THE HUNDREDTH CHILD.

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I

N nearly every large school there may be found pupils for whom the ordinary curriculum is ill adapted, children who are not and cannot be reached by ordinary methods of instruction. Convalescent from disease, of feeble constitution, or defective development, these pupils lack the ability to cope with the studies suited to their companions of sturdier mental grasp, and soon distanced when in active competition with them, seek to escape the bondage of the school, or remain the pathetic tenants of the rearmost seats in the primary class-rooms.

A report recently made by a committee of the London Board of Education states that approximately 1 per cent. of the public elementary school class in that city must be considered as of defective development. So significant a statement, when taken in connection with the repeated assertions of physicians and sociologists, that the relative number of these children is increasing, may well serve to suggest an inquiry as to the means which should be taken to care for and aid that member of the community who more than all others needs care and aid—the hundredth child.

Presenting, as they do, many forms of abnormality and grades of intellectual ability, which shade off from the normal down to cases little short of imbecile, the problem of the proper education of these children is not a simple one. Abroad, perhaps because of the greater number of cases and the more immediate necessity for their care, it has been met in many cities by the creation of special classes or schools designed and equipped for the individual instruction of those whose importance in society as potential members for evil is clearly recognized. But in our own country, up to within very recent times, few if any such provisions have been made, save by the establishment here and there of an ungraded class, to the limbo of which gravitated the school’s unfortunates, and from which they gladly escaped as opportunity offered.

In most instances the care of all grades of such children
has been left to the State, but the latter, more familiar with custodial than remedial measures, and hard-pressed by the necessity of providing accommodations for those whose presence at large is an active menace to society, has seldom been in a position to offer adequate provision for the schooling of its defective charges, and as only those of the lower mental grades come within its influence, such provisions, even when extended, have rarely proved to be of distinct service.

To be of the highest value, schools for the defective must be, as are schools for the normal child, free and accessible. The evil of relegating the more intelligent among such children to asylums for the lower grade is one which needs no discussion. It is, however, self-regulated, for at the present time those of the weaker mental development, though in the minority, monopolize all the possible accommodations in most of the State institutions open to them. But the annals of penology bear witness to the fact that the great army of criminals is drawn rather from the higher than the lower grades of defectives. The latter as dependents rest as far the lighter burden upon the State. To reach the members of the former class, to retain them as long as possible within the influence of the school, to offer them work suited to their ability and in such form that its accomplishment shall appear to them as a desirable thing, this cannot but be a labor philanthropically and economically of high importance.

So desirable an end can only be accomplished with a special course and by a special teacher. Yet such specialization is but the realization at one end of the school system of that which has progressed so far at the other, and a recognition only in another form of the educational spirit of the time, which teaches that each child shall be schooled to the end that he be best fitted to produce his best.

Indeed, the better the school system the greater is the necessity for the services of a special teacher. To the success of the admirable scheme followed in Cambridge, the special instructor has contributed much. Yet serving, as she does, to assist deficient students, her duties, as compared with those of the teacher of the defective differ in degree but not in kind. Both seek but to help those who without assistance would fail to attain their maximum power and would in their failure prejudice their own welfare and that of the community of
which they form a part. It must be remembered in this connection that the term "deficient" is but a relative one, the student being so rated according to the standard of the school. The defective, as regarded from a medical standpoint, is one of arrested development. He may be deficient in one branch, or many, depending upon the nature and extent of his misfortune.

The difference between the normal and the defective child is one of structure, and of function presumably dependent upon structure, though not in every case is it possible to point to the histological aspects of the nervous system of one who was feeble-minded and pronounce this or that as the cause of the defect. In general, the defective child is said to be lacking that which we agree to call intellect, but accompanying infirmities on the physical side are frequent and profound. Indeed, so close is the relationship between moral, intellectual, and physical weakness that any treatment directed toward the improvement of the former requires to be preceded and accompanied by the most careful attention to the health and hygienic environment of the pupil. It was Seguin's belief that dullness and even idiocy could be produced by isolation. However true this may be, it is an assured fact that the artificial production of stupidity can be caused, or real dullness can be exaggerated, by evil sanitary surroundings.

