 50, 6 c.; 48, 5 c.; 47, 3 c.;
46, 4 c.; / 45, 2 c.; 44, 8 c.; 43, 2 c.; 42; 41; / 39, 2 c.;
38, 4 c.; 37, 2 c.; / 35; 34/

Outstanding data:

Maximum score 92
Minimum score 34
Median score 59
Average score 59,5

Considering this average and the particular Intelligence Quotients, the distribution of the subjects examined respective I. Q.'s shows that this group may be held as regular.

I.Q. - Up to 55;	56 to 65;	66 to 75;	76 to 85;	86 to 95;	96 to 105	(normal)
Cases	-	10	14	20	51	62
I.Q. - Above	145;	136 to 145;	126 to 135;	116 to 125;	106 to 115	
Cases	2	4	10	31	46	

Among these 250 Macuas, 26 could read Portuguese and 37 Arabic, while 3 could read both languages; the percentage of the literate was therefore of 24 per cent.

By computing the percentages of the average total scores attained to the highest possible score for to every test, the Intellectual Profile of the Macuas is obtained. The diagram of fig. represents this profile, where test 18., only given to a few individuals, as was already stated, was therefore not taken into account.

Among these 250 Macuas, only 4 (3 Macuanas and 1 Caroa) did not pass all the parts of test 3., each of them having nevertheless scored 2 points out of the 3 constituting to the highest possible score for this test.

Auditory memory for sentences (test 6.) is good, and so are the comprehension of questions (test 15), the criticism of absurdities (test 17.), and the definition of abstract terms (test 19.), in which they attained more than 75% of the respective maximum scores. The results were poor in the comparison of weights (test 8.), definition and comparison of objects (tests 10. and 9.), copying a square and a diamond (test 12.), resistance of visual suggestions (test 11.) and analogies (test.20.); and they were poorer still in free

association/

association (test 13.), using three words in one sentence (test 14.), description of pictures (test 7.) and drawing designs from memory (test 16.).

Very weak is their memory for numbers (test 4.), only 22% of the highest possible score having been attained; and with this weakness their feeble capacity for counting backwards (test 5.) is to be correlated.

Sub-tribes	Number of cases	Maximum Score	Minimum Score	Average Score
Macuanas	103	86	37	58.7
Metos	50	92	34	65.0
Erátis	30	90	39	60.3
Chacas	22	86	38	59.1
Pamelas	14	67	44	55.6
Caroas	12	72	35	53.4
Matatanes	6	66	42	54.7
Ecotas or Côtis	6	57	38	47.8
Namarrais	5	58	50	55.0
Maravónis	2	69	66	67.5
Totality	250	92	34	59.5

We are now going to specify the results for each of these sub-tribes.

MACUANAS.

In 1946 we examined 15 individuals of this tribe; 9 of them lived at Porto Amélia, and 4 could read and write Arabic. The average intellectual level of this small group, evaluated by adding their scores for the several tests, could not but be much higher than the real mean level, which was determined in the next field work season by measuring a larger and more consistent series.

In 1948, we examined another group of 88 individuals whose local distribution was as follows: 22 were examined in the Alto Molócoe, 20 at Ribaué, 18 at Nampula, 10 at Nametil, 7 at Mussoril, 3 at Mogingual, 2 at Meconta, 2 at Nacala, 1 at Mecúfi, 1 at Larde, 1 at António Enes and 1 at Namarral.

The levels obtained for this series were, in decreasing order, the following :

86; 84, 2 c.; 82; 78, 2 c.; 77; 75; 74; 73; 72, 3 c.; 71; 70; 69, 4 c.; 61; 60, 2 c.; 59, 3 c.; 58, 6 c.; 57, 8 c.; 56, 7 c.; 55, 3 c.; 54, 6 c.; 53, 2 c.; 52, 3 c.; 51, 4 c.; 50, 2 c.; 48, 3 c.; 46, 4 c.; 44, 3 c.; 43, 2 c.; 41; 39; 38; 37, 2 c.;

The/

The homogeneity of the series can be established by distributing the examined individuals by their respective Intelligence Quotients:

I.Q.	-	Up to 55;	56 to 65;	66 to 75;	76 to 85;	86 to 95;	96 to 105	(normal)
Cases	-		3	7	7	20	26	
I.Q.	-	Above 145;	136 to 145;	126 to 135;	116 to 125;	106 to 115		
Cases		1	3	5	11	19		

The curve of their mental profile, given in the appended diagram, runs near to that respecting the totality of the Macuas.

