

# AN ANALYSIS OF PERSONALITY TRAITS IN A GROUP OF MILDLY MENTALLY RETARDED CHILDREN WITH A MULTIVARIATE PERSONALITY TEST

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## Introduction

There have been two major research trends in research on mental retardation. One focuses upon the rehabilitation of the mental deficient. The other upon the nature of mental retardation (Lafon and Chabanier, 1966). This pilot study has another focus. It is the question: Are there typical personality structures in mentally retarded children? Or, stated in another way: Do we find personality structures in mentally retarded children which have some similarity and occur relatively frequently? And, if this is the case: What characterises these personality structures?

Not much is known about the personality structures of mentally retarded children. Even our knowledge about mildly mentally retarded children, a relatively large group, is very limited. Older clinical studies make a distinction between the "torpid" and the "euphoric" types in mental defectives. Very well known are Lewin's (1936) formulation about the relative undifferentiatedness of the cognitive structure of the mentally retarded child and Kounin's (1941) experiments which seemed to demonstrate that retarded individuals were more rigid than normal individuals having the same degree of differentiation, i.e. mental age. More recent studies of personality structures in mentally retarded children are comprehensively reviewed by Zigler (1966). He discusses among others the "motivational hypotheses" (a) the mentally retarded child is for his performance very much dependent upon the approving support of an adult; (b) the role of social deprivation and the out-directedness of retarded children, which may be narrowly related to expectancy of failure so often found.

Personality traits in mentally retarded children do not necessarily explain intellectual deficit. As it is however probable that there are different kinds of intellectual deficits (Osler, 1965) and as intelligence is a complex of various psychological functions (Hunt, 1961) and an integral part of personality—and not something additional to personality (Rapaport, 1951)—it seems reasonable to assume that there are relations between personality traits and "the" intellectual deficit.

It is a question of some importance how to investigate the personality structure of mental defectives. Often it is difficult to compare various personality traits as they have been measured with different assessment instruments. Moreover different personality traits are often intercorrelated.

In studying the mentally retarded child another problem is presented by the fact that these children have only to a limited extent the ability of using symbolic processes. We are therefore handicapped when using techniques which require self-reporting. In mildly mentally retarded children however the use of some self-reporting is possible.

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<sup>1</sup> This paper was presented at the 1st Congress of the International Association for the Scientific Study of Mental Deficiency, Montpellier, France, 1967. The study was supported in part by a grant from the Netherlands Organisation for the Advancement of Pure Research. (Z.W.O.).

In our study we made use of the questionnaire technique and used a multivariate personality assessment instrument, the Child Personality Questionnaire of Porter and Cattell (1959) (1). The personality traits that this test investigates cover a relatively wide range of rather lowly intercorrelated personality traits. The mildly retarded boys in our sample succeeded in answering the questions, which consisted of simple alternatives.

### Method and Subjects

A random sample of 33 boys between the ages 9 and 12 was chosen from a school for mentally retarded children. The children were all judged to be mentally defective by a team consisting of a psychiatrist, a pedagogue, a psychologist and a social case worker. The average I.Q. on the Terman intelligence test was 75 (SD=2.3) and the children can therefore be regarded to be mildly mentally defective.

The rough scores on the Child Personality Questionnaire were converted to weighted scores (2). As there existed significant differences in some of the personality factors (factor A, B, D, F and O) between a control group of "normal" Dutch children (n=81 boys; ages: 9—12) and the American boys on which the weighted scores were based, corrections in scaling for those personality traits were made. Significant differences were established between the samples of mildly mentally retarded boys and the control group. (3).

**Profile similarity coefficients** between every combination of two profiles were computed using a method described by Cattell (1959). At the  $P=.01$  level of significance a profile similarity coefficient of .482 can be considered significantly different from the expectancy for the normal population (4). Profiles which showed a profile similarity coefficient higher than .482 were selected for further study.

As we are not interested in exceptional profile similarity *per se* but in profiles which are typical for mentally retarded boys, the **frequency of occurrence** of significant similarity was used as a second indicator. This frequency was established for each personality profile and profiles which showed frequently a significant high similarity with other profiles were selected. The critical frequencies were chosen at two levels,—the first at the  $P=.05$  level of significance and the second at the 85% cut-off point.

