

A REVISION OF THE PROGNOSIS IN MONGOLISM*

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FORMERLY most authors agreed that the intelligence of Mongoloids is very rudimentary, ranging mostly between idiocy and low-grade imbecility. In text books a mental age of seven years is usually given as their upper limit of intelligence. At the Bancroft School we have found that Mongoloids are capable of attaining mental ages and intelligence quotients much higher than is generally believed possible.

In the literature Mongoloids are not credited with as high a mental development as we have found among our cases. Kanner, for example, says that "The mental picture is dominated by an extreme degree of feeble-mindedness. The patients rarely reach an intellectual level exceeding four years" (1). Penrose gives IQ 15-29 as "the most likely range of intelligence for mongols" (2). He regards a mental age of seven years as the upper limit of Mongoloid intelligence. Goddard states that the mental age is nearly always that of a four-year old (3), while Wolf is somewhat more liberal and writes that "such an individual never progresses to an intellectual level beyond that of a child of six or eight" (4). Tredgold, however, writes that "a few are pronounced idiots, the majority belong to the imbecile grade of defect, but others are merely feeble-minded" (5).

In 21 cases of Mongolism now at the Bancroft School, a mean IQ of 46 was obtained, indicative of high grade imbecile intelligence. Eleven cases (52%) have mental ages above six years; two cases display borderline intelligence.

Examination of Table I reveals that 18 of the cases (86%) have a mental age above four years which is often given in texts as average intelligence for Mongoloids. The sample of Mongoloids in the Bancroft School is a biased sample because of selective factors usually evident before admission into the school, such practice being common among almost all special schools. It is not legitimate, therefore, to apply to these data the usual sampling error formulae which assume a random sampling of a general population of whatever group is to be studied. The above figures allow a maximum mental development of eleven years, ten months for Mongoloids. Because this figure was obtained from a biased sample and because the sample itself is small, accurate prediction from sampling error formulae is not possible. It is interesting to note, nevertheless, that two of the cases contained in this report actually exhibited mental ages of 10-8 which is approximately $2\frac{1}{2}$ sigma above the mean for the group. Since there were two cases, we may conclude that these are not rare instances, occurring here twice in 21 cases (or once in 10 cases of a selected group).

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Without entering into the controversy over the constancy of the IQ, an explanation of the high mental ages found in Table I may be given by remembering that, 1) these cases were all subject to selective admission into the school, 2) previous estimates of Mongoloid intelligence in the literature were often given without accompanying tables to show the validity of such estimates, and 3) that all of the children receive daily instruction in school and are thus stimulated to attain their highest potential level of intelligence. Without such instruction it is highly probable that such children would show increased retardation as they advanced in chronological age.

TABLE I
Mental Level of Mongoloid Cases under Present Supervision

<i>Case</i>	<i>C.A.</i>	<i>M.A.</i>	<i>IQ</i>
CA female	22- 7	10- 8	71
PA male	22- 4	10- 8	71
JK male	15- 3	8- 8	60
IJ female	47- 0	8- 2	54
BB female	19- 1	7-10	52
JC male	19-10	7- 8	51
JB female	25- 3	7- 4	49
AW female	23- 0	7- 1	47
AD male	21- 8	6- 7	44
HP female	18- 6	6- 2	41
DP female	39- 5	6- 1	41
RH male	18- 2	5-11	39
HP male	19- 7	5-11	39
CR male	27- 1	5-10	39
BS male	36- 5	5-10	39
BL male	26- 6	5- 5	36
DR female	12- 0	5- 3	44
TG female	8- 6	5- 1	60
HC female	7-10	2- 9	35
JH male	16- 1	3- 7	24
LK female	8- 0	3- 2	40

By omitting the five children in Table I who are below C.A. 16, and who, theoretically, have not completed their development, it is found that the average mental age for our Mongoloids who have reached a chronological age of sixteen years or above, is six years, ten months, with a mean deviation of 1-9, giving an IQ of 42.

An outstanding characteristic of the Mongoloid is that his social age is higher than his mental age. For this reason most of them appear to be more intelligent than they actually are. Their social skills are greatly increased by training and, as a result of such increase, many Mongoloids are capable of becoming socialized to a much higher level than their mentality would seem to permit.

