THE INTELLECTUAL AND SOCIAL STATUS OF CHILDREN OF MENTAL DEFECTIVES

By

M. W. G. BRANDON, B.A., Dip.Ed.

Clinical Psychologist

The Fountain Hospital, London, S.W.17

PART II

INTRODUCTION

THE purpose of this survey was to assess the intellectual and social status of 150 children of 73 certified mental defectives. The mothers have been described in Part I.

THE CHILDREN

(*a*) DESCRIPTION OF GROUP

Number. One hundred and fifty children (including some miscarriages and stillbirths) were known to have been born to these certified women. Two of these have been born during the last three months and have been excluded in all calculations dealing with intelligence. They both appear to be perfectly healthy babies. All the other children are over six months old. Seventy children were seen by the writer, 60 of these were tested. Thirty-nine were not seen, 14 of these had already been tested by a psychologist. Those remaining were not seen because they were adopted, abroad, or it was not considered advisable to visit. However, a considerable amount of information was available about all but 7 adopted children and one child who, when last heard of, was being considered for adoption.

Deaths. Forty-one of these children have died, 2 at 7 years and 2 as adults. The remainder, 37 or 24·7 per cent. of the whole group, were miscarriages, stillbirths or died before they were two years old. This percentage is similar to that of Lewis (1934) who, in a group of 8,841 children of defectives, found a death rate of 22·5 per cent. An inquiry was made into the causes of death in the present group. All the hospitals where a death was known to have occurred were asked to give the cause. Unfortunately, in most cases, this appeared to be impossible, owing to records being lost or destroyed. Four of the children who died were known to have been abnormal physically. These are given below with the mother's Wechsler test I.Q.

Mother's I.Q.	Child's Abnormality
73	Anencephaly
91	Hydrocephaly
69	Mild microcephaly
73	Large soft swelling on side of head

In only 4 other cases was the cause of death known. These were: broncho-pneumonia, jaundice, prematurity and breech with extended arms and prolapse of the cord. The cause of death is an important aspect which should receive more attention. The death rate over the last five years is still far higher than the national average. The contributory causes of death, whether hereditary, or environmental, might be very revealing. In Table I the dead children are included at the age they would now be (31 December, 1956) if they had lived.

TABLE I

Age and Death Rate of Children

Age	0–5	6–15	16–20	21–24	25 and Over	Total
Number dead*	6	9	2	2	22	41
Number alive	51	26	3	8	21	109

* Age would have been 31 December, 1956.

The number of deaths has decreased over the years. Comparing those born during the last five years, and those before, there is a significant difference in the death rate. $\chi^2=11\cdot75$ $p<\cdot001$. This is probably due to some considerable extent to the national decline in infant mortality. The fact that the figure has improved with that of the general population indicates that the high death rate is not wholly an inherited and unalterable characteristic of this group. The number of illegitimate children has a bearing on this problem and will be mentioned later.

(*b*) INTELLIGENCE

Tests used. It was hoped to use the Griffiths developmental scale for those under 2 years, the Terman-Merrill 1937 Revision of the Stanford-Binet, Form L. for those from 2–14 years and the Wechsler-Bellevue Form I for all those above 14 years. However, this was not always possible. With the adults it was almost exclusively those who had been in institutions who were available for testing. For the remaining adults, estimations were made on school record, past and present occupation and general conversation. It is realized that this method is not very satisfactory; however, it does lead to under rather than over-estimations. The following is an example of a girl who was rated as having average intelligence. She had been brought up in an orphanage and was better than average at secondary modern School. She taught herself to type and was "discharged" from the care of the Local Authority at 18 rather than 21, because she was thought capable of managing for herself. She kept herself by secretarial work until she married and now runs a home quite efficiently. (See Case A.F.C. Appendix I.) The estimations were:

average plus I.Q.	110
average I.Q.	100
average minus I.Q.	90
average double minus I.Q.	80

(in fact this latter estimation was not given, as intelligence test scores were available in all doubtfully low cases).

