COMPARISON OF THE INTELLIGENCE QUOTIENT WITH BEHAVIOUR.

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COMPARISON of different tests performed on the same individual is of value in showing whether tests purporting to be testing the same properties are, in fact, doing so, and also in determining whether certain psychological characteristics tend to occur concurrently in the same subjects. Previous work (Rudolf, 1948) has shown that the accumulation of general knowledge based on the environment and excluding school work, as shown by the I.Q. obtained by the use of Kent's test, correlates highly with the I.Q. obtained by the use of the Stanford Revision of the Binet-Simon, the coefficient being + 0·7499 ± 0·019. With a test of reasoning, Raven's Progressive Matrices (Group), the correlation-coefficient of the Kent Test was less impressive, being + 0·2686 ± 0·038. These results suggest that the accumulation of knowledge of the environment is not markedly dependent on, or connected with, the powers of reasoning.

In these investigations the behaviour of the individual was not considered. Yet the external attitude towards one's fellows is most frequently the characteristic by means of which people are judged.

PRESENT INVESTIGATION.

The present investigation compares behaviour with I.Q. The Wechsler Bellevue Test for Adults was used for the last and Doll's Social Maturity Scale for the first.

(1) *Tests and Testers.*

Wechsler's Verbal Test, which was the scale used, is a battery of five subtests, these dealing with information of a general and scholastic nature, with the comprehension of everyday matters, with arithmetic, with the repeating of digits, and with the similarities of pairs of objects named. The results are recorded in terms of I.Q. Mental ages cannot be calculated from the scores above the age of 15½ years, this mental age corresponding to a score on the verbal scale of 46.

Doll's Social Maturity Scale gives a description of the subject's behaviour as recorded by an observer. The maximum Social Age is 25 + years and a Social Quotient can be obtained by dividing the S.A. by the chronological age. In view of the difference of the maximum ages in the calculation of the S.Q.

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and the I.Q., comparison of the two quotients is not strictly fair. In addition, a statement that an individual behaves like a child of a certain age is of more value than the statement that he behaves as does a person of one-half, one-quarter, etc., of his age. In this investigation, therefore, the Social Age, and not the Social Quotient, has been used.

As behaviour alters as the outlook, training, etc., change, no tests have been used in this work if the time-interval between the obtaining of the I.Q. and the S.A. was greater than two months. A total of 1,519 tests was carried out on the same subjects. Of these, 1,076 are considered here, the remainder being unsuitable for comparison.

The tests were performed by testers who were fully qualified nurses working in a mental deficiency colony. They were all trained in testing by one psychiatrist, so that the standard was approximately similar throughout. The training consisted of lectures dealing with intelligence and with the individual tests used. Practical work comprised testing each other and, finally, the testing of mental defectives under the supervision of the psychiatrist.

(2) *Subjects.*

The subjects investigated were mental defectives resident in a colony. They numbered 281 males and 247 females, and the chronological ages extended from 10 to 57 years.

(3) *Results.*

The results are shown in Table I, which shows that the majority of cases with I.Q.'s of from 40 to 50, showed S.A.'s of 4 to 8 years; from 50 to 60, of from 4 to 12 years; from 60 to 70, of from 6 to 14 years; from 70 to 80, of from 8 to 18 years; from 80 to 90, of from 8 to 16 years. The cases with higher I.Q.'s are too few for rough inspection.

The correlation-coefficient is significant, being $+ 0{\cdot}93 \pm 0{\cdot}043$.

TABLE I.—*Wechsler Verbal I.Q. and Doll's S.A. on Same Subjects S.A. (in years).*

Wechsler I.Q.	S.A. 2—	4—	6—	8—	10—	12—	S.A. 14—	16—	18—	20—	22—	24—	.
40— .	3	7	10	3	..	..	..	..	..	..	..	..	23
50— .	3	23	54	51	23	7	0	2	..	..	..	..	163
60— .	1	7	29	49	36	13	7	2	..	..	..	..	144
70— .	..	2	8	23	38	14	14	14	2	..	..	..	115
80— .	..	4	4	9	9	9	8	3	6	..	..	..	52
90— .	..	..	..	2	8	2	3	2	..	..	..	..	17
100— .	..	..	..	..	1	2	4	2	0	0	0	1	10
110— .	..	..	..	..	1	1	1	..	..	..	..	..	3
120— .	..	..	..	..	1	..	..	..	..	..	..	..	1
	7	43	105	137	117	48	37	25	8	0	0	1	528

The Social Maturity Test, being a scale of behaviour, is affected by physical or emotional disabilities. Individuals may score low on the test as they

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cannot, owing to these hindrances, use their maximum intelligence. A score low in proportion to the I.Q. may be due to these factors. It may, however, be due to lack of encouragement and training and the table shows the approximate maximum that can be expected at the different I.Q.'s. Table II has been constructed to show the S.A.'s that should be attained by all cases at the various I.Q.'s, providing physical and emotional disabilities are not present in sufficient degree to interfere with behaviour.

TABLE II.—*Social Ages that can be Attained at Varying I.Q.'s providing no Physical or Emotional Disability Acts as a Hindrance.*

I.Q.	S.A.
40—	4–8
50—	6–12
60—	8–16
70—	10–18
80—	8–20

The possibility must not be denied that, with further training, these S.A.'s can be exceeded.

SUMMARY.

1. Comparison of behaviour, as represented by Social Age and I.Q. (Wechsler-Bellevue, Verbal) has been made in 1,076 tests on 528 male and female defectives.

2. The correlation-coefficient was $+ 0{\cdot}93 \pm 0{\cdot}043$.

3. A scale of Social Ages that should be obtained at I.Q.'s from 40–90 has been constructed. This scale is inapplicable if physical or emotional disabilities prevent the full use of the intelligence.

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REFERENCE.

RUDOLF, G. de M. (1948), *J. Ment. Sci.*, **94**, 452.

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