A striking instance of the value of hygienic treatment will be found in the records of the experiments made by Dr. Wey, of Elmira, upon a number of youthful delinquents, none of whom was possessed of ability of a much higher order than that of the average kindergarten child. Placed upon the special regimen and made to follow a system of physical exercise designed to correct their bodily ills, these youths speedily and markedly improved in health, morals, and intellectual power.

Medicine thus regards dullness as a condition generally symptomatic of constitutional defect in the nervous system but one frequently associated with coincident defects in the physical organism. Thus involved in a vicious circle, the poorly developed brain has pumped to it by a slow-moving heart, blood often deficient in quantity as well as quality. The consequent defective innervation of the body reacts to aggravate still further the physical defects which may be present, and though it
appears certain that in some cases there is at important centers an actual dearth of brain tissue which would account for some of the imperfect responses to external stimuli, the evils consequent upon a defective circulation and an impoverished blood, would in themselves be sufficient to explain many of the symptoms exhibited by the dullard, and would in any event serve to exaggerate them all.

It would frequently appear that the blood making apparatus is to no small extent responsible, in the defective, for the general low state of vitality which often persists despite of careful feeding and medication. Roberts, comparing the stature and weights of the two classes of children, found the average normal child of fifteen years of age to be three inches taller and eight pounds heavier than his unfortunate brother.

The signs which point to arrested development are generally marked in the lower grades of defective children, yet frequently may be seen in the dull child of the ordinary school. Naturally, the most striking of these are to be seen in the head and face. "In the latter," writes Shuttleworth, "it is often possible to trace a tendency to the microcephalic or small head type, to the hydrocephalic, to the sluggish Cretin, or to the Mongol, with oblique eyes and roughened tongue.

In some children the epicanthic folds at the corners of the eyelids decidedly narrow the palpebral fissures. The forehead is frequently marked with prominent frontal bosses, and trenched upon by the low descending hair line. The hair itself may give evidences of defective nutrition by its dryness and coarse texture, while the ears often exhibit structural deviations from the normal, both in shell and lobe. The abnormalities in the inferior maxilla, or jaw bone, are also various, the jaw sometimes being found prognathus or protruding, sometimes all but chinless. The familiar defect of hare lip may be associated with a similar division of the palate, or the latter may be dome-like, and bear upon its border peg-shaped and defective teeth. In some cases a deficiency of innervation of the muscles of the jaw may cause the latter to drop, but occasionally the open mouth and vacant air of the dull are found to be dependent upon a growth of glandular matter (Adenoids) which in the vault of the pharynx serves to block the nasal passages and leads to mouth breathing, with its train of deafness and catarrhal diseases. The presence
of these growths is more frequently a cause of dullness than is commonly supposed, while their removal has, in the words of a prominent teacher, "served in many cases to clear up the minds of the children as if by magic." Certain forms of physical defects in eye and ear may also affect in no small degree the mental alertness of the pupil, and cause him to exhibit signs of dullness which may be attributed to congenital deficiencies, or if he be mentally defective may serve to exaggerate his weakness. The percentage of children with defective eyesight is large. In some of these cases the eye-ball too short in its antero-posterior axis (hypermetropia) may become better spontaneously as the child grows older, but not infrequently the strain to which the eye of the school child is subjected, causes the normal and even the hypermetropic eye to become in time too long from before backward (myopia), so that a clear image of near objects only can be focused on the retina. This condition never improves, and as the eye grows longer is fraught with no small danger to the retinal and choroidal coats, which may be strained to the point of rupture.

Deafness due to the accumulation of wax or cerumen in the auditory canal is by no means uncommon, while the percentage of deafness from all causes has been found by both Gelle and Weill to be surprisingly large. Dr. Saxton records, after watch and voice tests, 13 per cent. of partial deafness among the very considerable number of children examined by him. It must be borne in mind in this connection that only rarely do children complain of their defects in sight and hearing, sometimes, indeed, because they are unaware of their misfortune, sometimes from a desire to conceal the defect. The necessity of careful and repeated physical examinations of all children of apparent mental weakness, becomes, in the light of these facts, imperative, if their cases are to receive treatment physiological as well as pedagogical.

