THE EDUCATION OF THE DULLARD IN THE PUBLIC SCHOOL.*

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The State, for its own advancement and protection, has developed a great system of public education. Economic needs have aided to cause this system to offer various forms of instruction to those pupils who attain the higher schools, a differentiation which has been enforced by the fact that adolescent pupils vary much in tastes and inclinations. A careful study of the child in all his stages of development has, however, caused it to be seen that differentiation in subject matter and methods is just as necessary at the lower end of the scale as at the upper. The pupils of the high school grades, even though they have been sifted and winnowed by a process making for the survival of the fittest, vary much in mental calibre and capacity. So, too, the pupils of the lower primary classes present a wide range of physical and mental capacity for development.

Somewhere in this range, though where it is not always easy to state, it is our habit to establish a division line between the normal and the subnormal child. Those above this line grade upward by degrees to the genius, those downward by as slight differences to the imbecile. We have

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grown used to the thought of presenting to the normal adolescent, various forms of instruction especially adapted to his mental capacity, but are not as yet accustomed to the idea that to the normal or subnormal child should be presented material specifically adapted to his training and education.

From the fact that the grades of intelligence shade into one another by small differences, it is difficult to say just what children are to be classed as subnormal. So far as public school teaching is concerned, the subnormal child, however defective his physical and mental equipment, is able in a general way to take care of himself, to feed and clothe himself and to find his way to and from school. From the individual who may thus be put down as the lowest school type with dulled sense perceptions and mental processes of the slowest, we pass upward until we reach one who just shades sufficiently short of his brighter brothers to be continually falling behind in any of those mental tests which are used to establish class-room standards.

Wide variations appear in the statements as to the percentage of defective children in cities where tests to this end have been made. These differences are to be accounted for by the varying standards erected by the different examiners and by the numbers and grades of the children examined. Some cities report only 1 per cent. mentally dull, others as many as 10 per cent. In some cities the presence of a large foreign population of a low type of intelligence and a low physical stamina accounts for the large number of the dull discovered, particularly when the examination has been conducted with rigid mental tests. It is not here proposed to reconcile these differences, but to discuss the nature of the defective as seen in schools and the methods to be adopted in his training.

The great difference between the normal and subnormal child is a difference in power to function. This difference is dependent on the difference in structure, leading to a lack of what we call intellectual power. Stated in medical terms, the deficient has suffered an arrest of development. The cause of this arrest may be functional or central.

The commonest forms of functional cases are those that suffer from imperfections in seeing, hearing and breathing. These difficulties, when they occur in children otherwise nor-
mal, make them appear dull, though no central defect is present. Examinations to detect eye, ear and throat troubles must always be carefully conducted, for children are apt to be secretive in regard to such matters, even when they know that some trouble exists. Often, however, the child is unaware of the difficulty, and nothing but careful and tactful questioning will serve to reveal it.

When, however, the functional defective has his eyes furnished with properly adjusted glasses, has his seat placed in the class-room so that he can hear, or has the adenoids in his pharynx removed, he quickly experiences a mental awakening which is often very striking.

Associated with the above cases are those children who evidence a disturbance of the blood making apparatus, who have been badly nourished or badly housed or who have experienced severe attacks of the eruptive fevers or other diseases of childhood. Cases of this type with their attendant physical symptoms may be found in every large school. With those previously mentioned, they form the class of "backward" children, and are to be distinguished from the true defectives. Though suffering from no lesion, they are undeveloped, dull and apathetic, with clammy hands and blanched mucous membranes. Once their blood is raised in quality and quantity, and their nutritive processes improved, they brighten mentally and are able to retake their places with their normal mates.

In the case of the central defective, quite a different picture is presented. He, too, may suffer from myopia, hypermetropia, deafness, adenoids or anemia, but accompanying these defects he has an actual dearth of tissue in the higher centres. This pupil is the true defective. If his defect is congenital, he, as a rule, evidences unmistakable signs of arrested development, but if such arrest has arisen from meningitis or the cerebral complications of the eruptive fevers no such signs may be present.

It is about the head that the most marked signs of defective development appear. Those in the face are multiform. Among the most common are over-acting frontal muscles, coarse and dry hair, malformed and high planted ears, narrow and close-set eyes, peg shaped teeth, or teeth flattened by continued grinding.
In general these symptoms are associated with imperfections in structure leading to defective innervation. The proper nervous control is absent, while the nervous currents may be exaggerated or deficient. Depending on such central defects we find types of the fatigued, irritable or emotional child.

Deficiencies in the special senses are common among these children. They do not as a rule smell, taste, or feel things as does the normal child, though it is to be understood that a deficiency in any one sense does not imply a deficiency in another. Not infrequently one of the special senses will be found normally, or even abnormally acute.

