PSYCHOMETRIC TESTING IN IRAN

By

MAX VALENTINE, M.D., D.P.M.

Professor of Neuropsychiatry
Medical Faculty, University of Shiraz

General Background of the Iranian Culture

Geographically, Iran is for the most part a plateau at an average altitude of about a thousand metres; the terrain—the near-jungle conditions of the Caspian littoral excepted—is arid semi-desert and the typical landscape one of limestone mountain ranges between which lie flat plains. It is bordered by Iraq, Turkey, the U.S.S.R., the Caspian Sea, Afghanistan, Pakistan and the Persian Gulf. Except during spring the vegetation in most areas is sun-shrivelled on the bare treeless earth; after five months of burning heat the winter rainfall washes off the topsoil, and river-beds, dry throughout the summer, overflow with muddy torrents. Although the soil is dry and powdery there are abundant water-courses below the surface and with irrigation the land is very productive. The country has great mineral resources; apart from the oil-fields they are un-exploited due to lack of coal and road and rail communications. The people are mainly feudal villagers or nomadic tribesfolk but Tehran is a modern city of a million population and the provincial capitals are also semi-Westernized.

Persian history is said to extend over some six thousand years and reached its apogee two and a half millennia ago when Cyrus the Persian, having conquered the fabled wealth of Croesus of Lydia, went on to assimilate the Babylonian empire of Belshazzar: this occurred after the renowned feast during which a mystic hand appeared and wrote words of doom upon the wall. The couriers of his successor, Darius I, carried the royal decrees from Persepolis throughout the largest empire the world had yet seen, spreading from the Libyan desert to the Indus. Trying to extend his dominion to Europe, Darius was defeated at Marathon; his son Xerxes mounted a second gigantic expedition but a fateful end awaited it and indeed it may be no exaggeration to say that on this foray hinged the future course of history in Europe and Asia. Weakened by the struggle at Thermopylae against the heroic resistance of the Spartan Leonidas, Xerxes marched on Athens and succeeded in destroying the city, but the following year his armies retreated after defeat at Platea. Athens was rebuilt under Pericles, and the "Athenian Age", founded on free, exact and systematic thinking, began to flourish: its ideals of freedom, beauty and truth, its drama, science, architecture and philosophy, have influenced all subsequent Western culture. In turn, Persia succumbed to the Hellenic invasion under Alexander the Great, but when his empire disintegrated she again emerged as a separate state under Parthian and native Persian dynasties.

Persia then became involved in wars of attrition with the Roman and later the Byzantine Empire before succumbing to the growth of Arabic Islamic power in the seventh century, and again to the Tartar hordes of Jenghis Khan in the thirteenth. Persians often explain their present-day cultural and economic poverty, and their difficulties in getting out of it, in terms of having been a twice-conquered people. Incidentally, Iranian history as it is generally known

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

in Iran is a mixture of fact and myth: Darius and Alexander are almost unknown, and Persepolis is called "The Seat of Jamshyd" on the grounds that it was so magnificent that only this legendary hero could have built it.

Culturally, there is not a very strong literary representation apart from the many poets, nor has Iran much to show in the graphic or plastic arts; science, technology and industry are likewise very weak. The Persian language (Farsi) possesses a very limited range and without its many Arabic and European importations any exactitude of expression would be impossible. The Shia Mohamadism of Iran is a less strict type of religious observance than the orthodox Sunna, and does not lend itself to fanatical practices unless during the mourning days; in addition there is a proportion of Jewish people, of Bahai adherents (a schismatic sect established about a hundred years ago), of Zoroastrians (followers of the pre-Islamic religion of Persia), and of Armenian Christians.

Iranian culture, one might say, is primarily a civilization of manners. Formal types of address regulate all social intercourse and there tends to be a pyramidal system whereby one abases oneself and shows respect to superiors: many examples of this occur in polite speech which requires the liberal use of submissives and honorifics, as for instance the use of the term *bandeh* (bound one, or slave) in place of the first personal pronoun; the use of the verb *farmudan* (to command) e.g. "What do you command?" to a superior instead of "What did you say?" and the use of the second personal singular to children or servants, the plural for social equivalents or superiors. The usual greeting *Salam* (Peace) is indicative of the non-aggressive attitude which prevails, and the employment of physical violence is strongly deprecated. The traditional Oriental virtues of respect and acceptance are very prominent; no less evident is a general insecurity which may also be traditional, and derive from the previous tensions between the *khans* (chieftains), who had little reason to trust each other. Incidentally, it may be noted that social anthropologists have noted a strong need for dependent relationships towards authority-figures in the Persian culture.

Intelligence Testing

The use of standardized tests in the West has reached such a high level of technical proficiency that it is now a matter of routine, but if we apply these methods in an undeveloped country we interfere with the basic theory of testing to such an extent that we must pause and enquire what we are really doing—what are we measuring and how are we trying to measure it?

First, as to the nature of intelligence itself, I have elsewhere put forward the view (Valentine, 1955) that the idea of "intelligence" as an abstract entity is not a rewarding concept, and that when we speak of intelligence we should recognize that we usually mean "intelligent behaviour". Now, the kind of intelligent behaviour necessary for survival as a primitive tribesman may be something quite different from the kind which succeeds in a Western metropolis; but as Western science, logic and philosophy have penetrated so deeply into the nature of the cosmos, and shown themselves to be so universally adaptable, we may perhaps be forgiven the presumption that they represent a normative ideal.