It was assumed that profiles that had frequently (significant at the .05 level) a high similarity (significant at the .01 level) with other personality profiles would have a loading on personality traits that could be regarded typical for mentally retarded boys. Composite profiles were constructed from the profiles on the basis of these tracer profiles. This was accomplished by averaging the scores on each personality trait of those profiles with which the tracer profiles had a high similarity. (6). The resulting personality profiles were considered "typical" for mildly retarded boys and are analysed and described in the following section.

### Results

Testing for significant differences of the personality traits between the mildly mental retarded boys and the normal boys for the whole groups showed differences in personality factors A, B and  $Q_3$  only. The first two factors were significant at the .05 level, the third at the .025 level. The two factors show a child with low general intelligence (B—) that is cyclothym and outer-directed (A+) (6). In questionnaires motivational-situative-distortions and self-perception-distortions play an important role (Cattell, 1957). Thus the interpretation of the A+ factor might have to be changed to mean a very high need for contact with others.

Two personality profiles showed frequently high similarities with other profiles. Similarity coefficients were significant at the  $P=.01$  level. Analyses showed that both profiles were essentially based (respectively 80% and 90%) on a group of profiles which showed also a high intercorrelation. Another tracer profile occurring frequently (85% cut-off point) was also mostly based upon this same group of profiles, although here intercorrelations were lower. The common profiles of these three groups can be considered as a nuclear cluster (Cattell, 1966). This nuclear cluster accounts for 21% of the children of the sample, and 35% of the children relate to this cluster (7). A composite personality profile was constructed from the group of profiles belonging to the nuclear cluster.

The profile (figure 1) shows a child that is characterized by low general intelligence (B-) and by central feelings of loneliness and inadequacy. The child is easily downhearted and is extremely remorseful, which makes careful handling of emotional problems necessary. He shows often anxiety and nervous symptoms. Phobias, hypochondrical—and neurasthenic symptoms, such as being easily overfatigued, occur frequently (O+). If we have to make an interpretation more at face value the child sees himself as worrying, apprehensive and troubled. The child is excitable, restless and tense. He is distractable and displays an attention getting insecurity (D+). He has weak super ego strength, i.e., by-passes obligations and disregards rules (G-).

A further analysis of profiles with a high profile similarity occurring relatively frequently (85% cut-off point) resulted in two other composite profiles, each accounting for 18% of the children in the sample. Although these profiles are not typical for mildly retarded boys in our sample—their frequency does not reach the  $P=.05$  significance level—they still occur frequently (85% cut-off point).

The first of these profiles (figure 2) shows a child that has again low general intelligence (B-). He is however not very changeable, not easily upset and can be considered emotionally stable (C+). The most characteristic trait of this type of child is his sensitiveness and dependency. It is the tender-minded child as first described by William James. In objective test data we find in this type of children a lack of assertiveness (I+).

The second of these composite profiles (figure 3) shows a phlegmatic, inactive and stodgy child (D-) that has low drive tension and is tranquil and torpid ( $Q_1-$ ). The child shows however a high self sentiment ( $Q_2+$ ), which might mean here that he conceives himself as somebody who wishes to be "good" and do "good things". Characteristic for this type of child is that he is cyclothymic and outer-directed (A+) or that he has a high need for contact with others. The combination of outer-directedness, inactivity and phlegm poses interesting questions. In any case it is a combination of personality traits that does not look as if it would stimulate intelligent behaviour.

## Discussion

The results are based upon a small group of children. The use of a questionnaire technique and the interpretation of the results raise many questions that have not yet been solved. However, it is encouraging that one typical personality profile and two frequently occurring profiles could be discovered.

The outer-directedness or need for contact with others (A+) of the mentally retarded children fits in well with results of other investigators using other approaches, for instance with the motivational hypothesis (Green and Zigler, 1962; Turnure and Zigler, 1964; Zigler, 1966 and Zigler *et al.* 1958).