When it was possible more than one test was given. With some of the older foster children, it was felt by the Children's Officer that an intelligence test might be disturbing for the foster mother and child. In these cases, the children's officer gave a full description of the child, and was asked to get a drawing of a man under conditions where it could be scored as a Goodenough test. One hundred and nineteen tests were given to 74 children. The tests were all given during the last year so that the ages in Table I are also the age when tested. The following tests were used: 17 Griffiths mental development scale, 40 Revised Stanford-Binet intelligence Scale Form L, and 7 Wechsler-Bellevue Intelligence Scale, Form I, 13 Progressive Matrices, 9 Goodenough draw-a-man test and 33 Vineland social maturity scale. The Vineland test was used mainly for children under two years of age. It was decided to take the score of the test

best suited to the child's age where one of the first three tests mentioned was available. When they were not available, the other tests noted above were added in, in the order mentioned above. An alternative method was used of averaging the I.Q.s for each child where more than one test had been given. Thus, a 20-year-old daughter (F.M.A. Appendix I) with the following scores: Wechsler-Bellevue I.Q. 81, Terman-Merrill I.Q. 72 and Progressive Matrices I.Q. equivalent of 75 is given the Wechsler I.Q. of 81 by the first method, and an average I.Q. of 76 on the second. McNemar (1942) and Roberts (1952) corrections were used for the Terman-Merrill scores. To these results were added the estimates. There were 27 of these. There were also 7 children who had been adopted. On the basis of those known I.Q.s for children who had been or who were being considered for adoption, these children were estimated as having I.Q.s of 95.

Results. Of the 109 live children, 74 were tested. The average for all the intelligence test scores was 89·1, using the first method described; that of taking the I.Q. as scored on the test best suited to the child's age. When the total of 34 estimates were added, this came to I.Q.=91·3 for 108 cases, Range 30–132 SD. 17 (2 cases were included who died as adults, but who had had an intelligence test and an estimation; 2 children were excluded because they were less than three months old and one child could not be traced). This child, when last heard of, was normal and was being considered for adoption. Using the second method, that of averaging all the intelligence test scores, the average was 90·5. When estimates were added this came to 92·2. Yet a third method of

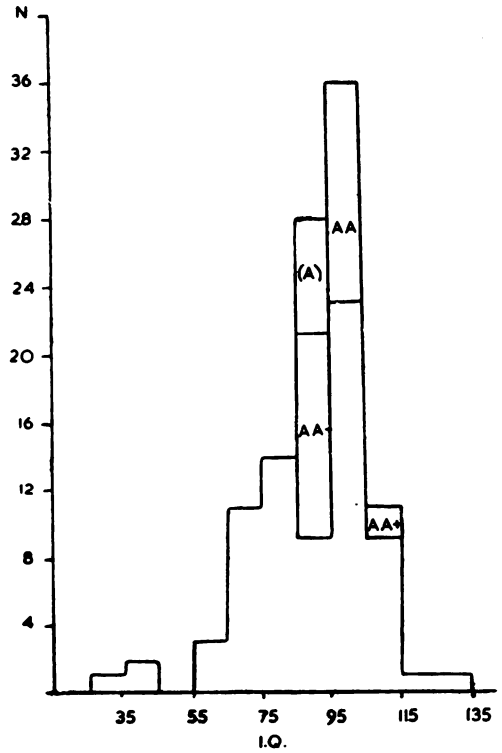

FIG. 1.—Distribution of intelligence of 108 children of women certified as Mental Defectives. Intelligence test scores converted to an S.D. of 16 points. Mean I.Q. of test scores=89. Mean of I.Q.s plus estimation=91·2.

dealing with these results is to take the scores obtained by the first method and to convert them via Standard scores to the same standard deviation. Converting all the scores to a standard deviation of 16 points, the mean I.Q. is 89 and the mean I.Q. plus estimates is 91·2. The scores obtained by this method are illustrated in Figure 1. The method of taking the highest I.Q. on any of the tests has been used by Charles (1953). In the present survey it gives an average I.Q. of 93·7, which gives a mean of 94·5 when estimations are added. It would appear from these results that these children's intelligence on the average is within the normal range. The four methods produce average I.Q.s for the whole group of 91·3, 92·2, 91·2 and 94·5. In the survey by Ainsworth, Wagner and Strauss (1945) the mean I.Q. of the 15 children in their group was 91·1 which is very similar.

Although it is interesting to find the average intelligence of a group such as this, a more detailed account of the results is needed to give a true picture of their intelligence. The results when looked at in detail present some rather surprising features. The mother with the highest I.Q.=113 produced one of the defective children I.Q.=44, and the mother with the lowest I.Q.=55 (Wechsler-Bellevue Scale) has produced the child with the highest I.Q.=132 (Terman-Merrill).