The measurement of this kind of intelligence depends variously on the perception and analysis of visual data, on linguistic ability and general knowledge, and on the employment of reasoning processes. There is evidence how-

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

ever that all these abilities are influenced by learning which we acquire unconsciously from prolonged exposure to training stimuli, and that they are not inborn, ready-to-use mechanisms. For example, to show that Western-type perceptual sophistication is not a feature of an undeveloped culture we have only to think of the Arabs in T. E. Lawrence's *Seven Pillars of Wisdom*, who were totally unable to recognize paintings of themselves; one perplexed tribesman even suggested that a portrait might be a sketch of a camel as the curve of the jaw reminded him of the animal's hump. There are obvious difficulties therefore in transferring Western perceptual tests to other cultures; and since these visual, "non-verbal" tests based on perceptual reasoning were designed for the express purpose of avoiding the complications of types based on language and general knowledge, it seems scarcely necessary to stress the point that linguistic tests cannot always be directly translated. In the third place, it is easily demonstrated that many aspects of reasoning as known in the West are also learned processes, because much of the thinking in undeveloped societies is of a prelogical type, unrelated to causality and showing only a crude appreciation of number. This is normal in the West as a phase in child development, but it does not usually persist after the age of about eight years, when analogical reasoning begins to be used; we also find such thought processes in old people and in some psychiatric cases. Bromley (1953) has pointed out that the kind of observation and clear thinking, or intelligence, demanded by a test such as the Progressive Matrices (Raven, 1938) is a highly developed form of abstract, objective, logical, relational thinking, whilst the intelligence of primitive groups is of a qualitatively different kind—a lower order of concrete, subjective, alogical, global thinking.

These points should be sufficient indication that no test is so free from cultural influence as to permit it to be used unquestioningly in alien societies.

Intelligence Testing for University Entrance

The Progressive Matrices (1938), a convenient non-verbal group test, was used for the selection of candidates for higher education in Shiraz and the results are demonstrated in Figure 1. The test was given a rather more elaborate

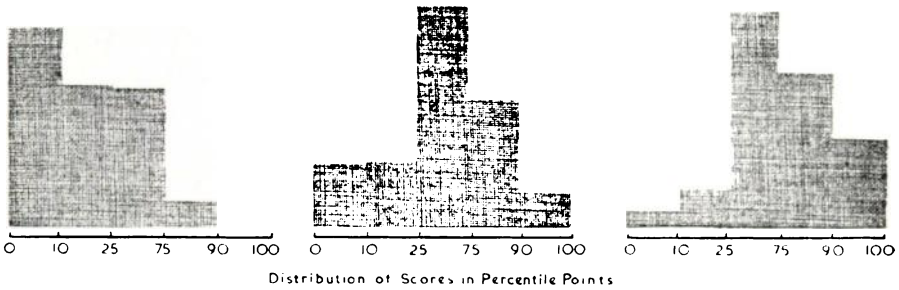


FIG. 1.—Distribution of Intelligence Test scores in candidates for higher education.

introductory description in Farsi (Persian language) than is specified for the English-speaking procedure, and the score-sheets were printed in Farsi. Three groups were concerned; first, candidates for the *Agricultural School*—young men from villages and small towns applying for a 1- or 2-year course in farming methods, mainly practical but with some theoretical instruction. The test procedure was completely unfamiliar to them; they had evident difficulty in

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

assimilating and handling the data and it will be seen that the scores are very depressed by Western norms, probably due to a combination of novelty and anxiety. The majority return "subnormal" scores and almost one-third are in the "defective" category (0–5 percentile points). It would however be ridiculous to translate these results literally in terms of Western standards.

The second group consisted of candidates for admission to the *Medical Faculty* and an intensive selection procedure was followed as there were 340 applicants for 60 places. This number was reduced to 120 by (*a*) a test of academic achievement in basic sciences and (*b*) a test of linguistic ability; then the 120 were given (*c*) the Matrices test and (*d*) the Ranking Rorschach test. As the middle section of Figure 1 indicates, a much more normal distribution occurred here. There are however two discrepancies: first, the results are only "average" whereas this is in fact a selected group; and second, there should not be in a selected group a "tail" of poor performers such as is shown by the 12 per cent. scoring less than 10 percentile points.

The third test was carried out on applicants for the *Agricultural Faculty*. Here the results much more nearly resemble those expected from a similar Western group, with a definite bias towards the higher percentile ratings. One presumes the reason to be that this group was tested last, and candidates had acquired some idea of what to expect. Also, the group contained some candidates who, having been rejected at the medical entrance examination, made a try for admission to the agricultural college; with recent experience of the test they might be expected to do better at a second trial. However, an anomaly persists in the distribution in so far as a few students seem quite unable to organize the material, and return unduly low scores.

As regards the success of the selection procedures, results are available at present only for the first year. However, even in the first few months of the sophomore year the agricultural and pre-clinical teachers were enthusiastic about the selection method as the classes showed exceptionally high average grades in examinations and the students were noticeably keen and capable.

It is clear that the proper selection of students is absolutely vital to the success of any such new educational establishment, for otherwise candidates may be admitted having a severe and practically irremediable limitation of logical thinking which will affect their potential level of attainment. Also it is important that during the first year of higher education, students should be exposed to a basic orienting course providing training in logical thinking and methodology: this need not necessarily be a separate course, but may be learned indirectly from the curriculum subjects provided they are sufficiently well taught. Reasons for this may be adduced from the present study: it will be seen that the younger students are more hopeful, constructive and independent in outlook and if at this stage they are provided with adequate tools for thought they will be able to bring a critical scientific attitude to the remainder of their education. Otherwise—and especially so in unselected student groups—their level of achievement is very likely to be markedly attenuated.