It seems that we can recognize in the last personality profile described the torpid mentally retarded child—although the personality picture we find here is more differentiated.—The extreme outer-directedness or the need for contact with others we find in this profile poses intriguing questions. One might speculate even upon the influence of these personality traits upon ego formation and the development of thinking processes. The second personality profile with its sensitiveness and dependency is harder to interpret, although the lack of self-assertiveness makes one expect a child who will not function well in some (school—) environments. The fact that the child is not easily upset and is not very changeable (C+) poses problems for interpretation since one expects in most clinical groups a low ego strength.

The first profile showing apprehensiveness and worrying and various neurotic traits is not at all unexpected for those who are acquainted with the mildly mentally retarded child. The excitability might suggest minor brain damage. The case stories of the children however upon which the nuclear cluster was based do not demonstrate gross organic etiology.

### SUMMARY

This paper reports an analysis of personality traits in a group of mildly retarded children (boys, ages 9—12; average Terman I.Q. 75, (SD=2.3) with a multivariate personality test (the Child Personality Questionnaire of Porter and Cattell). Typical profiles for the mentally retarded boys were constructed, using exceptional profiles (for the normal population), based upon profile similarity coefficients, and the frequency of occurrence as indices. Three profiles could be described, all showing low intelligence. The first profile shows an excitable child that has low super-ego strength and is characterized by many neurotic traits, apprehensiveness and worrying. The second profile shows a child that is sensitive and dependent and lacks assertiveness, but has also a rather high ego strength, is not easily affected by feelings and is emotionally stable. The third profile shows a child that has a high need for contact with others, or is very outgoing (and perhaps constitutionally cyclothym) but has also low ergic tension, is torpid, phlegmatic or inactive. The three clusters account for about 60 to 70 per cent of the group.

### ACKNOWLEDGEMENTS

The author is very grateful for the help received from Dr. D. van der Werf, Dr. F. Smith and Miss L. Evers. We are grateful also to the schools that coöperated in a very pleasant way.

### Notes:

1. A questionnaire is based upon introspective data. In the CPQ however apparent Q data are behaviourally cross validated and the data belong strictly into the realm of objective test variables.
2. Weighted scores were Standard—five point scale scores. The percentage included in the classes 1, 2, 3, 4 and 5 are respectively lowest 7%, next 24%, mean 38%, next 24%, and highest 7%. Percentiles at midpoint are respectively 2, 16, 50, 84 and 98.
3. Rough scores were used. Differences between the American group of boys and the mentally retarded boys were used only if there were no significant differences between the Dutch normal boys and the American boys at the .05 level. This resulted in significant differences for the  $Q_3$  factor only which was still significant at the .025 level. Other significant differences were based on the rough scores for the Dutch boys and the mildly retarded boys. This resulted in differences significant at the  $P=.005$  level of significance for the factors A and B, respectively higher and lower than the average values.

4. The profile similarity coefficient ( $r/p$ ) is based upon the sum of the squared differences of the personality traits for each factor. The expected  $r/p$  for the normal population was assumed to be .00. The .482 level of  $r/p$  is based upon the number of 14 personality variables that the test measures (Cf. Horn, 1961). A maximum enclosure in clusters and a minimum overlapping is generally desirable in the study of types. In work with clinical groups however, which are not "homogeneous" it seems reasonable to set the  $r/p$  high ( $P=.01$ ). As with sum  $D^2$  many variations are possible depending upon the sum  $D$  (or distribution) we noted that sum  $D$  was in no case 9 and also never 3. The mean variation in the 14 factors was also in 6 factors.
5. This is a variation of the technique used by Cattell, Coulter and Tsujioka (Cattell, 1966) described in their study about the taxonomic recognition of types and functional emergents. The averaging is done to stabilize the profiles. Visual inspections shows that the tracer profiles still can be recognized in the composite profiles.
6. A+ corresponds with Thurstone schedule F (friendly) which is a simple structure combination of Guilford's scales objective, agreeableness and cooperative-ness. The A factor is cooperative with the factors F and H.
7. A nuclear cluster can be opposed to a fenomal cluster. The nuclear cluster rests upon the common elements of fenomenal clusters. In the first profile (figure 1) based upon a nuclear cluster three fenomenal clusters can be recognized. As these are less stable they are not described.