Of the 109 children still alive:

6 had been certified as mentally defective, but are now discharged and self-supporting;

2 were in places of safety under the Mental Deficiency Acts, and have now been discharged;

6 are still certified and have I.Q.s of 30, 40, 44, 56, 73 and 84
4 are in schools for the E.S.N. with I.Q.s as described later } 10

Thus 99 or 91 per cent. of the surviving children of these allegedly mentally defective mothers are apparently mentally normal. Only 6 children scored consistently below I.Q. 70 and only 4 below I.Q.=65 (3·7 per cent.). It could be argued that one of the four defective children comes from parents with above average intelligence and so should be excluded. This would bring the percentage of seriously defective children to 2·8. The percentage of mental defectives in the total community is still being discussed. Lewis (1929) estimated that the general incidence was about 8·6 per thousand with wide fluctuations when the age groups were separated, the highest figure being 3 per cent. at 12 years of age. The Scottish Survey (1933) indicated that more than 1·5 per cent., but not as many as 3 or 4 per cent., of school children were mentally defective. A more detailed study of those children with lower intelligence is made below. First, those who are certified as mentally defective; in each case the possible social and hereditary reasons for the child's defect have been divided from the possible physical ones. Cases 5 and 6 belong to the borderline group rather than that of the true mental defectives.

Children Certified

(*a*) possible social and genetic factors.
(*b*) possible physical causes.

1. M.B. I.Q. 30. Aged 8.
   (*a*) Father was a defective on licence, mother's twin sister was an imbecile.
   (*b*) Grandmother tried to procure his abortion.

2. M.C. I.Q. 56. Aged 6. A very disturbed child.
   (*a*) Mother was schizoid and grandmother was voluntary patient at a Mental Hospital—a neurotic. Mother's twin sister has a Wechsler I.Q. of 68.
   (*b*) Nothing relevant known.
3. S.P. I.Q. 48. Aged 9.
   (*a*) Father was a skilled foundry worker. Mother was an orphan, she has an I.Q. of 113 (Wechsler) so that factors leading to her certification were not wholly intellectual.
   (*b*) Nothing relevant known.
4. D.B. I.Q. 40–48. Aged 19.
   (*a*) Nothing relevant known.
   (*b*) Fits as a baby.

The above four children have all been patients in the Fountain Hospital.

5. L.H. Aged 20. Goes out on daily licence.
   Wechsler I.Q. 73. Verbal I.Q. 65. Performance 87. This man is more of a social problem than an intellectual one with an I.Q. as high as this.
6. G.D. Aged 25. Wechsler I.Q. 84. Matrices I.Q. 86.
   This man is certified as a mental defective, although according to the medical report he has a schizoid personality. He has earned his living for short periods, but again, his main difficulty is not his deficiency.

Those children who have been under the Mental Deficiency Act and are now discharged are as follows:

1. R.B. Aged 34—earning £10 a week, slight speech defect, runs a house and goes out to work—very capable.
2. G.C. Aged 32—now earning his living and married. He was admitted to a Place of Safety and ran away, so was discharged.
3. J.D. Aged 28—brought up in an institution, now married, rather headstrong, but appears to be managing her life.
4. F.G. Aged 22—working in a hotel, has just been discharged.
5. M.P. Aged 31—working as a ward orderly, seen and is quite independent and competent.
6. P.J. Aged 25—about to be discharged. Matrices I.Q. 84. Mainly kept in because of tuberculosis—now clear of this.

These children were all brought up in the care of local authorities. They could not afford to appear dull since on practically every case sheet it was mentioned that mother was a certified mental defective and they were literally watched for signs of defect.

E.S.N. Children

The 4 children who are attending E.S.N. schools are a further interesting group.

The incidence of true feebleminded children rather than idiots or imbeciles in such a group is probably the most important consideration in a survey of this type. If it could be shown that certified feebleminded mothers produce large numbers of educationally subnormal children, then the fears of the eugenicists would be justified and there would be a danger in allowing these girls to make normal emotional attachments and marry. However, the only 4 children in this category appeared to be basically normal children who had undergone extreme lack of mothering in their early years. Bowlby (1951) has

reviewed the researches carried out on maternal deprivation and suggested that a lack of mothering can depress children's intelligence quotient by an average of 20 points or more. It will be seen later that in the present survey, those children separated from their mothers appear to have a lower intelligence than those who have remained with them. Recent researches have tended to find fewer certified children and a higher mean I.Q. among children of mental defectives. This may not only be due to more exact research methods. Many more children are now allowed to stay with their mother or are adopted or fostered immediately after birth rather than sent to large institutions because they were considered to come from "bad stock". Griffiths (1951) has also observed the effects of a lack of mothering on the development of very young children. Mundy (1955) has studied the question in relation to mental deficiency specifically. Bourne (1955) also notes it as a factor in the possible aetiology of a residual group of mentally deficient children. Penrose (1954), in concluding his chapter on problems of causation, writes: "the postnatal environment can contain decisive psychological factors tending to cause or prevent the development of mental defect." These particular children may be susceptible to the effects of institutional upbringing. This is, however, quite different from postulating an innate inability to learn inherited from their mothers. It does seem that these four children in this present survey are suffering from a reversible and probably preventable state of being "E.S.N.". They are described in detail. Three of the four have been through the same residential E.S.N. School. A letter was written to the principal asking how these children were progressing. The following descriptions of them were given:

P.S., aged 7. "An extremely highly-strung and nervous little boy, delicate, small physique, expressive face, and quaint amusing mannerisms and conversation render him popular among adult visitors. He is not always amenable to discipline, likes his own way and gets it often in a roundabout way, is at times aggressive and unco-operative in a baby way resembling the behaviour problems of a three year old. He will fasten his loyalty on one person and becomes extremely lovable and endearing towards the object of his affection, often addressing her as 'my Manny'. His insecurity is also shown by his appropriation of small objects which he will hide and hoard, regardless of ownership. In the class he has shown little progress in the two terms he has been here, cannot concentrate for long, but wanders around. As he is very young in age and insecure, he may yet show a latent development. His mother's mother has visited him since he has been here and we are trying to cultivate the contact for his sake."

H.H., aged 11½. "Is a child with a definite chip on her shoulder, will not conform to rules and quarrels with the other children. She is extremely backward in the classroom, cannot concentrate, and it is very difficult to persuade her to attempt her lessons. If not given individual attention, she will sit and dream. Any mental concentration is difficult for her and the lack of ability in this way may be the cause of her behaviour problems and disturbance, although many of the staff members have tried to mother her, she has shown no affectionate inclination towards anyone. Her reasoning power is very limited and she can only understand her own point of view, is decidedly unpopular among the other children. This child is given as much individual attention as it is possible in a community, has a room of her own, and has had her own animals."

J.F., aged 11. "Lives largely in a fantasy world except when stimulated by classroom activities. J. is a live-wired boy who needs firm discipline to make him adhere to routine. He is highly imaginative, egocentric, and anti-social, not easy to handle. Up to last summer he had never shown the least sign of

affection for anyone but himself. He seemed utterly incapable of love, perhaps because he had always been the *bête noire* of the staff who had had to cope with him. During the summer he showed great interest in the two-year-old child of his house matron and became extremely fond of her. At the same time he also intimated that he was going to marry his teacher because he loved her. This was a great step towards security for J. Unfortunately he was transferred soon afterwards while this new outlook towards others was still a new thing. His work in the classroom was interesting. He had many creative ideas, showed extreme care, neatness and enthusiasm in his writing and number work and had a rare feeling for design in colour in his art work. The general feeling here was that he was more maladjusted than E.S.N. The topic of his conversation was often his loss of family and mother."

M.G., aged 6½—has only just gone to Special School. She is described by her house mother as "very quiet and withdrawn and frightened of being alone".

As the intelligence test scores of this E.S.N. group appear to be rather variable, these have been given in detail in Table II. It will be seen that these children have much higher performance scores than verbal ones.

TABLE II

Verbal and Performance Scores of E.S.N. Children

Name	Age	Mainly Verbal Tests		Mainly Performance Tests		
		Terman-Merrill	Wechsler Verbal	Goodenough	Matrices	Wechsler Performance
M.G.	6½	64	—	83	—	—
P.S. ..	7	67	—	—	71	—
J.F. ..	11	63	71	112	82	98
H.H.	11½	65	57	—	—	67

The tests of two of the children show wide variations and this is one of the recognized signs of emotional disturbance. All four children were seen and tested by the writer. They did not present the textbook picture of slow, dull feebleminded children. All four move and think quite quickly, but have difficulty in personal relations. It should be emphasized that at the moment these four children are in extremely good environments as far as can be provided by a large boarding school. From the report given above it can be seen that a considerable amount of individual attention has been given to them. It would be most interesting to follow the subsequent careers of these four children.

To try to assess the effects of continual moves and lack of home life, a note was made of those children who had been away from home for long periods and who had full siblings living at home.

TABLE III

Comparison of Separated Children's Intelligence with that of their Own Siblings

Mother's I.Q.	Child	Position in Family	I.Q. of Child	I.Q. of Siblings with Same Father
72 (T. and M.)	J.A.	3rd child	80	104, 96, (100)
68 (V.W.-B.) ..	R.B.	2nd child	77	85, 85
71 (V.W.-B.) ..	C.F.	1st child	(90)	(100), (100), 108, 100
84 (Full W.-B.)	R.S.	2nd child	90	104, 100

Figures in brackets represent estimates.