Intelligence Testing in the Schools

Formal education in Iran begins at the age of 7 years and proceeds through 6 years of primary and 6 years of secondary instruction in sex-segregated schools: the "certificate" is thus taken at the age of 19, or possibly later. Teachers are not fully employed and generally work 20+ hours per week; in primary schools they have no higher qualifications.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

Over 600 Shiraz secondary school children were tested with the Progressive Matrices (1938); as the British norms show little variation between 14–20 years, pupils of this age group were tested. They were drawn from 4 secondary schools, 2 for boys and 2 for girls; from the results a cumulative percentile ogive was constructed (see Fig. 2); the curves have not been smoothed and the British norm is added for comparison.

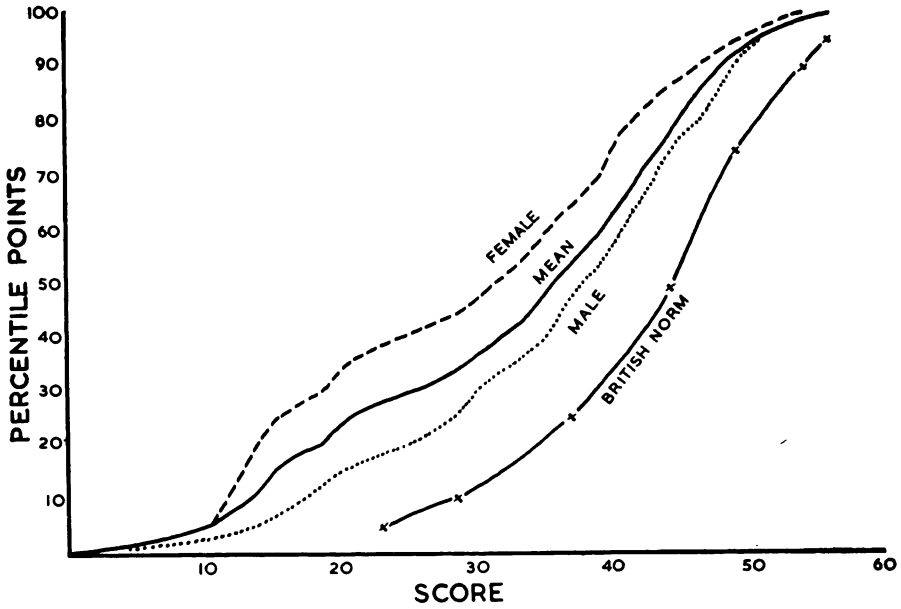


FIG. 2.—Progressive Matrices (1938). Cumulative percentile ogive showing the results of intelligence testing in 627 Shiraz secondary school pupils.
———— Mean
. . . . . Male
— — — Female
×———× British norm (for comparison)

The Iranian scores are notably lower than the Western norm, specially towards the low end of the curve (below score 20), where the discrepancy becomes acute. Raven (1958) notes that this feature of the test score distribution has occurred in African and Oriental populations, and he explains the unduly low scores as likely to be the product of non-Westernized members of the community who have not learned to think analytically—an observation with which my own views are in accord.

Common Errors. To find out what kind of mistakes were commonly made, and to throw light on the thinking processes, a sample of 50 records was analysed. These were from subjects of 14–20 years, equal numbers of male and female, and the sample was randomly selected from subjects scoring approximately 35, as higher scores contain too few errors and lower scores are likely to be an indication that much of the test was imperfectly understood; also, 35 was in any case approximately the median score. The number of errors made on each problem is shown in Figure 3. One point which jumps to the eye is that although Set A shows by far the smallest number of errors, and Set E the largest, Sets B, C and D appear to be of almost equal difficulty.

Some common errors are selected for particular attention. The criterion of a "common error" was that it should have been selected in more than 25 per cent. of all wrong choices.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

Set		Problem												Total Errors for Set
		1	2	3	4	5	6	7	8	9	10	11	12	
A	No. of errors . .	0	0	1	1	1	0	11	6	4	10	12	28	74
	Commonest mistake	—	—	—	—	—	—	4	—	—	6	5	6	
B	No. of errors . .	3	5	5	12	20	19	22	42	40	37	44	40	289
	Commonest mistake	—	—	6	4	5	4	2	5	1	1	3	2	
C	No. of errors . .	7	16	9	18	19	26	19	26	19	40	35	46	280
	Commonest mistake	3	3	—	3/4	4	—	7	—	—	8	—	3	
D	No. of errors . .	9	14	14	19	12	22	23	30	25	40	39	47	294
	Commonest mistake	4	3	4	2	—	3	—	3	—	5	—	7	
E	No. of errors . .	19	32	28	46	40	43	41	48	45	45	49	49	485
	Commonest mistake	4	3	2	3	7	8	6	8	—	7	1	—	

FIG. 3.—*Progressive Matrices* (1938). Common errors for each problem of Sets A, B, C, D and E in a random sample of 50 subjects.

In Set A the first stumbling-block is problem A7—perhaps because this is the first pattern which requires the formation and completion of a gestalt; a similar but doubled element is the popular mistake. In A10 a smaller and laterally inverted pattern is selected, and in A12 a smaller but correctly oriented example.

Set B presents no great difficulty until B5, an asymmetrical pattern; here the fault is to repeat a portion of the pattern. Problems B8 to B12 mark the commencement of analogical reasoning and in all of these the common error is again to repeat a part of the given pattern. In general terms, these problems ask

$$\text{if } a \rightarrow a_1$$
$$\text{therefore } b \rightarrow ?$$

The usual mistake is to reply by repeating the fundament "a_1" instead of searching for the correlate which would give a "b_1" category of solution. This may be regarded as perseveration of a method which was learned in the early part of the series—that is, pattern-completion by repetition of a discrete part. The facts that the pattern is now asymmetrical, and that it needs analogical deduction for its solution, are equally ignored.