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#### Note on Figures 1, 2 and 3:

Profile and average factor scores of a cluster of mildly mentally retarded boys on the Child Personality Questionnaire. The column at the left gives the average factor scores of the cluster. The personality factors are given under "3". Low and high score descriptions are labels of the personality factors. The numbers 1, 2, 3, 4 and 5 are standard five scores with percentile midpoints of respectively 2, 16, 50, 84 and 98.

FIGURE 1

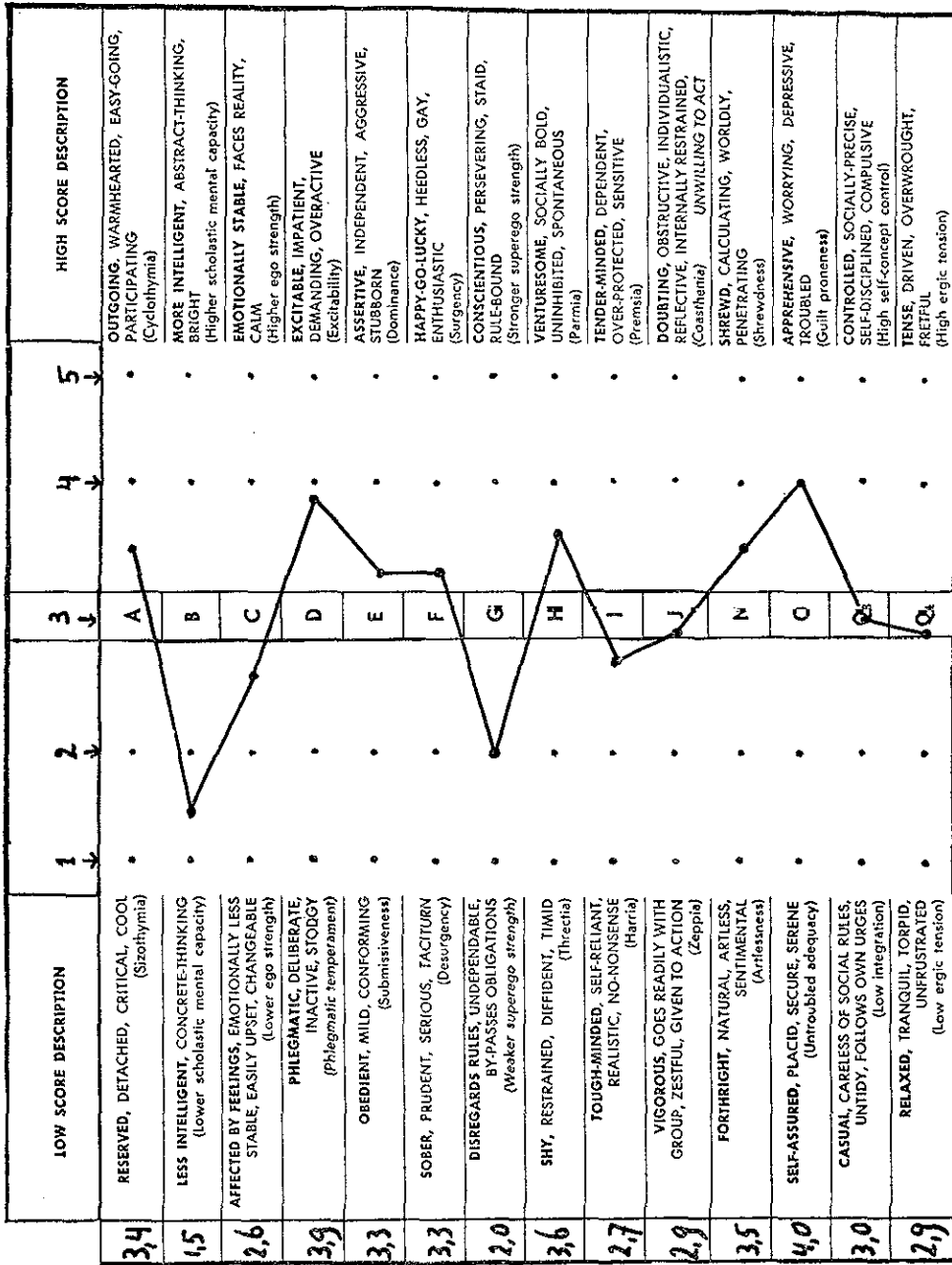


FIGURE 2

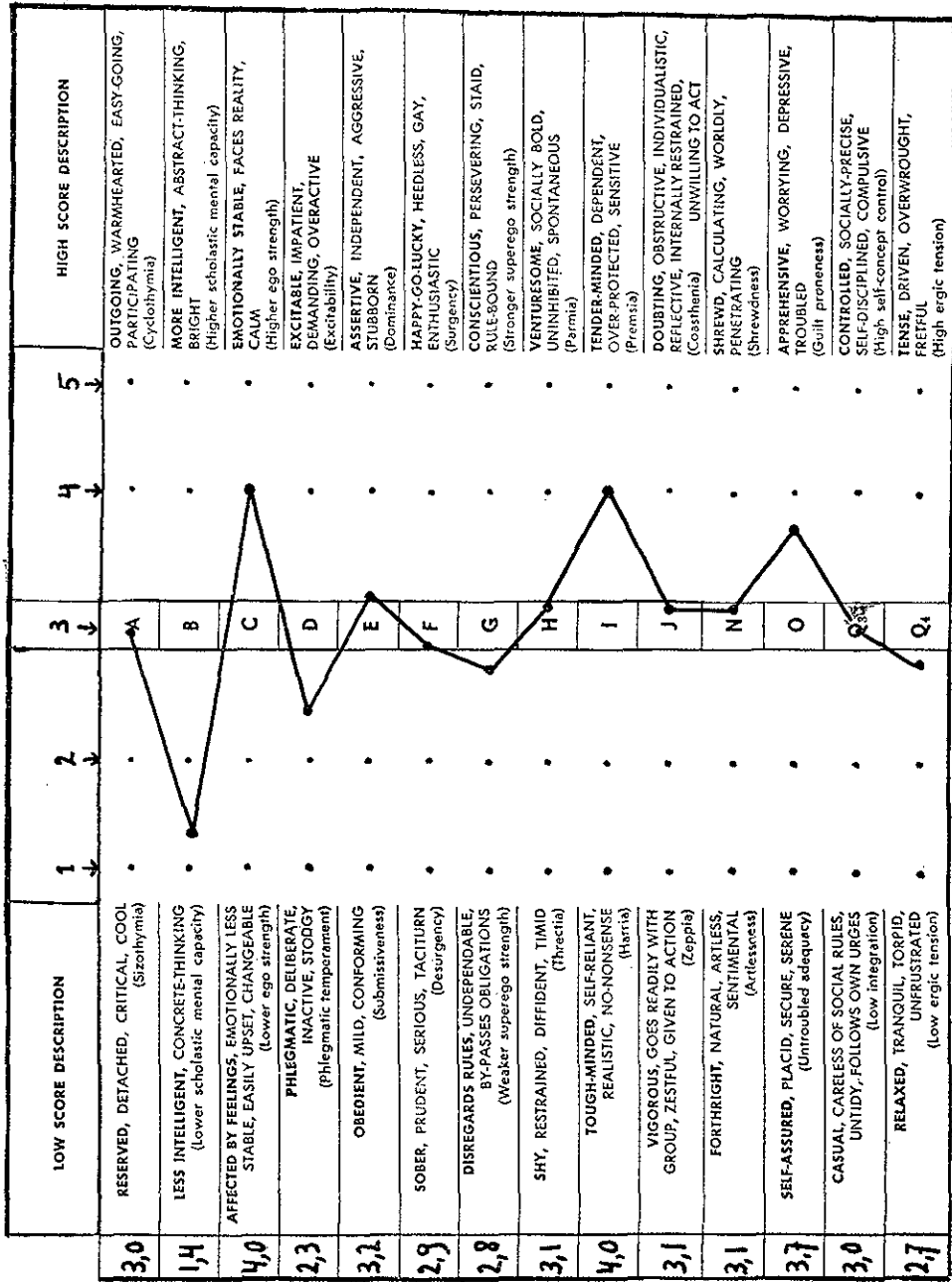


FIGURE 3