It is strongly suspected that adverse environmental factors have held back at least three other cases, but amongst these there are no full siblings to act as controls (see F.M.A., Appendix I). The group is too small to make any deductions, but it is possible that lack of family life has had a depressing effect on the development of their intelligence. The average difference between those who have been at home and those who have not is about 14 points I.Q. Birth order does not seem a relevant factor. Mundy (1955), dealing with a similar group writes: "the hypothesis is submitted that adverse social circumstances may exercise an inhibitory or depressive effect on intellectual function and that this appears to be a reversible process."

(*c*) Illegitimacy

For the whole group the illegitimacy rate is high: 30 or 20 per cent. are legitimate and 120 or 80 per cent. are illegitimate. Ten of the nominally illegitimate children are, however, "legitimate" in that there is a stable home. The death rate in infancy in the two groups is significantly different: $\chi^2 = 12 \cdot 84$ $p < \cdot 001$. Early separation and multiple placements which occurred frequently may have been responsible for the high death rate. However, the birth dates of the dead illegitimate children are earlier than that of the live illegitimate children. The illegitimate children who died would now have an average age of 23, whilst those who are alive average 16 years. It is difficult to judge to what extent improvements in ante and postnatal care and possible social tolerance are responsible for these differences.

The Comparative Death Rates of Legitimate and Illegitimate Infants

	Legitimate or Appear Legitimate	Illegitimate
Number	40	110
Number died in infancy ..	1	36
Percentage dead	2·5%	32·7%

The death rate is much higher for the illegitimate children: it might be argued that these probably come from less intelligent parents, because the more intelligent would be more likely to marry. However, when the married mother's I.Q. on the Wechsler test is compared with that of the discharged unmarried mothers, it is found to be slightly lower. The married women have an average I.Q. of 80·6 and the unmarried 82·3. The women whose children all died were only a small group but their average I.Q. was just as high.

(*d*) Mode of Upbringing

Four children have been brought up mainly in mental deficiency institutions, seven children have been adopted, two children, the youngest in the group, will probably be brought up by their mothers, and five have had a rather mixed upbringing and are now with their mothers.

Apart from these the rest were brought up as shown in Table IV.

TABLE IV

Mode of Upbringing and Intelligence of Children

Mode of Upbringing	Number	I.Q.
Brought up by their own mother	30	98·7
Brought up by 1st or 2nd foster mother, a close relation, or adopted after being tested	25	96·8
Brought up in orphanages or by a succession of foster mothers	38	87·6

There may be various selective factors operating on these groups, but it is interesting to note that being brought up by a discharged mental defective does not appear to depress the children's level of intelligence.

(*e*) PRESENT OCCUPATION

Thirty-four of the children are over sixteen; 21 girls and 13 boys. Their occupations have been grouped roughly in order of difficulty below:

			Number	
(1)	Men	In mental deficiency hospitals (patients) ..	3	3
	Women	In mental deficiency hospitals (patients) ..	0	
(2)	Men	Farm or general labourers, hotel work ..	4	13
	Women	Domestic, ward orderly or laundry work	9	
(3)	Men	Baker, soldier	2	6
	Women	Shop assistant, factory work	4	
(4)	Men	Farm foreman	1	5
	Women	Typist, nurse	4	

In addition, one girl will probably be discharged and do domestic work, 3 women are now housewives and their previous occupations are not known. Three of the men have been adopted and their occupations are not known. Out of the 34, 13 of the women and 4 of the men are now married. There are 27 grandchildren, of the original mothers, some of these have been seen and inquiries have been made about all of them. They all appear to be healthy and although they are mostly young, none is considered dull or backward.

(*f*) CORRELATION BETWEEN THE INTELLIGENCE OF PARENTS AND CHILDREN

The correlation between the mother's Terman-Merrill I.Q. and the child's for 77 cases was found to be ·14. The correlation between the mother's Wechsler score and the child's I.Q. for 65 cases is found to be —·008.

The occupation was known for 54 of the fathers. They had 80 of the 150 children, 14 of whom died. The fathers' occupations were divided into five groups as shown in Table V and given intelligence quotients for each level. These were taken from Burt (1926).

When the parents' scores were averaged and compared with the children, the correlation was ·0008 for 66 cases. There appears to be little or no correlation between the parents' intelligence in this group and the children's. When the data are grouped, however, the duller mothers appear to produce more of the defective children than the brighter ones.