It is in the intellectual centres that the defects make themselves most apparent. The power of comparison and judgment is imperfect. Concentration for the defective is impossible. His will is weak and his tastes perverted, hence moral dereclusions are common. He may be trained to be self-supporting, but no training can give him such judgment as will make him self-directing.

A review of the causes of central defects is not to the purpose of this paper, though it may be noted that heredity in the form of mental defect in the parent was found by Parr in 33 per cent. of the cases, while tuberculous disease was present in 28 per cent. Beach in an extensive investigation noted intemperance on the part of the parents in 16 per cent. Of the cases not congenital the great majority are due to cerebro spinal meningitis and the exanthemata.

The school picture of the dullard shows him to be an overgrown lad occupying the rearmost seat in the primary class-room, his face now blank and slack-jawed, as he listens apathetically to the lessons going on, or painfully wrinkled with an awkward grin as he hopelessly tries to comprehend the orders and directions of his sorely tried teacher. Surpassed by his mates in mental achievement, yet dully feeling his superiority in size and physical power, he restlessly chafes at their jeering flings or flies into paroxysms of bad temper in which his strength makes him a real danger, and his ungoverned tongue a menace to all class-room proprieties. When one adds to these undesirable qualities uncleanly personal habits or overt moral shortcomings, one completes in brief the representation of the dullard as he now exists in countless
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class-rooms. Not, however, of his own volition does he re-main cabined and confined. The longer he stays the more in-tolerable the conditions become for him and sooner or later he is off to join the errant band of truants who drift singly or in little groups of two or three, about the purlieus of every good sized town.

The succeeding history of such a one may be condensed in few words, and has been written a thousand times over in the records of penology. From school to street is the first stage. Sooner or later the truant becomes one of a gang. An inviting prospect of idleness and petty crime now opens, to be closed by a few brief hours in the town jail and a hasty examination before a committing magistrate.

The reform school now holds the delinquent for some months, and here at times his downward course is checked and his evil propensities altered for the better by an interest aroused in various forms of hand work. But this school works at a disadvantage because its members are all delin-quents, and its useful teachings in the class-room or shop are counteracted by association of the mentally weak with those who are by nature criminal. Only too often do the later chapters of this story see the weak-willed man an in-mate of the penitentiary.

Those who see the dullard only as an aggravation in the class-room are prone to say that such a one should never be allowed in school. Far more properly might it be said that he should never be allowed out of school, at least until he has obtained some measure of self-control. Even then it were wiser that he remain the ward of the school, to be followed in his industrial career with sympathetic yet watchful surveillance. As a mere economic axiom boy-saving is less expensive to the State than the erection and maintenance of penal institutions to reform boys, for the most part past saving.

From a medical point of view the indications in the case of both backward and defective child are plain. Diagnosis shows what is lacking on physical, mental and moral sides and consideration of school conditions show also that proper treatment of the deficient cannot be undertaken in the ordinary class-room.

Education for the dullard must include hygienic treat-
ment, as well as mental stimulus. It must be elemental in
character, and sympathetic in administration. For those of
defective development, sense training must be at its basis, and
it must offer more freedom in its processes than is possible
under the restrictive discipline of the ordinary school. This
training can only be given in a special class and by a special
teacher.

The class should be strictly limited in numbers, fifteen
pupils forming the maximum that can be properly taught by
one teacher. The class-room itself should be a good size.
It should specifically aim to appeal to the pupils as a place
good to come to and good to stay in. It should be well
lighted and should see the ordinary equipment of desks and
seats replaced by tables and work benches. It should be pri-
marily a place for objective teaching, a place where its pupils
are constantly handling things, and learning about them
through actual contact rather than through the hearsay of
teacher or of textbook.

Besides the combination of class-room shop or work-
room, the pupils in the special class should have access to the
school gymnasium, and there should be for him if possible a
school garden and a school bath. Outdoor exercise should
form part of his regimen, and he should if possible receive
one hot meal a day.

The teacher should be by preference a woman, and one
peculiarly suited by education, temperament and personal in-
terest for the position. Her compensation should be equal
to that of the best paid teachers in the system. Her educa-
tion should include the study of genetic psychology and the
literature which deals with the atypical child. She should
know the methods and devices which experience has evolved
for the teaching of these children in special schools the coun-
try over, and should be one having a strong professional
pride in her work. In temperament she must be sanguine,
cheerful, optimistic, but quiet in manner and low voiced.
Above all she must be one of infinite patience, able to find
cause for cheerful congratulation in the small gains made
by her dull charges or to stand unperturbed when for the
nonce no gain at all is perceptible.