METOS.

In the 1946 field work season 24 individuals of this sub-tribe had been examined at Marrupa and 22 at Montepuez. The group constituted by the 24 cases of Marrupa was fairly consistent, and attained an average intellectual level of 60.6.

In 1948 we examined another batch of 4 individuals at Mecúfi, who attained the average of 61.5. The actual average of this sub-tribe must be near those figures. But the 22 Matos of Montepuez, whose levels were all above 51, while for two individuals the total scores rose respectively to 81 and 92, constitute a selection of the most gifted; 2 of them had learned the Portuguese language and 5 the Arabic, and therefore the average they attained exceeds by much the right mean level, notwithstanding which we feel bound to include them in the total series of the 250 Macuas.

The scores recorded, including those respecting the 46 individuals examined in 1946, are these:

92; 81; 77, 3 c.; 76; 75; 72, 3 c.; 71c 3 c.; 70, 6 c.; 69, 2 c.; 68; 67, 2 c.; 66; 65, 3 c.; 64; 63, 2 c.; 62; 61; 60, 4 c.; 59, 4 c.; 37, 2 c.; 55; 53; 52, 3 c.; 45; 34;

giving the average of 65.0, higher than the figures actually to be expected.

The diagram of intellectual profile, grounded upon the above scores, is appended. The dotted line for test 18-a indicates the percentage for the 4 individuals of Mecúfi who solved the puzzles.

ERATIS.

In 1948 30 Macuas Erátis were examined, 21 of which at Memba, 4 at Nacala, 3 at Nampula, 1 at Moginqual and 1 at Mirrote.

Their/

Their intellectual levels were:

90; 76; 69, 3 c.; 68; 66, 4 c.; 64, 4 c.; 62; 61; 60; 59;
58, 2 c.; 57; 56; 55, 2 c.; 54; 51; 50; 45; 44; 39.

which gives an average of 60.8.

The diagram of their intellectual profile was grounded upon the percentages obtained on every test. This series is anomalous.

CHACAS.

The 22 individuals of this sub-tribe, who were examined at Mecúfi (eleven), Namapa (five), Nacala (four) and Mirrote (two), constitute a series that, although not numerous, is fairly consistent:

I.Q. - Up to 55;	56 to 65;	66 to 75;	76 to 85;	86 to 95;	96 to 105
					(normal)
Cases	-	1	-	3	3
I.Q. - Above	145;	136 to 145;	126 to 135;	116 to 125;	106 to 115
Cases	1	-	-	2	3

The scores attained were 86; 71; 67; 66; 65; 62, 2c.; 60; 59, 2 c.; 58, 3 c.; 57; 56; 52; 51; 50; 48; 47; 38

Average score, 59.1

As the individuals of this sub-tribe, and those of the six sub-tribes that follow, constitute relatively scanty series, some of them even exceedingly scanty, we were not in a position to determine their respective Intellectual Profiles, for they would lack all statistical significance. We have therefore decided to join them together, thus obtaining a series of 67 individuals, whose intellectual profile is given in the diagram of fig.

PAMELAS or M'PAMELAS.

At the Administrative Post of Larde, circumscription of Momo, we examined 14 individuals of this sub-tribe, recording the following scores:

67; 63, 2 c.; 62; 58; 57; 56, 2 c.; 55; 53; 51; 47, 2 c.; and 44.

Average, 55.6.

CAROAS.