TABLE V

Occupational Level of Fathers

Number of Fathers	Father's Occupation	Total Number of Children	Number of Live Children	Number of Children Who Died
3	Certified defective ..	3	2	1
6	Casual labourers	11	8	3
13	Unskilled labourers ..	20	18	2
21	Semi-skilled workers ..	32	28	4
8	Skilled workers	11	8	3
3	Highly skilled workers ..	3	2	1
54		80	66	14

MOTHERS WITH CERTIFIED SIBLINGS

Eighteen mothers have certified siblings. The average I.Q. of these mothers is 76 which is very similar to the I.Q. for the whole group, 73. The children's I.Q. is 89 which is also not very different from that of the whole group, 91, so that it might be inferred that having deficiency in the family does not affect the intelligence of the children. However, the 25 children in this group contain a large number of those who have been under the Mental Deficiency Act. The group contains 3 of the 5 children who are now certified, 3 of the 6 discharged cases and both of the place of safety cases, and 2 of the 4 children who died in infancy and were physically deformed. Some of these have quite low I.Q.s and in order to produce such close averages with the total group, it seems possible that there are two factors operating here. There are those nine mothers who are backward because of factors operating early in development and who have dull siblings and tend to have certifiable children. Some of the children, however, may have been more easily certifiable because "there was deficiency in the family". The average I.Q. of this group of nine children is 73 and their mothers 64. On the other hand, there is a group of nine mothers who come from very adverse homes (see B.B., Appendix I). Here the same disadvantages are acting on all the family and it is very likely that a number of siblings will be certified whilst being of fair potential intelligence. This group of nine mothers had an I.Q. of 87 and their 14 children had an average I.Q. of 100. This is seven points higher than that for the whole group. It will be seen that although there appears to be a cluster of duller children coming from families with more than one person under the Mental Deficiency Act, great care needs to be taken before it can be assumed that there is a "deficient strain" in the family.

DISCUSSION

It has been pointed out in Part I that eugenic statements have sometimes been rather wild. Even geneticists have looked on feeblemindedness as a single disease or unified syndrome. Statements are still being made which show the earlier type of loose thinking to be prevalent. Pantin (1957) writes: "of two feebleminded parents, nearly all the children will be feebleminded" and such debatable statements as "three-quarters of all types of mental deficiency are genetically determined". Penrose (1954) discusses the whole question of genetics and intelligence and goes into the problem in relation to mental deficiency. There seem to be four main verified statements which have been made about genetics and intelligence. The first, that certain specific diseases

appear to be gene-determined. These are often accompanied by mental deficiency. Examples are phenylketonuria and amaurotic familial idiocy. The majority of those recognized lead to imbecility and idiocy and not to feeblemindedness and account for a small fraction only of mental defect. Secondly, there appears to be a fairly constant relation between the intelligence of parents and children. The correlation is often quoted as being in the order of ·49 (Jones, 1946). Thirdly, there is a tendency for the intelligence of children to regress toward the mean, Thompson (1946), and fourthly, there tends to be a greater variation in the children's intelligence than in the parents. How do the results in this research compare with these known facts? The mothers in the present survey suffer from no known genetically determined illness. When the mothers' intelligence is correlated with the children's the correlation is found to be very low. This may be due to two factors. The mothers have been shown to have very divergent I.Q.s with a marked tendency to increase; there is no guarantee that they have finished maturing and that we now have their highest and "real" I.Q. In fact, after an adverse home background and an average of 14 years in institutions, it would not be surprising if they never develop their full capacities. This does not alter their genetical make-up. They can still be passing on genes capable of producing normal intelligence. The second factor is that one is dealing with a selected group, a relatively narrow band of I.Q.s, and one would expect the correlation to be smaller because of this. The high correlation between parental and child intelligence does not hold true right the way down the scale. Penrose (1938) in his survey stated that the idiots and imbeciles did not have dull parents. Possibly there is a point or a range of I.Q.s where this correlation becomes smaller. Alternatively, because of the regression towards the mean, the correlation may remain constant, but with the children's results always tending to be higher than the parents. However, almost all idiots and imbeciles have grossly abnormal brains. They are not just the normal swing from their parents' intelligence. It is very difficult to draw any upper limit for this process.

The third point about regression towards the mean has been shown in this research. If some of the children had not themselves been subject to adverse environment this regression might have been even greater. The fourth point, that there tends to be greater variation in the children's intelligence than in the parents', is also illustrated in this survey. When all the test scores are used, the mothers' I.Q. ranges from 43–113 (70 points) whilst the children's range is from 30–132 (102 points).

Conclusion

Women who have been certified as feebleminded do not appear to have large numbers of defective children. In the present survey the number of defective children is 3·7 per cent.