The abnormalities in the functioning of the nervous system of the defective may, as has been said, be dependent upon actual absence of brain tissue at certain centers, as in the case of the congenitally blind or deaf, or may be due to deficient or misdirected flow of nervous currents. Among those children who exhibit mental abnormalities consequent upon defective development of the nervous system there will be found the fatigued, the irritable and emotional, types which
are but exaggerations of those observable in normal children. In the first of these there would appear to be an insufficiency in the flow of nervous energy, associated with defects in the generating, transmitting, receiving, and recording apparatus. Such children are naturally slow, indifferent, and insensitive. They are incapable of fixing their attention or of concentrating their thoughts. To stimulus from without they respond tardily, mental combinations being made with difficulty. Some are slow to hear, some slow to think, some to speak; indeed, these children do not see, hear, or feel in the ordinary significance of these terms. They do not sense things as does the normal child. Yet deficiencies in one sense do not argue deficiencies in the others, and at times a defective child will be found to exhibit extraordinary sensitiveness to odors, to colors, or to sounds. Strange vagaries of taste are often met with, a striking example being cited by Shuttleworth in the case of a lad who evidenced his liking for literature by devouring his book, cover and all.

Deficiencies in what may be termed the recording and translating machinery of the nervous system are very common, yet are not always associated. Cases are frequently encountered in which the defective child is possessed of an excellent memory, sufficient indeed at times to enable him to read from a familiar book, though the volume be turned upside down. But the significance of the story which he peruses or the poem which he speaks may be quite hidden from him, and many lessons be needed to cause him to comprehend that which he recites with ease.

In consequence of the defective stamina of the feeble-minded child he is quick to become fatigued. It is this fact which accounts in some cases for those exaggerations of nervous excitation which are frequently experienced by normal children, but which in the hypersensitive take the forms of outbursts of irritability after what would appear to have been but slight draughts upon their slender nervous exchequer. Occasionally, however, these outbursts of temper will occur at intervals some days apart, resembling in their onset and intensity the nervous explosions seen in epileptic convulsions. Such attacks have been termed by some psychical epilepsy, and are not unlike the vicarious fits experienced by some epileptics who in place of a convulsion will display a violent attack of bad
temper. It should be added in this connection, that the true epileptic is not a proper subject for instruction in the special class. His care and treatment present a different though scarcely a less serious problem.

With imperfect powers of comparison and judgment, weak wills and perverted tastes, abnormal children not unnaturally have moral eccentricities which appear in protean forms. In the lower grades these may be merely uncleanly habits, but among the more intelligent children the gravest transgressions are to be anticipated and guarded against. Nowhere can the special school be of higher service than in the systematic inculcation of habits of virtue and morality in the daily life and tasks of pupils of this class.

Some of the causes of mental deficiency have previously been hinted at. Unhygienic surroundings undoubtedly may play an active part in the aggravation of some of the symptoms but the two general divisions under which the causation of mental weakness must be sought are heredity and disease. Mental defects in the parents were ascertained by Parr to be directly responsible for a little over one-third of the cases he examined, though singularly enough alcoholic intemperance was not found to be a determining factor at all in the ratio that is commonly supposed to be the case, Beach discovering it in but 16 per cent. of the 23,800 cases he investigated, while tuberculous disease was present in the parents to the significant extent of 28 per cent.

It is well known that children of intellectual men are by no means exempt from mental weakness, the serious demands of church, bar or state appearing to have sapped the vitality of the father, leaving to his heirs a mental bank account already overdrawn. As, however, it is comparatively rare that the evidence of mental deficiency is visible at birth and the physician obliged reluctantly to confess that "the baby is not all there," the statements of parents are not always to be relied upon, artificial causes being frequently ascribed by them to account for that which is in truth congenital. Accident involving internal hemorrhage from blows upon the head is an immediate cause of some cases of dullness, but cerebro spinal meningitis and the cerebral complications of the exanthemata or eruptive fevers are accountable for a much larger number. The latter cases are frequently very pathetic, as
they are seen in children frequently of good physique, and at times really handsome. But the results of education in these children, as far as intellectual improvement is concerned, is often less satisfactory than in other cases from which apparently much less could be expected.