Frequent errors in Set C are:

C2 Use of symmetrical instead of progressive completion.
C4 Failure to complete both the vertical and horizontal progressions.
C5 Use of balanced symmetrical completion in place of progressive completion.
C7 Failure of vertical balanced symmetrical completion.
C10 Failure to separate the elements.
C12 Failure of horizontal completion.

In Set D we find:

D4 Repetition of a discrete part.
D6 Selection of "figure" but not of "ground".
D8 Selection of configuration but not of its patterning.
D10 Inclusion of an unnecessary element.
D12 Failure to appreciate both the numerical progression and the change in the patterning;

and in Set E

E1, 2 and 3 Omission of an element from the superimposition.
E4, 5, 6 and 8 Attempted symmetrical completion instead of subtraction of elements.
E7 The lower element is altered instead of being retained.
E10 and 11 Failure to appreciate the subtraction of elements.

It may be questioned whether any errors are due to the use of the test in a different culture from causes such as the following—the pages of the test book turn from right to left instead of in the Persian fashion of left to right; the examples run from left to right, and the patterns have to be completed from left to right, whereas the Persian student reads from right to left.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

From observation it is believed that neither of these factors is important in the groups tested, as the subjects were familiar with English books. Once the "set" of the problems has been acquired, the lateral inversion of the subjects' normal habit of scanning from right to left loses importance.

Personality Testing

Personality tests were used both in selection procedures and as a method of investigating personality structure in Iran.

Ranking Rorschach Test

The multiple-choice version (Harrower-Erickson and Steiner, 1945) was employed as part of the selection procedure. There are of course arguments for and against the use of such tests in populations for which they have not been standardized but on balance it seems a justifiable and useful thing to do. It has been amply demonstrated that academic failure is related to emotional instability rather than to lack of intelligence and so any measurement of emotional stability, however imperfect, is not to be discarded lightly. Also, whatever one may believe about the value of the determinants, and the content of the responses, the test shows up candidates with a low number of responses and this inhibited productivity is in itself one of the most valuable indications. The multiple-choice Rorschach possesses another advantage not shared by all group projection tests—it can be scored by unskilled clerical staff. In the testing, standard group procedure was followed; the score-sheets had been translated into Farsi.

The graphs of the entry for the agricultural and medical faculties are shown in Figure 4. The distribution, and the median scores, seem to resemble Western

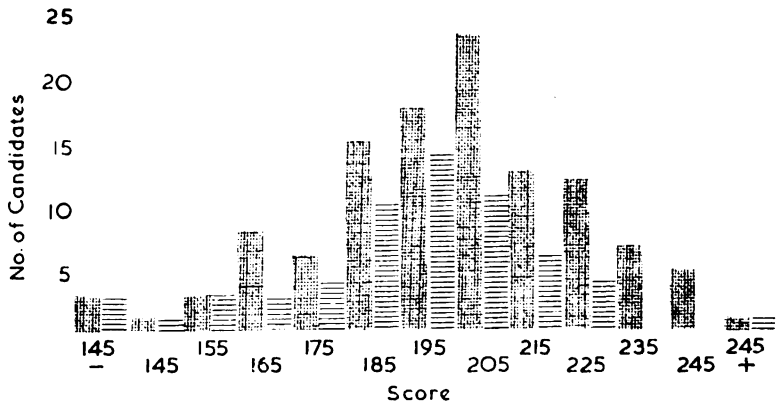


FIG. 4.—*The Ranking Rorschach Test.* Dotted bar graph—115 candidates for entry to Medical Faculty, Shiraz University, 1957. Median score = 203.
Lined bar graph—60 candidates for entry to Agriculture Faculty, Shiraz University, 1957. Median score = 194.

norms sufficiently to enable one to pay some attention to the results. It will be noted that the median scores (194 and 203) are lower than Eysenck's (1947a) findings, which were generally about 230. This could be interpreted as a tendency on the part of the students to show more neuroticism than corresponding Western groups.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

"Study of Values" Test

Another test relevant to selection purposes—although not used as such in the present instance—is that devised by Vernon and Allport (1931). This is a questionnaire type of test and the scores allotted by the subjects are used to build up a profile of his interests from six aspects—theoretical, economic, aesthetic, social, political and religious. The mean standard score is 40 with an average range extending from 30–50. The results in a group of 37 medical freshmen were as follows:

Theoretical	46·9
Social	43·9
Political	41·9
Aesthetic	37·3
Religious	35·1
Economic	34·5

The theoretical interest is supported by a strong tradition of polemic and discursive argument, and the marked social trend we shall encounter again in considering the findings of other tests. There was a remarkable uniformity in the results, and deviations from the mean were very small.

The Maudsley Medical Questionnaire

This test (MMQ) was developed in Britain as an index of neuroticism; it consists of 40 questions containing common neurotic symptoms, and the score is based upon how many positive answers are returned. In common with all such tests it has the defect of being dependent on "what the subject says" but nevertheless is of value in giving the subject's own estimation of himself.