Summary

Among the 150 children of the certified mental defectives discussed in Part I, a high death rate was noted. Their average intelligence was found to be I.Q.=91·3. Only 4 children scored consistently below I.Q.=65 (3·7 per cent.). The suggestion was made that the small group of educationally subnormal children might be functioning at a low level because of adverse upbringing. The intelligence of those children who had been separated from their homes was compared with that of their full siblings at home. Although the group is small, the I.Q. was found to be consistently lower for the separated children. It was suggested that a number of other children in the group had also been adversely affected by constant changes and lack of mothering. Children brought up by their own mother had an average I.Q. of 98·7. Upbringing by a discharged mental defective does not appear to depress the child's intelligence unduly. The occupations of the children over 16 were described. Mothers with defective siblings appear to belong to one of two groups: one having dull children and the other normal.

The correlation between the mother's and child's intelligence was found to be ·14. When an estimate was made for the father, the correlation between parents and child was ·0008.

The mothers in the present survey suffer from no known genetically determined illness. There is a low correlation between the mothers' intelligence and that of her children. The children's intelligence shows a regression towards the mean and a greater variation than their mothers.

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APPENDIX I

Individual Case Histories

F.M.A.

F. was third of 17 children, 8 of which died before they were two. Her father was a packer who earned 60s. a week in 1938. Her "abnormality" was not noticed until she was 8 years old. Her mother was described as difficult, unreliable and incompetent. One of the children attended an M.D. school and was certified.

F. is described as having wasting, eczema and chronic blepharitis. She was premature (7 months) and has defective vision.

At 8 she was sent to an M.D. special school and left at 16. She was then under supervision. At school she was described as quiet and industrious, but occasionally hysterical and later reports said she was untruthful, cunning and sullen, always talking to men. On leaving school she helped at home and had one job as a case maker for nearly a year.

She had one stillborn child when she was 24, the father being a married man, but nothing else is known of him and two years later she had a baby the father of whom was said to be her brother. This brother had "wasting" but was not one of the certified children. He worked in an iron foundry and later went into the Army.

After the second child, the family rejected her, and mother said she did not want anything to do with her. F. was with her baby for 7 months and became very attached to her. They were to go to a Rescue Home, but the child had gastro-enteritis and a rash, and they were separated. She was then found neglected and certified. She was in institutions until she was 35. She was then on licence for two years as a ward maid and was discharged when she was 37. She is still working as a ward maid at 56.

The daughter had 10 moves before she was 3 and a further move just after her third birthday. She was at one time considered for special school, but her I.Q. was found to be 86. She left school at 15 and wanted to do domestic work in hospital, but was turned down after a month's trial at a housecraft training school. She then went to a convent for training but began to have a series of hysterical outbursts and to show defiant "disobedience". She appeared extremely passive apart from these aggressive periods, but seemed to be deteriorating and became destructive. She also ceased to take a pride in her personal appearance. The Sisters felt unable to continue to care for her and asked for her removal. She was admitted to a hostel as a temporary measure and medically examined and deemed not to be M.D. She was then admitted to another convent where she stayed for 2 years doing laundry work. As she was approaching the age of 15 years she was re-examined with a view to being placed under supervision, but was still deemed not to be feebleminded. A situation was found for her as a ward maid, but whilst there she became pregnant. She said she had met a man and after two days became pregnant, that she had known nothing whatever about sex. She was again seen with a view to certification and her I.Q. was found to be 72 on the Terman-Merrill, 73 on the Matrices and 81 on the Wechsler Full Scale with a Performance I.Q. of 91. Eventually the idea of evoking the Mental Deficiency Act was dropped and she obtained resident employment as a maid.

The daughter was extremely difficult, but her reaction at 15 years to the convent life was hardly abnormal, especially after such an insecure childhood. For the time being the tragedy of repeating the same pattern for child as for mother has been averted. The mother almost certainly had a brighter potential than her Terman-Merrill I.Q. of 60. This test was given when she was 35, and to compare it with one given at 15 she would have at least another 4–5 points added for deterioration.

B.B.

B. is the fourth of 13 children, 11 of whom are living. Her father is a farm labourer, a cowman. Her parents were convicted of wilful neglect of six of their children who were taken into care by the County Council. The eldest child at 17 was on probation away from home. The next child, a girl, was certified as feebleminded. She is a little duller than B., but her case is rather similar: her I.Q. is 82 on the Matrices. She was brought before the court by the N.S.P.C.C. One other sister attends special school. B. led a rather nomadic life with her parents and did not attend school very regularly. At elementary school she was backward and her scholastic attainments poor. In the year before B. was certified they moved seven times.