Nine individuals of this sub-tribe were examined at Nacaroa, and 3 at Moginqual, their scores having been:

72; 66; 62; 61; 57; 53; 52; 51; 50; 46; 44; 37.

Average, 53.4.

The number of cases and the distribution of the individual scores by the I.Q.'s resulting from that average score of 45.4 entitle us to hold this series as consistent and the abovementioned average as adequate.

In the appended diagram the intellectual profile of the Macua women is contrasted to the profile of the men.

By comparing the two diagrams respecting male and female Macuas, their profiles are found to be very similar nevertheless the women reveal a lower intellectual level, chiefly in copying designs (test 12.), visual memory (test 16.) incomplete pictures (test 2.), using three words in a sentence (test 14.), appreciation of absurdities (test 17.) counting backwards (test 5.) and resistance of visual suggestions (test 11)

This poor mental level explains the state of servile dependence of the women in the Macua family. The callosities in their hands bear testimony to their hard work with the hoe, from which their husbands exonerate themselves. But those women who are endowed with some intellectual superiority do not look like slaves, but like queens, within their social milieu. Anifa, 25 years old, examined at Namapa, who attained the highest score, 69, among the Macua women, exhibited a showy necklace, numerous bracelets (12 around each arm) and a trimmed blouse, thus forming a striking contrast to the bareness of ornaments noticed in her companions.

Our examinations were made among the undermentioned tribes:

Sub-tribes	Number of cases	Maximum Score	Minimum Score	Average Score
Macuanas	30	64	21	42.1
Erátis	28	69	28	48.4
Chacas	14	51	34	43.5
Ecotas	4	66	44	55.3
Metos	2	54	41	47.5
Totality	78	69	21	45.4

Just as we have done re the Macua men, we are next going to give the results for each of these sub-tribes.

FEMALE MACUANAS.

We examined 22 at Neconta, 5 at Mossuril, 3 at Ribaria and 2 at Muscate, recording the following scores:

64; 57; 55; 3 c.; 53, 2 c.; 52; 49; 47; 46; 44, 2 c.; 42, 3 c.; 41; 40, 2 c.; 38; 37; 35, 2 c.; 34; 33, 2 c.; 27; 26; 22; 21.

The number of cases, 30, examined among this sub-tribe, although relatively small, might nevertheless allow us to draw the diagram of their intellectual profile; but as the groups examined in the other sub-tribes were very small, and two of them even exceedingly small, we preferred to draw the profile of the whole series of the 78 Macua women comprised in the previous table.

FEMALE FRATIS.

20 Frátis women were examined at Namapa, 3 at Memba, 3 at Chicapa (Porto Amélia) and 2 at Nacala, attaining the following scores:

69; 63; 59; 57; 55, 2 c.; 53, 2 c.; 52; 51; 50; 49, 2 c.; 48, 2 c.; 47; 46; 44; 42; 41; 2 c.; 40; 37; 35; 28.

FEMALE CHACAS.

We examined 11 at Namapa, 2 at Mecúfi and 1 at Chicapa, their scores being

51; 48; 47; 46; 45, 3 c.; 43, 3 c.; 42; 40; 37; 34

FEMALE ECOTAS or ECOTIS.

At Antonio Enes, 4 women belonging to this sub-tribe were examined, who attained the scores

66; 62; 49; 44.

FEMALE METOS.

Only 2 were examined, one at Chicapa, who scored 54, and the other at Nacala, scoring 41.

MATATANES.

The 6 Matatanes we examined at the Administrative Post of Larde, attained the following scores:

57, 2 c.; 53; 44; 38, 2 c.

Average, 47.8.
Two of them could read Arabic.

ECOTAS or COTIS.

At the Malatane Missionary Station, in the municipality of Antonic Enes, we examined 6 natives of this sub-tribe, who attained the following scores.

66, 2 c.; 53, 2 c.; 48; 42

Average, 54.7.
One of them could read Portuguese, and another, Arabic.

NAMARRAIS.

Five individuals were examined at the village of Namarral, circumscription of Mossuril. One of them could read Arabic.

