minimal cerebral dysfunction and learning disabilities

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Definition

IN 1969, A COMMITTEE OF ENQUIRY, led by Dr. C. H. de C. Murray, was formed by the Department of Higher Education to investigate the characteristics and incidence of Minimal Cerebral Dysfunction. After a wide survey on an international scale, the Committee accepted the following definition: "Children with minimal cerebral dysfunction have average or above average intellectual ability, and the motor function, vision, hearing, and emotional adjustments are adequate, but they manifest specific learning disabilities or behavioural disabilities which are associated wth deviations of the function of the Central Nervous System. This function of the central nervous system manifests itself in different ways and in various combinations of the deviations mentioned below:— The impairment, namely, of perception, conceptualisation, language, memory, control of attention, impulse, and motor function."[1]

Learning disabilities manifested by children with Minimal Cerebral Dysfunction are of a primary nature i.e. are a dysfunction of the central nervous system and therefore need specialised treatment. They are not to be confused with those of a secondary nature caused by external agencies e.g. emotional upset, prolonged absence from school, malfunction of body organs, etc. Also, in contrast to the mentally deficient child who is deficient in all integrities, except perhaps one, the child with Minimal Cerebral Dysfunction is perfectly normal in all integrities except one or two. This is one of the important criteria in diagnosing the child with Minimal Cerebral Dysfunction.

Incidence

The extent of Minimal Cerebral Dysfunction in normal schools in South Africa as found by the Committee of Enquiry led by Dr. Murray was as follows:

1) Approximately 15% of pupils at school, and whose I.Q.'s are at least 90, have learning disabilities which retard their progress at school. These disabilities are severe enough to necessitate the institution of special measures by the educational authorities to alleviate the learning disabilities of these pupils.

2) Children with Minimal Cerebral Dysfunction constitute approximately 5% to 7% of the school population. The I.Q.'s of these pupils are at least 90, and they show the integrities described in the above definition.

Between 5% and 7% of the school population constitutes between 40 821 and 57 151 pupils.

Manifestations

It is impossible in an article of this length to adequately discuss all the manifestations of learning disabilities caused by Minimal Cerebral Dysfunction but the following incorporate the areas of dysfunction.

INPUT-OUTPUT PROCESS

It is fairly easy to observe the relationship between understanding the spoken word and speaking, and between reading and writing. This learning takes place in a systematic order and according to a set plan. Output of information takes place only after input has been accomplished. The child first learns the sound and meaning of words and after this, speaks, and he writes after he has learnt to read words. Johnson and Myklebust[2] put it in this way:

"This principle of learning in terms of input and output is stated primarily in terms of initial learning processes because, after a level of competence has been attained, words may be learned through usage. However, they have meaning in output only when they have become meaningful in input." During diagnosis, when it has to be established which learning deficiencies exist and which

function is affected by the impairment, it is clear the the impairment must be looked for in input, output, or both of these processes.

A few examples of errors made by these children are:—

1. Bottom to top rotation u — n or h — y.
2. Near to far mirror rotation e.g. f to t.
3. Righ and left mirror rotation e.g. b — d and p — q.

A child will also reverse complete words e.g. was — saw, top — pot or make sequencing errors e.g. swa for saw.

Errors can appear in arithmetic:

e.g. 16 or 25 or 21 for 12

—7	—18	
11	13	

subtracting the upper unit from the lower while subtracting tens in the normal way.

Inability to understand the spoken or written word. (Input).

Inability to express thoughts verbally or in writing. (Output)

Diagnosis

Diagnosis of children with Minimal Cerebral Dysfunction and learning disabilities is an exacting and responsible task. The child's future is at stake and how could a clinician or remedial teacher ever forgive him- or herself if an incorrect, inaccurate or careless diagnosis jeopardised the chances of that child ever taking his independent role in society?

The ideal method of diagnosis is by a group of qualified clinicians from all pertinent disciplines to determine what the problem is and where it should be looked for, so that the appropriate remedial measures may be taken in an attempt to alleviate the problem. However, this diagnostic team of specialists must pool their findings so that an all-round accurate picture of the child can be built up.

For an adequate diagnostic assessment of the child a frame of reference by which to test should be drawn up. For example:

1. Visual and Auditory Reception — Auditory Expression (in reading, writing and language).
2. Semi-autonomous system: Visual Input, Auditory Input and Visual Auditory Integration.
3. Receptive, expressive and inner language.
4. Input, integration and output including memory: Analysis, Synthesis, Storage, Retrieval.
5. Perception, Imagery, Symbolization, Conceptualisation.
6. Verbal and Non-verbal behaviour including Laterality, Directionality and Body Image.