B. was physically fit and was given I.Q.s of 69 and 72 before she came to the Fountain. She had been on probation for larceny, examined and deemed not subject to be dealt with under the Mental Deficiency Acts. But after she had been at the approved school for 4 months an order was made under Section 9. She was then 16. When she was 17 she came to the Fountain Hospital where it was found that she had a Wechsler I.Q. of 97 and a Matrices I.Q. of 95. After three months she was sent out on licence, and after a further seven months she was discharged. Five months later she married a farm labourer and seems to have settled down well. A year after she was married she had a son, who has a Griffiths I.Q. of 108, and she is expecting another child.

She now seems a very capable person, her house is well kept and she looks after her baby well. She was very immature when she first came to the Fountain Hospital, but matured quickly.

I.C.

I. is the sixth of 9 children, the last one dying at birth. Her parents are described as being of poor mentality. She is said to have developed normally in infancy. The father works in an iron foundry. One brother has suffered from schizophrenia, but is now at home, another went to special school and is now under statutory supervision at home. Both are working. I. went to elementary school until she was 8 when she was deemed E.S.N. and sent to Special School. She left at 16 and was employed in several factories. She was under supervision. At 17 she became pregnant and the parents agreed to her being certified as they did not want it to become known. Three months after the baby was born the mother asked to have them both home and was allowed to. The father of her first child was still seeing her although the parents objected to their getting married. There were constant quarrels in the family. Eventually they were married and I. again became pregnant. The husband had tuberculosis and could not undertake heavy work—he went to a rehabilitation centre at one time. On the Matrices test he scored between 66 and 76. He was seldom able to obtain work. I. lived very near to her mother and was constantly moving from one home to the other, having rows in both. She came back to the Fountain Hospital at intervals for temporary periods. The Family Service Unit gave a great deal of help, but she still does not seem able to cope with the situation. Her husband has left her for long periods. She has had one further child by him and is expecting another. She is now nearly 24, he is 41.

On tests when she first came in she had a Terman-Merrill I.Q. of 50 and a Wechsler Verbal I.Q. of 63. Four years later she had a Terman-Merrill of 58 and a Wechsler Verbal I.Q. of 71. She was described as abrupt, dispirited and sullen. Depressed when being tested, insecure and of hysterical temperament. She is very dependent on her mother, has a violent temper and is quarrelsome.

Her eldest child has been brought up by his grandmother. He has attended a Child Guidance Clinic for some time, but is essentially a bright and stable child, somewhat upset by the constant quarrels between his mother and grandmother. He is now 6 and doing well at school. His Terman-Merrill I.Q. is 111. The other two children are with their mother and at $2\frac{1}{2}$ and $3\frac{1}{2}$ have I.Q.s of 97 and 98 on the Terman-Merrill.

I. would manage fairly well in spite of her limited capacity if her husband did not reappear at intervals and cause her repeated pregnancies.

A.F.C.

A. was the first of seven. Her father was a fireman, bringing home 50s. a week in 1931. A. was born prematurely. Her lack of progress was always attributed to a fall at birth. She was born with no one in attendance and her mother stated that, for the first three months, the baby screamed almost continuously. Childhood development, however, was said to be normal. She went to an elementary school until she was 7 and then to a Special School until she was 16. When she was a child she had measles, after which there was a convergent strabismus.

Her siblings are all quite healthy. She was employed as a domestic on leaving school and stayed at her last post for 3 years.

She was certified as feebleminded just before she was 21 as she was pregnant, under Section 6, "as in need of care and training". She only met the father of the child once and could say nothing about him. She received treatment for a positive W.R. just before this. Later tests were negative. She was 27 when she came to the Fountain Hospital and was then in good health. When she was 34 she went out on licence and was discharged when she was 39. She was in resident employment until she left one situation and was unable to get another. She then lived in a hostel and looked vaguely for jobs. She became confused and depressed, possibly through lack of proper food. She was again admitted at 43 to the Fountain Hospital for two months before going to another domestic post. After several months she became confused and was admitted to a mental hospital. The report from there is that she is usefully employed in routine work and that a certain amount of supervision is necessary, but her behaviour is amenable and quite sociable. Mentally, when at the Fountain Hospital, she was found to have a Wechsler Full Scale I.Q. of 85, Matrices I.Q. of 88 and a Terman-Merrill I.Q. of 67. She was able to read, but only write the simplest words and it was noted that she was slow and clumsy in all her movements. The mental hospital feel she is really a feebleminded patient who needs some support in the way of supervision.

Her daughter was brought up in a residential home. She had a number of jobs, but always moved to better herself. She "got by with typing" as she said, having taught herself, and she was considered capable of managing her own affairs at 18 rather than 21 by the Local Authority. She married a printer's assistant and they have one child with a Vineland I.Q. of 96. The family live in a prefab. and maintain a very good standard of living. The daughter is at least of average intelligence and her child, although only two when tested, seems at least average.

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