No hard and fast lines can be laid down to indicate that
which should form the course of study in the special class-
room. All the work must be individual and must be specifically administered to meet specific needs. It must be the business of the class teacher to study each case that she may determine the treatment which will be of greatest service for each of her pupils. It must be her business to discover the point at which individual arrest in development has taken place, that she may carry each forward from that point.

In the case of the duller pupils the first exercises must be those which will give control of the larger groups of muscles—lessons in drawing long lines, in folding papers or planing a board. To those who have control of the larger muscles, finer exercises, as those in braiding, weaving, cutting and chiseling, should be offered. The sequence to be pursued with the defective pupil is not to be a sequence based on mental operations but on manual operations. The aim must be to develop an increasing muscular skill. The joy of successful constructive achievement, and the growing knowledge of constructive power, acts as a keen spur to interest and to mental development. The pupil’s interest is to be enlisted in constructive work, however crude, and the teachings of language, form and number made to take their rise from such manual operations.

The constant effort of the teacher should be to seek self expression in some form, and this expression should relate to things which the pupil sees as useful and good. In all such work the brighter pupils make helpful teachers of their slower companions. The good teacher will not fail to use these pupil-aids to the mental as well as the moral profit of her class.

Physical exercise and free gymnastic work should form part of the day regimen, and three times a week, if it is possible to do so, the pupils should bathe under a shower bath. In the city of London, where a number of such special classes are conducted, there is provided, in addition to the teacher, a school nurse or matron, under whose care is prepared a substantial and well cooked mid-day meal.

Inadequate and improper feeding of both the backward and the defective child is in a large number of cases one of the elements which has prejudiced his advance. Proper exercise and feeding in the school are the best agents which counteract this untoward influence. If a meal cannot be pro-
vided by the school, at least it should be the effort to serve the pupils at noontime with a glass of milk in addition to whatever lunch they themselves may bring. On moist and depressing days the milk were better served hot. In the words of one, a successful public school teacher of defectives: "When weather and other conditions seem to be most against us, there is nothing so soothing and so helpful as a glass of hot milk served to each pupil."

The pupils of the special class should not, like the pupils of other classes, go home at recess, but should remain under the guidance of their teacher, preferably eating their luncheons at a common table. They should learn to spread this table and to serve the food at it in decent and orderly fashion. The table deportment so taught is a civilizing influence not to be disparaged.

It is in the city school, with its thousand or more pupils, its crowded class-rooms and its repressive discipline, that the teacher of the special class is most urgently needed. Those seeking to organize such classes should bear in mind the things already noted as essential to success: a large room, a small class, a trained teacher, an elastic curriculum, and individual instruction in which mental work is made to rise out of manual work and sense training.

If there be several such classes some departmental organization will be necessary. This organization, including supervisor or superintendent, should be protective as much as directive. Part of its business will be to conduct the medical examination of those whom it is sought to place in the special class, and another and not less important part to preserve the integrity of the class and prevent it from being turned into a disciplinary institution or a dumping ground for all the lazy pupils in the school. Further protection may also be needed from interference at the hands of zealous but misguided schoolmen, who cannot believe that education for the dullard should be other than a more persistent grind at the three "R's" than that given in the ordinary class-room.

A well organized special department must undertake to keep a careful record, presumably in card catalogue form, of the pupils admitted to the special class. This record should include their history at the time of admission, with a
diagnosis by the examining physician and space for entries in regard to improvements shown while under instruction. The department should also undertake the systematic instruction of those who are to enter into the work, and should stand as a bulwark against the introduction of untrained instructors or those of mercenary mind attracted by the report that the special class has but few pupils, and that a high salary is paid to special teachers.

To attempt to develop a special system with untrained teachers is to foredoom it to failure. The dullard must have a teacher informed as to his needs, understanding his limitations, sympathizing with his failings, and hopeful as to his future. This cannot be too strongly emphasized. Though but few cities have undertaken the organization of such classes, even in these few there are several pathetic examples of indifferent success, due to the assignment of teachers to work for which they were not fitted by temperament or training.

Of our largest cities—those over fifty thousand population—forty-one have as yet organized no special classes. Fifteen report that they are doing something in the way of ungraded classes and five or six of these, including Chicago, Ill.; Springfield, Mass.; Bridgeport and New Haven, Conn., and Worcester, Mass., have classes for defectives. Cleveland, O., reports a department organized with eight classes, while in New York City there are now twenty-three special or ungraded classes with a register of 409 pupils. The first of these classes was organized in New York City but five years ago, while in May, 1903, there were but eight classes, containing one hundred and sixty-seven pupils.