The mean score of 147 medical students was 11·0, a figure slightly higher than the published norm (Eysenck, 1952) of 10·0 for an average population. However, considering that the personnel in the present experiment were not an average but a selected group, young medical students in good health and of better-than-average intelligence, the score is high, as Eysenck (1947b) found a mean of only $2 \cdot 81 \pm 2 \cdot 60$ in his supernormal group of officers. On breakdown there were no significant differences between students of different years, the range being only from 9·7 to 12·8 and the means of the junior students (1st, 2nd and 3rd years) not differing significantly from those of the senior students (4th, 5th and 6th years). The mean for women students was slightly but non-significantly higher at 12·9.

The questions which were answered most often in the abnormal direction were—worry over humiliating experiences, feelings of inferiority, feelings easily hurt, lack of vitality, and self-consciousness with superiors. Questions answered least frequently in the abnormal direction were—nervous breakdown, liability to diarrhoea, dizzy turns, severe headache, and traumatic unconsciousness.

The women students returned the greatest number of abnormal replies on the following—worry over humiliating experiences, off work through sickness, feelings easily hurt, touchiness, and aches and pains; possibly dysmenorrhoea may account for Questions 4 and 36 (off work through sickness, and aches and pains). It is interesting to note that concern over humiliation and sensitiveness are again dominating themes; also that these results are not in accordance with the British rank order of questions having diagnostic value for females, except in so far as Question 4 (off work through sickness) is second in rank order both in the British results and in the present investigation. "Worry over humiliating experiences" and "feelings easily hurt" were questions

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

found by Eysenck to have a higher diagnostic value for men, but here they rank respectively first and third in each sex. The questions which the women students answered least frequently in the abnormal direction were—dizzy turns, palpitation, traumatic unconsciousness, sleepwalking, sweating, and liability to diarrhoea.

Thus both sexes tend to reject the questions indicating a liability to anxiety or hysterical symptoms, the women more strongly so than the men. Also, lack of self-confidence tended to be denied in spite of admission of inferiority feelings, and also self-consciousness in the presence of superiors.

The general pattern of the results is of interest because although the mean score tends towards the "neurotic" pole, the score is composed of elements other than we would expect in an English-speaking sphere. There are no hypochondriacal complaints, no irritability or feelings of loss of concentration, nor any anxiety, depressive or compulsive features. The subjects do not appear to be "somatic reactors" and the adjustment difficulties appear to lie directly in the field of relationships to power-figures, with widespread concern over humiliation, inferiority and sensitiveness. What this may mean in terms of dynamic structure, or social culture, is not revealed by the present study; but there are indications that the personality structure of the students is, by Western standards, under some stress. A questionnaire designed to allow expanded and explanatory answers was next given out, but the response to this was poor and such replies as were received did not throw much light on the reasons for the prevalent feelings of humiliation and inferiority.

Character Trait Rating Scales

The population in this experiment consisted of over 100 medical students at the University of Shiraz; their median age was 24 years, the range extending from 19–35 years. By religious persuasion, the largest proportion was Moslem (65 per cent.), the next biggest group being Bahai (8 per cent.); Zoroastrians, Jews and an atheist constituted 9 per cent., and for one reason or another no reply was returned by 18 per cent. Female students amounted to 10 per cent. of the whole group.

The character trait rating scales evolved by Goldman-Eisler (1953) were used; these consist of questionnaires on which the subject ranks his score on a scale −2, −1, 0, +1, +2, attesting his opinion on first, a group of proverbs and aphorisms, and second, an analytic questionnaire modified from H. A. Murray's (1938) scales. In all there are 150 questions, giving ratings on 19 character traits; these follow, accompanied by brief working definitions:

Optimism—a hopeful attitude without reasonable expectation, psychoanalytically stated to derive from persistence of an infantile sense of magical omnipotence. *Pessimism*—inability to accept frustrating experiences as part of reality, and an anticipation of disappointment as a defence mechanism. *Passivity*—an indolent, receptive attitude. *Desire for the Unattainable*—ambition combined with a sense of the impossibility of achievement. *Displaced Oral Aggression (Verbal)*—aggressive use of speech. *Aggression*—desire to attack and overcome opposition. *Aloofness*—a negative and rejecting attitude to people. *Ambition*—striving to overcome and excel. *Autonomy*—independence of attitude. *Dependence*—helplessness and desire for love and protection. *Guilt*—self-torture from retributive images. *Change*—inconsistency and lack of fixed attachments. *Conservatism*—enduring sentiments and loyalties, rigidity of habits. *Impulsiveness*—acting without

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

reflection. *Deliberation*—hesitant, inhibited action. *Exocathexis*—participation in practical and co-operative action. *Endocathexis*—preoccupation with inner life. *Nurturance*—tendency to aid and protect. *Sociability*—ease in personal relationships, tendency to join groups.

The results were sorted into four sub-groups—youngest and oldest male Moslem students, female students, and Bahai students, and the results are set out in tabular form in Figure 5, and graphically in Figure 6. No standard deviations are available so conclusions cannot safely be drawn from small differences.

From general consideration of the table it may be seen that the group as a whole is fairly homogeneous and that there are no abrupt reversals of sign for any of the traits in different sub-groups. Also the paired opposites such as optimism-pessimism, change-conservatism, deliberation-impulsiveness, sociability-aloofness and exocathexis-endocathexis show the expected polarity. However, in interpreting this sort of test the results cannot be taken at face value; subjects may answer, not exactly what they feel, but what they think they ought to feel. Hence the results may indicate identification with some desired culture pattern rather than the existing reality.

First considering the differences between the sub-groups, it is noted that the younger male students (average age 21 years) show less pessimism and a stronger denial of passivity than the other Moslem groups, also they are less aloof and more sociable than the other male groups. Oral aggression is refuted, dependence is fairly strongly denied and endocathexis (roughly corresponding with introversion) is feeble.