Their scores: 58, 2 c.; 57; 52; 50, averaged 55.

MARAVONIS.

Only two individuals were examined at the Administrative Post of Larde, their scores being 69 and 66. They were heirs to the local chief, and attended the rudimentary school.

With the examined individuals belonging to the sub-tribes of the Chacas, Pamelas, Caroas, Matatanes, Ecotas, Namarraais and Maravónis, a series of 67 cases is obtained, the intellectual profile of which is shown in the respective diagram.

FEMALE MACUAS.

Seventy-eight Macua women were also examined, attaining the following scores;

69; 66; 64; 63; 62; 59; 57; 2 c.; 55, 5 c.; 54, 3 c.; 53, 4 c.;
52, 2 c.; 51, 2 c.; 50; 49, 4 c.; 48, 3 c.; 47, 3 c.; 46, 3 c.;
45, 3 c.; 44, 4 c.; 43, 3 c.; 42, 5 c.; 41, 4 c.; 40, 4 c.;
38; 37, 3 c.;
36; 35, 3c.; 34, 2 c.; 33, 2 c.; 28; 27; 26; 22; 21.

Outstanding data:

Maximum score 69
Minimum score 20
Median score 45
Average score 45.4

The/

B. S E N A S

56 Senas were examined: 35 at Luabo, 5 at Mopeia, 8 at Chupanga, 4 at Chinde and 1 at Buzi. The scores attained were:

88; 85; 82; 72; 70, 2c; 69; 68; 67; 66, 2c; 65, 2c; 64; 63, 6c; 61, 3c; 60, 2c; 59, 2c; 58, 2c; 56; 55, 2c; 54, 2c; 53, 6c; 50, 2c; 49, 2c; 48; 47, 4c; 46; 41; 39; 38; 36; 35; and 31.

Average score, 57.2.

The 35 Senas examined at Luabo, labourers for the Sena Sugar Estates, were tested during their daily rest, and therefore slack to respond: one of them, a Pozo, even refused to answer, and only changed his attitude when we menaced to send for the Chief of the Post.

Had they been examined in a better frame of mind, some of their scores would perhaps have been higher, the same applying obviously to the average score, which would have been nearer to 60.

Among these Senas, 10 could read and write Portuguese; 2 had learned it while serving in the Army. Six of them spoke Portuguese, but could not read.

Some were very slow to react.

By distributing the 58 Senas examined by their I.Q.'s related to the average obtained, 57.2, we come to the conclusion that to this series a certain statistical weight may be ascribed:

I.Q. - up to 55;	56 to 65;	66 to 75;	76 to 85;	86 to 95;	96 to 105	(normal)
Cases	1	2	3	6	12	9
I.Q. - above 145;	136 to 145;	126 to 135;	116 to 125;	106 to 115		
Cases	2	1	1	7	12	

A diagram is appended giving their intellectual profiles.

The Senas are strong in aesthetic comparison (test 1) and in comprehension of questions (test 15); in the arrangement of weights in order (test 8), resistance of suggestions (test 11), memory for words (test 6) and definition of abstract terms (test 19), they are normal, or almost normal; but they are poor in the description of pictures (test 7), definition and comparison of objects (tests 10 and 9), drawing designs from memory (test 16), and free association (test 13); and very poor in memory for numbers and counting backwards (tests 4 and 5) and in building sentences with three given words (test 14).

Although inferior to the whites in resisting suggestions, the Senas attained, among all the examined tribes, the highest score on this test.

C. CHUABOS

This name is given to the natives of the region of which the (now-a-days) town of Qualimane is the centre.

Their ascendants, Lómuès for the most part, embodied nevertheless a fairly high percentage of individuals from other tribes, picked out among the slaves and who settled there. This admixture accounts for the superiority of their mental level in relation to the Lómuès, a superiority which would be higher still were it not for the alcoholic taint due to long intoxication by the "sura" (palm wine).