Summarizing the advantages of the methods urged, it is to be noted that for the functional defective or backward pupil, the special class offers a means of rousing his intelligence and advancing him to his proper standing, while the defective, if suffering from no profound lesion, can, through the influence of such a class, be roused to a real interest in school work, and be given no small skill of hand, so that later in life he may take up some of the minor trades with a good prospect of earning a livelihood. The class thus tends to save from a useless or too often a criminal
career a large percentage of the cases which come within its walls. It serves to educate those to whom usual class-room conditions are repellant.

Money spent in this way is well spent. If not wisely expended in attracting and retaining these pupils in school, it must later be paid not once but many times for the machinery necessary to apprehend and punish them when they have been driven from the school and have fallen into evil ways. It is much to the State's interest to be early informed as to those of its future citizens who are by nature unfitted to play their parts without special help. A State as it develops a higher civilization cannot but become more and more solicitous in regard to its weaklings, conscious of their power of moral contamination. It must become more solicitous in this regard, just as it becomes more solicitous in regard to infectious diseases and their power of physical contamination.

The organization of special classes in elementary schools with teachers specifically interested in the welfare of their charges, is but the beginning of a far reaching movement which the future can scarce but see; this movement in its briefest statement means the oversight of the weakling from his cradle to his grave. Many are the incentives which the State now offers to its brighter children to school themselves to produce their best. As it thus stretches forth one hand to aid those who can help themselves, so will it extend the other as a protection and a support to those who cannot help themselves and who, left to their own devices, produce their worst.

THE MANAGEMENT OF CONSTIPATION IN INFANCY.

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When the mother of the otherwise thriving infant has no other cause for anxiety, constipation frequently comes to her aid and furnishes a pretext. The hospital physician who,
seldom, if ever, equalled in the history of the medical societies in this country. The influence of the American Medical Association on the profession of medicine in this country cannot be over-estimated, and will ultimately be a factor in the unification of the profession with powers for good greater than any other organization. In many of the States in the Union the division of the profession into two bodies has been the reason for the loss of a great deal of power. In reviewing the recent amalgamation it is safe to say that, had it not been for the American Medical Association, the bringing together of the two organizations would have been almost if not quite impossible. It does not require very much foresight to see that in the future the American Medical Association will lead the profession in the country. The State Societies will be “District Branches,” and the County Societies will be the Sections. In this manner, there will be for the first time in the history of this country a profession united in fact as well as purpose.

EDUCATION OF THE DULLARD.

The case of the backward child is one calling for increasing attention on the part of school authorities.

Dr. Haney, the writer of an article which appears under the above title in this issue, is a teacher of many years’ experience in the public schools, and one with both a medical and mechanical training, which places him in a position to speak upon this subject with authority, which is one that must interest the Pediatrician and General Practitioner, as the effort of the Board of Education must be seconded by the judgment and assistance of the medical profession, as in this way only can the best results be obtained; and it should not be long said of this country that we are behind other countries in the training of these defectives. That several Continental cities have well developed school classes for the care of these defectives should spur the Boards of Education and the medical profession of our various cities to redoubled efforts to provide proper training and schooling for them.

It is important that there be careful medical examination of these children, that those suffering from curable dis-
cases may be aided, and children who ought not to be put into competition with their normal mates may be trained under competent teachers.

The organization sometime since of a department of special education by the National Education Association marks the increasing interest in this subject on the part of school authorities; while in Denver a special physical department has been started by Judge Lindsay in connection with the juvenile court, in which numerous children showing mental defects appear for petty crime.

The last census of the United States recorded ninety-five thousand feeble-minded persons, but in a meeting held not long since at Portland by the National Conference of Charities and Correction, Dr. Fernald, of Waverly, Mass., announced it as his judgment that the actual number of such persons "is at least one hundred and fifty thousand," of which "existing institutions care for only about eight thousand." Doubtless there are of this hundred and fifty thousand some, possibly many, who are backward and physically weak because of bad nutrition. Undoubtedly these, and others of their weaker brethren, if properly cared for in school under well equipped teachers, as indicated by Dr. Haney, could be vastly improved and put in the way of being law abiding and self supporting.

It is to be hoped that the movement noted by this article will in the not far distant future develop in all of our cities. In no phase of the educational activity is the need of intelligent specializing more evident or more important.

ALCOHOLISM AS A CAUSE OF POST-OPERATIVE MORTALITY.

It has long been recognized that alcoholism as a cause for increased mortality in pneumonia and all serious acute medical diseases is a factor that must be taken in consideration in giving a prognosis.

That it is a factor in increasing the mortality after operation cannot be too strongly impressed upon the operator’s mind. The effect of alcohol on the kidneys and nervous system render a patient much less able to withstand any