"It is important to emphasize that a given child may not have symptoms in all or even many of these areas; each child has his own particular cluster of symptoms." (Clements).[3]

Remediation

"Remediation is given to pupils who, for various reasons, have failed to learn to a level that might be expected of them, e.g. children of average ability who have difficulty in the three R's. Remedial teaching can be distinguished from special education by its short term aim. It should also be distinguished from coaching which is extra tuition. Remedial teaching should be based upon an assessment of the nature and, if possible, the causes, of the failure." (Blond).[4]

If remediation is to succeed in its aims and if disabilities are to be overcome, the following prerequisites or aspects should be attended to:—

a) Basic skills learned prior to, and during the initial stages of Grade I should be grasped and well established in the children. Only then will they be able to cope with the school situation.

b) Motivation is one of the most important factors which promote achievement by the child, and success in the learning situation does much to increase this motivation and enable the child to develop to the limit of his ability.

c) In a remedial lesson active participation by the pupil is essential. The pupil should also be trained to listen and given opportunity to speak freely.

d) As is already being carried out in some schools, a perceptual training programme should be incorporated in the First Grade curriculum. This would overcome many difficulties before they could reach traumatic proportions.

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But the South African situation, he maintains, differ from all other ethnic frictions or colonial wars in that it allows for no compromise from either protagonist.

In a careful examination of the alleged resemblance between modern South Africa and Nazi Germany, more especially in the equation of anti-semitism and negrophobia, Dr. Adams finds that there is no evidence that South African leaders are fascist. "The undifferentiated comparison between anti-semitism and South Africa's race discrimination seems also doubtful from an historical point of view," he comments. "The specific new feature of Apartheid, the flexible and pragmatic domination over a racially separated majority is overlooked. The comparison of South Africa with Nazi Germany is rather useless."

The author notes the emergence of a modified policy. Dr. Piet Koornhof, deputy Minister of Bantu Administration has reiterated that the African is "a human being just like the Whites", and that he merited a place in the sun. "We do not believe in fraternisation — but we do believe in honesty and sincerity." There is, Dr. Adam considers, an awareness that White government need not be threatened internally if the government handles the situation realistically. But, of course, the crux of the matter is the urbanised African: for whilst the Bantustans are admittedly making a deal more progress than opponents of the policy would ever have credited, the urban African continues to make an increasingly sophisticated contribution to industrial davelopment, and the White oligarchy is faced with a number of awkward alternatives. By limiting the Black worker and holding down his spending power, he creates the possibility of all sorts of explosive tensions in the great urban conglomerates. He so hamstrings labour that the general economy may suffer, with unemployment problems among both White and Black that cannot be afforded financially or politically. By admitting the Black urban worker to a nearer parity economically, he raises expectations and may well provide (in time) the sort of sophisticated leadership that could outmanoeuvre White domination. Dr. Cilliers of Stellenbosch has commented that border industry will be insufficient to provide for a continued growth rate for the economy of the country as a whole. Dr. Adams sees the recent economic boom in South Africa as mitigating the effects of what he calls "ethnic disprivilege". (I do wish Americans would use the English tongue a little more kindly!) Nor does he see much hope for opposition in the form of a Ghandi-type, passive resistance. His assessment of armed conflict is realistic: for the present and the foreseeable future, this appears to be unlikely, despite somewhat outspoken exchanges between the Republic and Zambia.

As he points out, in the Fall of 1968, South Africa launched her first guided missile, and the possibility that she could produce an atomic bomb of her own is not to be discounted. The South African Army is at present superior in power to all other African armies south of the Sahara together.

In an interesting analysis of the Portuguese part in the Southern African scene, Dr. Adam finds it difficult to predict how long Portugal will be able to sustain a military commitment on all her fronts. He suggests that enthusiasm for the war is lower in Portugal than in her colonies. There is, he believes, the possibility of an UDI by Angola and Mozambique, concurrent with loss of interest in Metropolitan Portugal, and thus the creation of a situation of void into which South Africa might have little alternative but to assume leadership to protect her threatened flank. As Mr. Vorster remarked in 1967: "We are of Africa, we understand Africa, and nothing is going to prevent us from becoming leaders of Africa in every field". This book analyses rather than prescribes. In support of his anti-Apartheid stance he sees the breakdown of economic Apartheid as providing the change agent which will confirm Black identity and provide ultimately the power to compel a new social ordering.

Whatever one's opinion may be, Dr. Adam is an informed debater and one of those with whom dialogue would seem to be profitable.

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e) Adequate facilities to alleviate the need for remediation should be established as soon as possible.

Lack of adequate remediation in the child with learning disabilities creates emotional problems which add to the learning difficulties of the child. With regard to reading, probably the most important skill required in the learning situation, as it is part of every subject, Cleugh[5] rightly says: "The plight of a child who cannot read by the time he reaches secondary school is a pitiable one and his subsequent achievements are likely to be very meagre indeed, unless he can be helped to overcome this major difficulty."

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