We examined 31 Chuabos, 16 of which from Quelimane, 9 from Carungo and 6 from Maindo. They constitute 3 sub-tribes, and the following data were recorded:

Tribes	Number of cases	Maximum score	Minimum Score	Average Score
Quelimanes	16	93	39	60.1
Carungos	9	81	44	62.6
Maindos	6	73	49	58.5
	31	93	39	60.5

The series was small, but fairly consistant, and the average obtained is therefore unobjectionable.

I.Q. - Up to 55; 56 to 65; 66 to 75; 76 to 85; 86 to 95; 96 to 105 (normal)
 Cases --- 1 3 6 5 3
 I.Q. - Above 145; 136 to 145; 126 to 135; 116 to 125; 106 to 115
 Cases 1 2 2 2 6

Nine of them could read and write Portuguese, while two only spoke this language. Three of them showed great verbosity and one reacted very slowly.

Their scores were:

93; 86; 82; 81; 77; 74; 73; 68; 67; 66; 55; 64, 2c; 63, 2c; 59; 57; 54, 2c; 53; 52; 51; 50, 2c; 49, 2c; 46; 44; 41, 2c; 39.

The appended diagram, grounded upon the average scores attained on every test, gives the intellectual profile of the Chuabos.

They exceed 75% of the highest score in the comprehension of questions (test 15) aesthetic judgment (test 1), repetition of sentences (test 6) and copy of designs (test 12).

In all other tests they keep below 75%.

In visual memory and auditory memory for numbers the Chuabos, although weak, were only excelled by the Suailis, while all other examined tribes were inferior to them; and in copying designs only the Suailis and the Macondes excelled them to a slight extent.

The appended diagram shows the intellectual profile of this tribe.

D. MAGANJAS

27 individuals were examined: 21 at Maganja da Costa, belonging to the sub-tribe of the Nharingas, and 6 at Pebane, belong to that of the Muningas.

The scores attained by the former were :

78, 2c; 66; 59; 58; 57; 51, 2c; 50, 2c; 47, 2c; 46; 44;
41, 3c; 40; 35; 34; 30,

while the Muningas scored :

68, 2c; 65; 61; 57; 47.

Median score 50
Average score 52.2.

Four of them could read and write Portuguese, and one spoke, but could not read, the same language. One of the individuals examined at Pebane could read Arabic.

Some of them are slow to react. Two were very verbose.

A diagram is appended showing the intellectual profile resulting from the recorded data, but the series is small and inconsistent.

The mental level of the Nharingas, like that of the Alolos, is very low; they are inferior to our European children aged nine years, whose average score is 53.

Three Muninga women examined at Pebane had the low scores of 44, 33 and 31, averaging 36, i.e. less than the white child 7 years old

E. MOANES

We examined 25 Moanes: 16 at Mocimboa da Praia, 6 at Quissanga and 3 at Mucojo. The scores attained were:

76, 3c; 75; 73; 72; 71, 69, 2c; 67; 66; 63, 2c; 62; 60; 56;
55, 2c; 53; 50; 49; 48; 46, 2c; 44.

average score, 61.6.

This series, besides being small, is not regularly constituted. No individual is found with an I.Q. below 71, and four of them have I.Q.'s above 121. Nevertheless we append the intellectual profile corresponding to the data regarding these 25 cases.

By omitting two scores of 76, the series will become consistent, affording the average score of 60.3, which must be near to truth.

14 Moanes could read and write Arabic; 5 of these could also read and write Portuguese. Two could only read Portuguese and one spoke but could not read our language.

The number of the literate (64% of the whole group) shows that this tribe is eager to improve their culture.

At Mocimboa da Praia a woman was examined, who attained the total score of 48.

F. MACHANGANES

From this tribe 11 individuals were examined at Buzi, 1 at Mossuril and 1 at Muscate. Their scores were:

82; 74; 66; 65; 62; 61; 58; 57; 56, 20; 49; 44; 40;

Average score: 59.2

I.Q. - Up to 55; 56 to 65; 66 to 75; 76 to 85; 86 to 95; 96 to 105
(normal)

Cases - - - 2 - 1 - 2 4

I.Q. - Above 145; 136 to 145; 126 to 135; 116 to 125; 106 to 115

Cases - 1 - - 1 2

Although this series is consistent, it is too small to enable us to draw a trustworthy diagram of intellectual profile.