The Vineland Social Tests were rated for all children in the school. Analysis of the data revealed the following interesting facts. When Mongoloids are compared with non-Mongoloids it is seen that, on the average, the former exhibit higher social ages, when compared with their mental ages, than do the latter.

The mean Mongoloid social age, as determined by the Vineland Social Tests, is three years, four months above the mental age of the group. The mean social age for non-Mongoloid children is two years, one month above their mental age. This gives the Mongoloids a social acceleration of one year, three months over the non-Mongoloid group.

TABLE II
Results of Social Test with Mongoloids

<i>Case</i>	<i>C.A.</i>	<i>M.A.</i>	<i>S.A.</i>	<i>S.A. above M.A.</i>
JH male	16- 1	3- 7	9-0	5- 5
HP male	19- 7	5-11	8-6	2- 7
CR male	27- 1	5-10	9-8	3-10
RH male	18- 2	5-11	11-8	5- 9
HC female	7-11	2- 9	3-8	-11
BS male	36- 5	5-10	7-4	1- 6
AD male	21- 8	6- 5	10-4	3-11
AW female	23- 0	7- 1	10-9	3- 8
DR female	12- 0	5- 3	10-3	5- 0
LK female	8- 0	3- 2	5-2	2- 0
JB female	25- 3	7- 4	11-0	3- 8
HP female	18- 6	6- 2	10-3	4- 1
DP female	39- 0	6- 1	7-0	-11
BB female	19- 1	7- 6	10-6	3- 0
IJ female	47	8- 2	13-9	5- 7
TG female	8- 6	5- 1	5-9	- 8
JC male	19-10	7- 8	11-8	4- 0
JK male	15- 3	8- 8	11-3	2- 7
PA male	23	10- 8	11-8	1- 0
CA female	22- 7	10- 8	17-0	6- 4
BL male	25- 8	5- 3	12-0	6- 9

It was found that mental ages of Mongoloids were below their social ages in greater amount than was found among non-Mongoloids. There is a definite acceleration of social above mental development in Mongoloid children which is greater than seen in non-Mongoloid retarded children. IQ grouping influences the range of acceleration of social above mental development and careful consideration of this fact was taken when comparing children.

Why the Mongoloid exhibits more sociability than does another child with a similar degree of retardation cannot be adequately explained without some speculation and it is not our purpose to theorize. No doubt the marked tendency to imitate found among Mongoloids plays an important role. Also, such children are often given special attention by their teachers and nurses because of their likeable qualities; such added attention is, in effect, additional training which less attractive children do not receive.

When reading of Mongoloids in present texts, one gains the impression that they all possess a personality which is stereotyped and typical for all Mongoloids, which is not true. Among our present cases there are several Mongoloids who are very stubborn and obstinate, while others seldom show this trait. There are slow learners and fast learners; there are those who love games and those who shun competitive play; those who love music and those who are indifferent to it. In

an attempt to gain some measure of this personality difference and to prove that there is no clear-cut and stereotyped Mongoloid personality type, the Marston Personality Rating Scale was given to Mongoloids at the Bancroft School.

The scale, in which traits usually thought to be indicative of extraversion or introversion are measured, was rated for each child by some who are very familiar with the child—his nurse, and usually one of his teachers, and the psychologist. Thus a measure was obtained which is as accurate as possible with the rating scale technique. Scores could range theoretically from 20 to 100, with a score of 60 representing the balance between introversion and extraversion. Scores above 60 indicate extraverted personality traits, and scores below 60 are indicative of introversion. The results, which should prove conclusively that there is no definite stereotyped Mongoloid personality reaction, are listed in Table III.

TABLE III

Marston Scores with Mongoloids

<i>Case</i>	<i>Score</i>
BB female	90
JB female	77
HC female	77
PA male	76
HP female	76
RH male	75
BL male	75
DR female	73
JK male	72
LK female	71
IJ female	70
JC male	70
DP female	70
JH male	65
AD male	56
CR male	55
WS male	53
AW female	51
HP male	48

To illustrate the vast difference in personality expression found among these children, a few excerpts from the psychologist's notebook will suffice.

B. B., female, who scored highest extravert score, has marked sex interest, is very interested in sports and is a leader whenever games are played, and is one of the best dancers in the school.

H. P., male, who scored most introverted, avoids groups, seldom participates in competitive sports, prefers to be alone and displays no sex interest.