The older students (average age 31 years) show the highest pessimism score, and desire for the attainable is denied—possibly an indication of increased reality thinking. Passivity and aloofness are less strongly rejected, and this is accompanied by a feeling of possessing less individual autonomy; the deliberate, introverted outlook has increased. These findings suggest that the older students are more reflective and less hopeful of achievement through individual effort; whether they grew up with this attitude, or whether they acquired it in becoming mature, cannot at present be determined.

The female student group is notable in showing low optimism and high pessimism scores. Although the ambition score is the highest for all sub-groups, passivity is not strongly rejected. Desire for the unattainable is less strongly rejected than by other groups and as might be expected, the nurturance score is the highest.

Bahai students have the highest optimism score and are also the only group to return a minus score for pessimism; passivity is also refuted more than by other groups but despite this the ambition score is the lowest. This group is the only one to show a moderate positive score for guilt feelings; sociability is slightly low. Although endocathexis is moderately high, with an associated lowering of the exocathexis score, it is perhaps surprising to find deliberation lower. The group appears to be more resistant to change, and more conservative, than others.

So much for the sub-groups. From a general review of the table, it is evident that 9 traits make up most of the scoring. Taking the group averages, there is a positive swing towards (in rank order), sociability, exocathexis, nurturance, optimism, ambition and deliberation. The negative scores, weaker and all of about the same strength, indicate a denial of displaced oral aggression, of desire for the unattainable, and of passivity.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

Trait	Youngest Male Moslem Students	Oldest Male Moslem Students	Female Students	Bahai Students	Mean
Optimism	+1·16	+1·01	+0·88	+1·23	+1·08
Pessimism	+0·05	+0·21	+0·20	−0·26	+0·08
Passivity	−0·66	−0·32	−0·36	−0·70	−0·50
Desire for unattainable ..	−0·58	−0·71	−0·36	−0·48	−0·56
Displaced oral aggression ..	−0·76	−0·66	−0·42	−0·41	−0·51
Aggression	−0·27	−0·35	−0·20	−0·27	−0·28
Aloofness	−0·38	−0·03	−0·50	−0·16	−0·25
Ambition	+0·80	+1·02	+1·16	+0·76	+0·93
Autonomy	−0·03	−0·23	−0·17	−0·06	−0·12
Dependence	−0·54	−0·16	−0·32	+0·03	−0·29
Guilt	−0·09	+0·09	+0·09	+0·22	+0·05
Change	−0·14	−0·10	+0·01	−0·22	−0·11
Conservatism	+0·22	+0·35	+0·37	+0·42	+0·32
Impulsiveness	−0·15	−0·42	−0·15	−0·28	−0·25
Deliberation	+0·91	+0·99	+0·85	+0·61	+0·84
Exocathexis	+1·25	+1·24	+1·28	+0·96	+1·20
Endocathexis	+0·07	+0·21	−0·09	+0·22	+0·14
Nurturance	+1·10	+1·15	+1·27	+1·16	+1·09
Sociability	+1·41	+1·16	+1·27	+1·09	+1·23

FIG. 5.—*Character Trait Rating Scales.* Results for 4 student groups and the general means for each trait. Scoring is by a self-awarded point scale ranging from −2 to +2.

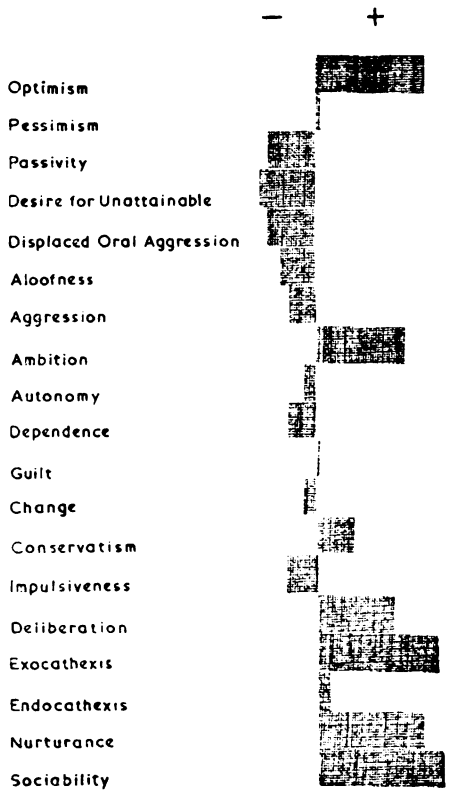


FIG. 6.—The Character Trait Rating Scales—bar graph of the mean values. (See also Fig. 5).

The results seem, generally speaking, to be in accordance with expectation. Iranian students are notably gregarious and show protective and—superficially

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

at least—cheerful attitudes together with a desire for improvement; Western observers might not agree with the deliberative tendency which is claimed. It would be admitted that aggression and verbal aggression are infrequent in Iran, but the denial of passivity might meet with less agreement. Also, although ambition is ranked moderately high, this fact does not run well in accord with the tendencies to conservatism, dislike of change and lack of personal autonomy. There may be some conflict over autonomy and dependence, as here both are denied whereas one would ordinarily expect them to be scored oppositely in sign. It is interesting that guilt feelings attract very little scoring.

All of the foregoing has been based on the fact that this test was standardized in England; that is to say, experiments were done to ensure that subjects possessing the trait of conservatism, for example, would in general tend to mark positively all questions in this section. However, when the test is used in a different country cultural factors may affect the issue and there is no guarantee that the questions in any section will be answered consistently. To determine this point, a random sample of the questionnaires was analysed to show how each question was answered, as a check on possible discrepancies. After each heading is given the mean score for all students.