G. P O Z O S · o r P O D Z O S .

Only 12 were examined: 10 at Luabo, one at Mopeia and one at Chupanga. Their average scores were:

60; 53; 52; 50.3.c.; 48; 47; 43; 39; 36; 31.

This series is too small and inconsistent to allow the determination of the intellectual profile of the tribe.

Even the average score, 46.6, and the median score, 49, are not reliable. The 10 Pozos from Luabo, laborers employed by the Sena Sugar Estates, had to be examined during their resting time, and for this reason were in the wrong mood to respond.

H. C H E R I M A S .

To the 30 natives belonging to this tribe who were examined in the 1946 field-work season, 11 were added in that of 1948, 9 of which were examined at Alto Molôcué, 1 at Mopeia and 1 at Ribaué.

The scores attained were:

88; 72; 69; 67; 65; 64; 62; 61; 60, 3c.; 59; 58;
57, 3 c.; 56; 55, 4c.; 54; 53, 3 c.; 52, 2c.; 51, 3 c.; 46, 2 c.;
45, 2c.; 44, 2c.; 43; 41; 38; 23.

Average score, 54.7 .

This series is consistent, and the appended diagram shows the intellectual profile of the tribe.

I. T A C U A N A S .

The 8 individuals we examined at Namacurra form with the 8 Tacuanas examined in 1946 a series of 13, too small for a reliable determination of their intellectual profile. There are no I. Q's below 75, or above 126.

The scores attained were:

64; 63; 60; 59; 58; 56; 55; 53, 2 c.; 48, 2 c.; 45; 42.

Average score, 54.2.

A woman we examined at Namacurra only attained the very poor score of 27, which is that of the European child aged 6 years.

J. L O M U E S .

In the 1948 field-work tour 5 Lômúés were examined, one at each of the following localities: Alto Molôcoé, Pebane, Maganja da Costa, Namacurra and Luabo. Their scores were:

74; 63; 48; 52; 53.

Average score, 58.0.

Adding to these Lômúés the 39 individuals examined in 1946, a fairly numerous series of 44 is obtained, which may be held as consistent.

1. Q. - Up to 55;	56 to 65;	66 to 75;	76 to 85;	86 to 95;	96 to 105	
Cases	-	1	1	4	11	normal 12
1. Q. - Above 145;	136 to 145;	126 to 135;	116 to 125;	106 to 115.		
Cases	-	2	1	5	7	

The average score for the whole series is 54.6.

The data gathered in the two field-work tours of the Mission give the male Lômùès the intellectual profile to be seen in the appended diagram, in which, for the purpose of comparison, that of the women examined in 1946 is also represented. These women form a series numbering 41, of a most irregular constitution.

L. ALOLOS.

In the 1948 season only 2 individuals of this tribe were examined, who did not exceed the low scores of 51 and 45; with the 26 Alolos examined in 1946, they constitute a small and rather irregular series of 28 individuals.

With the data recorded, scanty as they were, a diagram was drawn giving the intellectual profile of this tribe.

M. SUAÏLIS.

The tribe which in 1946 proved most intelligent, and, even for that reason, the most cultured, was that of the Suaïlis.

It is to be regretted that the series could not be more numerous and better balanced, including higher as well as lower intellectual quotients.

For the purpose of comparison with the other tribes, a diagram is appended giving the intellectual profile drawn with the data recorded, which will surely need modification if a larger series is examined.

N. MACONDES.

The 38 Macondes examined in the 1946 field-work tour form a regularly constituted, although small series.

A diagram is appended showing their intellectual profile.

O. MARENGES.

The Marenges examined in the 1946 season form the small series of 21, rather abnormally constituted.

The appended diagram shows the intellectual profile which the few data recorded allow us to draw.