We have observed in some a tendency toward a paired companionship with one of the pair playing a role of strong leadership. B. L., male, is always observed commanding A. D., male. A. D. follows meekly, loses all initiative whenever his more domineering companion comes upon the scene. The follower's will is not his own, and he may often be seen doing things which are obviously against his wishes, but to which he weakly submits because his leader calls to him in a dicta-

torial voice: "Come on ——, I am waiting for you." A. D., very submissive, follows. A second pairing is that of two boys, H. P. and R. H., the former exerting an anti-social influence over the latter who is normally interested in group activities. When together, whatever H. P. desires his companion will do unquestioningly. A third pairing was that of two girls, D. R. and her follower who left the school before the Marston Test could be given. When analysis of the Marston Test was made, it was found that those children exhibiting leadership scored in a characteristic manner on items 2, 4 and 8, while those who were more submissive scored in an opposite manner on these three items. It is interesting to note that most of our Mongoloids scored in the range theoretically indicative of extraverted tendencies.

Turning more specifically to personality traits, one of the outstanding traits too little noted in the literature, is the disorder in inhibitions which is displayed by Mongoloids. It is a cyclic type; either they express too little or exhibit too much inhibition. Much of their tendency toward imitation, which has received prominent mention in the literature, is to be accounted for by their inability to inhibit. They see a well-received response; they desire to give it, and they do. Careful examination will reveal that much of their best imitation is of immediate events, when the imitated act has, in effect, the identical *Anlage* of the original event.

Because of their inhibitory disorder, these children must be carefully directed concerning moral attitudes. They pick up bad words and impolite gestures easily. A moral attitudes test revealed no characteristic Mongoloid reaction, but the test given (6) was a symbolic one and did not measure their resistance to bad influences. Also, because of lack of inhibitions upon occasion, Mongoloids seem to show a bold kind of careless recklessness, devoid of all fear. Thus Kanner (7) says of them: "They know no fear, caution or excitement." But Kanner is not wholly correct. Often they exhibit too much inhibition, are overcautious. On hikes, when climbing, or when learning to ride a bicycle, they often show caution and even fear. As to excitement, they are easily excited into uttering wild exclamations of joy.

Many texts agree that Mongoloids do not show bad temper. Contrary to this belief, many display temper tantrums, even to the striking of another child. An outstanding trait is obstinacy. They cannot be forced, but are often easily humored into doing something which originally was against their wishes.

Another interesting finding concerning Mongoloids is their performance on the Goodenough drawing test. When asked to draw a man, seven (35%) drew hideous, ugly faces. Only eight children in the entire school drew these hideous, ugly faces, and of these seven were Mongoloids. Tentative explanation seems to be that these children show a peculiar interest in facial detail, an interest perhaps originating in their own peculiar facial features and their identification of similar faces with other children of their type. Whether or not this is conscious or unconscious reaction cannot be stated in the light of present findings. We have noted that when completing the man on the Binet (form I.) examination of gen-

eral intelligence, the Mongoloids spend more time with facial features than do the non-Mongoloid subnormal children.

Among the Mongoloids at our school 66 per cent talk to themselves when alone, when on hikes or in the classroom. Only 18 per cent of the non-Mongoloids talk to themselves. Closely related to talking to themselves is the characteristic tendency toward overt thought which is perhaps more clearly displayed in Mongoloids than in any other group of individuals, normal or subnormal. They think out loud. When writing, they read aloud as they write. When angered they often seek solitude and review the disturbing situation aloud. When performing arithmetic they think aloud. Without entering into the current dispute over the validity of theories to account for higher thought process as motor acts, it can be stated with certain definiteness that *Mongoloids display a strong tendency toward overt thought.*

Turning to the education of Mongoloids, we can best state the case by quoting from a report by one of our most experienced teachers. "In my years of training work, in spite of statements of educators and psychometric tests as to their limited educational possibilities, the education of the Mongoloid child has interested me most. Their start is from an open-mouthed, tongue-protruding, dull-appearing child with no speech ability. But with care, concentration, physical development and untiring work, this type can be developed into a laughing, workable and individual group" (8).

Such experience is verified by the work of numerous other teachers. It seems, therefore, that many statements in the literature are in error when they say, for example, "It is often possible by prolonged instruction to aid the patient to attend to some of his own needs . . . eventually they are able to dress and wash themselves, etc. More brilliant results are not to be hoped for" (9).