Optimism (mean score +1·08). All statements were answered positively except for two which had weak negative scorings—"Ill luck is good for something" and "Most people can be trusted".

Pessimism (mean score +0·08). The statements in this section were answered rather variably but there was general agreement about two of them—"Hardly anyone cares much what happens to you" and "Real friends are hard to find".

Passivity (mean score −0·50). The largest contribution here came from the refutation of the statement "An idle life is the life for me, idleness spiced with philosophy". There were no major discrepancies in the answering.

Desire for the Unattainable (mean score −0·56). All statements were answered negatively except for one having a zero score.

Displaced Oral Aggression (*Verbal*) (mean score −0·51). Again all statements were negative except for one weakly positive—"Are you fond of arguing?" This is in keeping with the observation that there are social prohibitions on the verbal expression of anger in Iran but that argumentative discussion is not classed as a hostile manifestation.

Aggression (mean score −0·28). Replies here indicate a fairly well-marked inhibition of aggressive impulses, the subjects denying the questions "Are you apt to express your irritation rather than restrain it?" and "Do you often let yourself go when angry?"

Aloofness (mean score −0·25). Most questions were answered negatively but it was noticeable that a preference for the company of older and talented people is not regarded as a factor of aloofness.

Ambition (mean score +0·93). There were no major discrepancies in the replies under this heading.

Autonomy (mean score −0·12). This section was answered very variably but students indicated strongly that they did not "tend to disregard the rules and regulations hampering freedom".

Dependence (mean score −0·29). Feelings of being neglected, and tendencies towards discouragement, are denied. Only one question was answered positively—agreeing that it was advisable to ask people's opinion before making a decision.

Guilt (mean score +0·05). Replies were very variable here and no reliable pattern could be discerned.

Change (mean score −0·11). Again answers are rather mixed. There is a suggestion that new things are welcomed but that the emotional cathexis to people and to social institutions is stable.

Conservatism (mean score +0·32). Most scores are weakly negative but there is substantial agreement that a regular and routinized life is desirable.

Impulsiveness (mean score −0·25). The subjects say that they think and act quickly. The emotional components of impulsiveness however are repressed and this accounts for the minus score.

Deliberation (mean score +0·84). Questions are answered compatibly except that there is a claim to favour quick decisions.

Exocathexis (mean score +1·20). All questions were answered in the same (positive) direction and there is a strong identification with the idea of being a "practical" person.

Endocathexis (mean score +0·14). Scoring is mixed but there is a tendency to deny withdrawal and philosophizing.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

Nurturance (mean score +1·09). All scores are fairly high apart from a denial of feeling much interest for children.

Sociability (mean score +1·23). All scores are high, with no discrepancies.

Discussion

First it may be noted that when these scales were developed by Goldman-Eisler the purpose was to test a theory, put forward by anthropologists and psycho-analysts, to the effect that prolonged suckling and nurturance of the child, with late weaning, are related to the personality traits of generosity and optimism and to co-operative and peaceful behaviour. The investigation conducted by Goldman-Eisler supported this, and she found that late weaning tended to be associated with what she called the "oral optimist" personality type, characterized by an optimistic outlook (optimism positive, pessimism negative), an interest in external events (exocathexis positive, aloofness negative), a sociable, generous, peaceable and protective attitude (sociability positive, nurturance positive, aggression negative, verbal aggression negative), moderate ambition (ambition positive) and a tendency to welcome new experiences (change positive, conservatism negative). The results in Iran are largely in accord with this formulation except that pessimism tends towards zero instead of being negative, and also the sign values for change and conservatism are reversed. As breast-feeding is continued in Iran for 15–18 months, there is an interesting parallelism in the results.

Second, the breakdown helps to show up differences between Western and Iranian thinking, because if the statements about a trait are all answered in a similar direction—either positive or negative—then it must be regarded in much the same light as in the West, where the items were standardized. On this reasoning we find that the students' conception of sociability, exocathexis, ambition, aggression and passivity must be broadly similar to our own.

However, when some of the statements about a trait are answered in the same way as in the West, and others differently, the resulting score tends towards zero and it indicates that the constellation of statements does not amount to a consistent similar trait in the Iranian view. Thus we find that the students' ideas on autonomy, change, endocathexis, guilt, and pessimism, differ from our own. Individual freedom is sought while still following social custom; change is desirable but existing institutions are to be retained; the reflective life is at once admired and despised; the components of guilt, though present, do not seem to follow a recognized pattern; and lack of friendship and fellow-feeling is to be anticipated rather than deplored.

The third class is of traits which are considered in practically the same way as in the West, but with a reservation. Thus, for example, one can be optimistic although unwilling to believe that people are to be trusted, or that bad fortune can be turned to good account; ways should change but one's life should remain regular; a man should look after his family but need not be much concerned with his children's upbringing, as this is woman's work.

These anomalies assist in the clarification of some ways of thought which at first appear inexplicable to Westerners. In general, the results give an impression of Iranian students as being essentially sociable, wishing to further practical developments, and with a tendency to reject the elements of culture advocating passive reflection; either they are optimistic or wish to be regarded as such. There is some emotional inhibition perhaps due to an instilled reverence for established custom which seems to produce some conflict as to how far they, as individuals, can take any effective action.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

General Observations

A few observations drawn from clinical experience rather than from test scores may not be out of place. First, the position of women in Islamic culture lends a special aspect to personality studies. It is only recently that women have been permitted any education, and the effect of being brought up by ignorant, culturally-isolated mothers (often united by arranged marriage at an immature age), was considered by the historian Sykes (1951) to be critical in the character-formation of the child. As in most cultures where women have little place outside the home, their influence within it is strong and young children may tend to identify themselves with the maternal figure. Hoff (1958) believes that whereas the common neuroses of the West hinge on the mother, it is the all-powerful and rather remote father-figure which tends to be the nucleus of disturbance in the Middle East.