P. NIANJAS ou NHANJAS.

31 Nianjas were examined in 1946, who attained the scores

86; 85; 76, 2 c.; 74; 73, 2c.; 72; 71; 67; 66, 2 c.; 65, 2c.; 64; 63; 62; 61, 2 c.; 60, 2 c.; 57, 2c.; 56; 55; 54, 2c; 51, 2c; 50.

This series is ill-balanced, with rather too many high scores and lack of the correlative low scores. If we do not take into account the scores 86, 85 and 82, the series becomes well balanced for the purpose of determining the average, which is thus of 62.9, probably approaching the actual average for the tribe.

For this scanty series of 28 individuals, the median score is 62/63. The average of 64.9 respecting the whole series of 31 is too high to be reliable.

The appended diagram gives the intellectual profile of the totality of the 31 Nianjas examined.

Q. A J A U A S .

To the 30 natives belonging to this tribe who were examined in 1946, another is now added who was tested in 1948 at Naçala, scoring 57 points (the points for the three puzzles not included). The levels attained by these 31 individuals were:

88; 85; 77; 73, 2 c.; 72; 71, 2c.; 70; 69; 66. 2c.; 65; 64; 63.2 c.; 62. 2c.; 60. 2 c.; 59. 2c.; 58; 57; 54; 3c.; 63. 2c.; 51; 46.

Median score, 63.8. Average, 63.8.

The series is abnormal for lack of low I. Q.'s. But if scores 88 and 85 are excluded, there remains a group of 29, much better balanced and giving the average score of 62.4, nearer to the real average for this tribe.

A diagram is appended giving the intellectual profile of these 31 male Ajauas (although the series is too small for a reliable diagram) contrasted with that of 17 Ajaua women examined in the 1946 field work tour.

The intellectual level of the women of this tribe, as of those of the other tribes examined, is inferior to that of the men.

We are now going to specify how the several tribes examined responded to each test, by contrasting the respective levels with those attained by the European adults.

Test 1. - In the aesthetic comparison test the Suaflis, Moanes, Machanganes, Senas, Maganjas and Pozos are strong, while the Tacuanes and Alolos proved poor, and the remaining tribes proved median. The large differences that are noticed on this and other tests among the tribes of which but small groups were examined, will diminish as those groups will become more numerous. Among the Europeans the scoring was high on this test.

Test 2. - In the missing parts test the best responses were those of the Suaflis, Nianjas and Ajauas, while those of the Maganjas, Tacuanes, Lomués and Cherimas were poor.

Test 3. - This test, which in the scales of Binet-Simon and of Terman is intended for children of 4-5 years, was passed by all tribes.

The European adults we examined at Coimbra also passed it fully.

Tests 4. and 5. - Memory span for digits is weak among all tribes, and in correlation with this result, the ability for counting backwards is very weak among the natives, sometimes almost absent. Even the Suaflis, who ranked higher than the other tribes, did not attain 75% of the total score for this test.

In the items of these two tests the superiority of the Europeans is marked: memory for numbers is normal among them, and in counting backwards they attain the highest possible score.

Test 6. - Memory for words is generally good among the natives. More than 80% of the highest possible score was attained by the Suaflis, Ajauas, Nianjas, Maranges, Macuas and Lómués; only the Moanes, the Tacuanes, the Alolos and the Pozos remained below 70%, the two last tribes being the weakest of all. But when the series examined will become more numerous, we feel certain that the widest differences shall disappear. The Europeans were found to be strong on this test.

Test 7. - In the interpretation of pictures but few natives were successful; the greater part only described, and many only enumerated. No tribe attained 75% of the highest possible score, and only the Suaflis and Ajauas exceeded 60 per cent.

The Europeans attained 61.6 per cent.

Test 8. - Four tribes --- the Suaflis, the Ajauas, the Moanes and the Senas --- exceeded 75% of the highest score. This percentage was also attained by the Pozos, but it is to be feared that they will not maintain it when their series will become more numerous. The other tribes remained below normality.