As proof of the excellent results gained with the Mongoloid child after patient instruction, see Table IV.

TABLE IV
Results of Monroe Silent Reading Test

<i>Case</i>	<i>Words per minute</i>	<i>Comprehension</i>
CA female	147 6th grade	6th grade
PA male	158 6th	6th
JC male	125 4th	3rd
DR female	106 3rd	1st
BB female	99 3rd	4th
JK male	99 3rd	4th
RH male	74 2nd	2nd
AW female	57 2nd	3rd
JB female	47 2nd	2nd
AD male	35	o
CR male	22	o

Other Mongoloids were not tested because 2 cases have just begun to receive instruction in reading, 3 are not in school curricula, and 4 read, but without adequate comprehension.

Arithmetic, always the most difficult subject for all retarded children, is no more difficult for the average Mongoloid than for other retarded children. Of the Mongoloids, 30 per cent scored above the 50th percentile when a standardized arithmetic test was recently given to all of the children in the school. The rankings of these children follow.

TABLE V
*Percentile Ranking of Mongoloids above
50th Percentile in Arithmetic*

<i>Case</i>	<i>Items correct from 30 items</i>	<i>Percentile rank</i>
IJ female	25	88
BB female	24	85
AW female	22	76
JB female	21	73
PA male	19	67
JC male	10	54

Critical analysis of the arithmetic testing revealed that among our children there is no high correlation between mental age and score on the test. Division is the weakest phase of arithmetic among all—only 30 per cent being able to perform simple division, two of the cases (10%) being Mongoloids. Of the Mongoloids, 50 per cent could perform simple addition; 30 per cent could perform long addition of three-place numbers; 35 per cent knew their multiplication tables, but only 5 per cent could perform long multiplication; 30 per cent can perform simple subtraction of digits, but none of them can perform subtraction of three-place numbers.

Learning to write is always a long and tedious lane requiring perhaps three or four years. One case, male, required five years to learn to write, but constant effort by his teacher and himself brought him the tool which makes his life happiest.

Turning from the more academic subjects to sports, it has been noted by us that Mongoloids, contrary to popular opinion, are capable of good muscular build and make strong swimmers, good runners and steady hikers. In baseball they throw well but are weak batters because of poor eye-hand coordination. In tennis they are not capable of great development because of the poor eye-hand coordination. They are a little better at archery than at games requiring coordination with a moving object. One of our Mongoloids is a consistent prize winner in archery.

The dancing instructor and teachers all agree that the four best dancers in the school are Mongoloids. Here they show their traditional feeling for rhythm and display great suppleness made possible by hypotonicity of their joints. In music instruction several are playing elementary pieces on the piano, reading notes and developing a sense for time.

The problem of occupational possibilities, is not so great with girls as with boys. Always bearing in mind the limitations imposed because of their tendency to tire easily, it is possible for the girls to become house cleaners and the more

highly developed can also look after the needs of children. We have, for example, utilized the services of two of our Mongoloids as assistants to the teachers in our Junior School. They assume responsibility well and are very affectionate. They place things in their proper places, keep the room tidy, and lay out the day's supplies for the children. One also assumes complete charge of packing her trunk and does the job well without supervision. She keeps the neatest dresser drawers of any of the older girls and is reported by her nurse as being of great help in making up beds, mopping the floor, putting away clothes and assisting the other girls.

The boys present a more difficult problem, namely because economic pressure is greater on the male. They can cut grass, weed the garden, rake the lawn and water flowers. They could become gardeners if carefully directed. One of the boys has rolled the tennis courts and assisted in lining the courts each summer. He has also earned money while home by turfing the lawn. Many Mongoloids are quite robust, despite statements to the contrary, and have always been helpful in handling boxes and trunks in the shipping room. Those who do not have heart ailment could perform many of the duties required in a shipping room. They can also paint if supervised; they cannot manipulate carpenter's tools without careful supervision which would make it impracticable from an occupational viewpoint.

It would seem, then, that Mongoloids are capable of mental and social development to a level much higher than heretofore supposed, certainly higher than that in idiocy and low grade imbecility. We propose, therefore, that the term "Mongolian idiocy" so frequently found in the literature be discarded, and the term "Mongolism" which more accurately describes the physical and not the mental status, be substituted. As a matter of fact, several cases in our series achieved the mental status ascribed to morons or borderline cases.

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