Another point is the segregation of the sexes before marriage; there are strict prohibitions against social intercourse between young people and it is impossible for friendships to exist between the sexes. Marriage has its difficulties also, as women have come to demand such massive financial guarantees against desertion, divorce and multiple marriage, that not many young men are willing to undertake it. Prostitution exists only in a limited degree; the incidence of homosexuality can only be guessed at and cases are not referred. It will be seen therefore that there is a severe limitation of sexual opportunity, and this may possibly be related to the seemingly very high proportion of cases of autoeroticism followed later by complaints of premature ejaculation and emotiogenic impotence.

There are frustrations too in the field of work, and even in the case of trained people there are many obstacles in the way of obtaining secure and adequately-remunerated employment. Thus after a free and happy childhood the young adolescent is brought face-to-face with considerable and sometimes insoluble difficulties in realizing his drives.

It is difficult to arrive at meaningful figures concerning the incidence of psychiatric disabilities, but there are differences in the relative incidence of syndromes. Schizophrenia and manic-depressive illnesses are similar to their Western counterparts; the mental content of delusional and hallucinatory states is almost invariably occupied with deistic and prophetic fantasies.

Among the neuroses, the commonest is a type of hysteria with moderate signs of anxiety. Vague, fleeting physical complaints are the symptoms, and almost universal is the complaint of being affected by a "wind" (*ba'ad*). This indicates a pain or aberrant sensation which moves from one part of the body to another; there are "hot" and "cold" winds which are ordinarily treated by "cold" and "hot" foods respectively. The typical anxiety state (with somatic dysfunction, conditioned phobias and panics) is infrequently seen unless in people exposed to a Western way of life, and obsessive-compulsive disorders are likewise not much in evidence. This is no doubt in accordance with expectation, as in more primitive social organizations the tendency is towards the evasion of conflict (and hence the production of hysteria); whereas the more sophisticated groups recognize their conflictful situations and consequently show more anxiety.

Although the more educated people are enthusiastic about the application of modern psychiatric practice, the culture is in general not ready to accept it; the idea of psychotherapy, for example, is unacceptable because there is no background of knowledge which might lead people to believe that it might be

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press

useful. People look for some "Western magic" to cure them, preferably by injections or electricity: hence narco-analysis will be accepted if it is presented initially as "an injection to relax you", and after inhibition has been reduced by the drug the normal psychiatric technique is very effective. It is often necessary to use this kind of harmless deception in order to get patients to embark on treatment, as otherwise a mixture of distrust and culturally-determined inhibition would prevent them. Perhaps because of these same factors, however, treatment of this kind, once started, seems to be even more effective than in Western practice.

SUMMARY

Intelligence scores, as obtained by a British test of perceptual reasoning, are lower in Iranian school and university populations than the expected norms, and particularly so in non-Westernized groups. It is believed that this is due to lack of training in perceptual analysis and logical reasoning. Traditionally there is a trend towards speculative theorizing rather than closely-reasoned hypothesizing based on accurate observation, logical deduction and experiment, and this tendency is confirmed by the results of "values" tests.

Personality testing shows a tendency to uniformity of response. Students are gregarious, unaggressive and protective and show a trait resembling "oral optimism" which elsewhere has been claimed to be related to prolonged suckling, but at adolescence these beneficent traits tend to be offset by frustrations and inhibitions due to other causes. In general there is more neuroticism than might be expected but it mainly takes the form of pre-occupation with feelings of humiliation, inferiority and sensitiveness, with adjustment difficulties in the field of relationship with power figures and authority-systems. Some recommendations on educational methods in new universities are adduced. In the general population a different type of neuroticism, with features of anxiety and hysteria, is found to be very common.

REFERENCES

BROMLEY, D. B., *J. Ment. Sci.*, 1953, **99**, 374.
EYSENCK, H. J., *Dimensions of Personality*, 1947a. London: Routledge and Kegan Paul, p. 212.
Idem, ibid., 1947b. p. 61.
Idem, The Scientific Study of Personality, 1952. London.
GOLDMAN-EISLER, F., *Personality* (ed. Kluckhohn and Murray), 1953. New York: Alfred A. Knopf. p. 146.
HARROWER-ERICKSON, M., and STEINER, E., *Large Scale Rorschach Techniques*, 1945. Springfield: C. C. Thomas.
HOFF, H., Personal communication, 1958.
MURRAY, H. A., *Explorations in Personality*, 1938. London and New York: Oxford University Press.
RAVEN, J. C., *Progressive Matrices: Test and Guide*, 1938. London: Lewis &Co. Ltd.
Idem, Personal communication, 1958.
SYKES, P., *A History of Persia* (2 vols.), 1951. 3rd edition. London: Macmillan & Co. Ltd.
VALENTINE, M., *An Introduction to Psychiatry*, 1955. Edinburgh: E. &S. Livingstone.
VERNON, P. E., and ALLPORT, G. W., "A test for personality values", *J. abnorm. soc. Psychol.*, 1931, **26**, 231–248.

https://doi.org/10.1192/bjp.105.438.93 Published online by Cambridge University Press