The Europeans scored 85.5 per cent.

Test 9. - In the comparison of objects pointing out their differences, the ability of the native tribes is very weak, except among the Suaflis and Nianjas.

Test 10. - The difficulty that the natives find in defining concrete terms is remarkable. No tribe attained 75% of the full score. A large proportion of the subjects do not go beyond the definition in terms of use, of which is capable the normal European child of 5/6 years. Noteworthy is also the fact that the differences from tribe to tribe is small, as well as the fact that the lowest level is recorded among the Suaflis, who in the comparison of objects ranked much higher than the other tribes.

The Europeans attained 75.4 % of the highest possible score.

Test 11. - In the resistance of visual suggestions, the Senas proved somewhat superior to normality, attaining 78 % of the highest possible score. The Macondes, the Ajauas and the Moanes attained 70%, and all others remained below this percentage.

The Europeans recorded the percentage of 83.3.

Test 12. - In copying designs, the Macondes, Suaflis, and Maranges proved above normality. But if we take into account the fact that a great part of the Suaflis had received at school some training in drawing, we must recognize that the Macondes are the most skillful in copying, which explains the perfection and quickness which the individuals belonging to this tribe display in reproducing figures in wood and in ivory. The weakest in this test were the Lómués, the Alolos, and chiefly the Pozos.

Test 13. - In free association Europeans and blacks revealed themselves equally weak. The former were excelled by the Moanes and Suaflis, who however did not go beyond 63% of the highest possible score for this test.

Test 14. - The response of the natives in sentence building with three words was poor among all tribes. The only exceptions were those of the Macuanas and the Machanganes, but the percentages they attained cannot be expected to hold on when

their respective series will become more numerous. Those low percentages are to a certain extent to be ascribed to our difficulty in making ourselves understood by the natives about what was wanted from them.

The Europeans attained 79.8 %.

Test 15. - The results of the comprehension of questions test were good among the natives, because, as we have already stated, for some of Yerkes's items easier ones were substituted. Without such a modification, all tribes, including the Suaflis, would have remained below the Europeans, who scored 87.5%. The poorest responses were those of the Macondes.

It must nevertheless be acknowledged that, in a general way, the comprehension of questions cannot be held as poor among the natives.

Test 16. - Visual memory, evaluated by means of the reproduction of designs shown during a very short time, was found to be weak among all tribes. It was a little better among the Suaflis, who, however, did not attain 60%. The Lómues and the Cherimas did not go much beyond 30%, and the records of some tribes revealed still lower percentages.

The Europeans attained 64% of the highest possible score. They proved superior to the natives, but remained below normality.

In fig. some reproductions are given.

Test 17. - The power for appreciating verbal absurdities proved to be very weak among the Maranjás, Tacuanes and Pozos, but the respective series are too small to allow us to form a reliable judgement. Among the remaining tribes, the Ajauas, Machanganes and Macondes show some superiority, while the others approximate normality. When the respective series will comprise a larger number of subjects, some striking differences to be noticed in the diagram will become slighter.

For some of the absurdities of the scale of Yerkes, others were substituted, easier to detect. Instead of the item referring to the "bicycle rider who fell on his head and was instantly killed", we have given this: "A motor-car that passed along the road at great speed knocked down a woman and killed her. The driver ran off in his car and the woman went to the Police (or to the Administration) to lodge a complaint against him."

In the same way, for the part about the guide post at the cross-roads with directions regarding distances, and for the one about the convenience of leaving off the last car in a train, as it is the most liable to accidents, the following items were substituted:

"A certain man posted a letter to a friend who was at Mozambique (or at any other locality to be mentioned) to transact for him some urgent affair, and at the end of the letter he added: "If you don't receive this letter, please write to me without the least delay, so that I may send another immediately."

"Two men were slapping one another. The pistol drawn by one of them shot the other dead. A Policeman came and took both of them to prison."

"A newspaper said that in Lorenzo Marques they had arrested a thief who had never stolen anything."



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