The time during which special training is most important is that embraced in the years immediately preceding and including puberty, especially those from eight to twelve. "The early recognition of mental defects," writes Fort in advocacy of a system of medical examination of feeble minded children, "would tend to increase the chances of improvement under proper training, while it is an assured fact that the failure to experience such training is followed by a further deterioration of the mental grasp of the dullard."

To provide a course of training for the child of school age who is incapable by reason of mental infirmity of profiting by the ordinary course: this is the function of the special class. It is a class designed to teach the defective child to labor and to be happy in labor, that he may not grow up with that abhorrence of work which is so characteristic of the criminal, a class which aims to add to the child's powers of inhibition—of self-control—and one which, despite the fact that Lessing avers that "education can only develop not create," does attempt the creation of habits, a thing more serious for these children than the development of mind. In short, the special class is one which at a most critical period seeks to help over, that child who is on the line of mental insufficiency, thus making a good citizen of him who without such aid would be quite certain to prove a useless or a bad one.

Thirty-one years have elapsed since the foundation of the first "auxiliary" class in Dresden. Other continental states have instituted them since until, at the present time, more than thirty cities in Germany alone have classes for their defectives in connection with their school systems. In England five of the larger cities have instituted such classes, those in London alone now numbering thirty-one, as noted in the last report of Supt. Burgwin. These "centers" had an average attendance for the past year of over 1,200. Several other cities in England, though they have not as yet introduced the special class as such, have made arrangements to have particular attention paid to the schooling of their defective children.
In the United States various experiments in the same direction are now being made, Chicago and Providence having instituted special classes for the dull. In the latter city, the first class introduced two years ago, was found to be so successful that it has been recently supplemented by the addition of two others. In one New England town the School Superintendent has, without designation of a particular department for dull children, practically arranged that all such children receive their instruction in the same building at the hands of very competent teachers. The advantages of some such plan have appealed to many other superintendents, but few have ventured openly to favor the inauguration of special classes within their own schools, owing to the feeling which it is feared might be aroused by their introduction. Practically the objections are found to be not so much with the class as with the name which must necessarily be used in describing it, the qualification of even the milder euphemisms—'deficient,' 'backward,' 'peculiar,' 'eccentric,' or 'feebly-gifted,' appearing for various reasons to be unsatisfactory. To the term 'special,' as used in connection with the London classes, scarcely any objections are urged, as it includes no possible stigma and is descriptive of the instruction necessary for the deficient as well as the defective child.

Though it might not be possible to have the commitment of children to the special class made compulsory in all cases, even after the medical examination, which always should be made, comparatively small difficulty in this direction has been found in the cities where such classes have been instituted. Parents disheartened at the repeated failures of their children to receive promotion, frequently welcome the opportunity to place them in a class with studies which interest them and a teacher able to give them particular attention. Supt. Tarbell, of Providence, reports that in some instances families moved nearer to the school that their children might have the advantage of the best instruction.

The securing of those prepared to undertake such teaching is a matter of no small moment. The teacher must understand the normal child if she is to know the abnormal one. She should be familiar with the periods of development and the changes in physical and mental attitude which take place in the successive cycles of the child's life. Possessed of no small knowledge of
the physiology of the ills to which her charges are subject, she, too, should be a student of pedagogy and psychology, but above all must be one of infinite patience and of sympathetic yet firm nature, with power to command the confidence and influence the wills of her pupils. Like the Ancient Mariner she must be possessed of the ability to exhibit that which Seguin in quaint phrase terms "the power of holding the eye by the eye."

To secure capable instructors of this nature, the inducements offered to them should at least be equal to those extended to the highest assistants in the grades. Proper measures should also be taken to prepare those who are desirous and capable of undertaking that which must always be, despite the highest remuneration, a labor of love. In the London system, the special teachers before being placed in sole charge of a class are obliged to serve a probationary period as assistant in one of the classes already established. They receive as instructors during the first year a salary of £10 in addition to that paid to the grade teacher. After the first year this additional salary is increased to £15 per annum. In the Providence schools the special teachers rank as first assistants.

The number of children who can be instructed with advantage will necessarily vary. A maximum number of thirty may be taught in most of the English schools; practically, however, the classes rarely number more than twenty, while inexperienced teachers are given but a dozen children to instruct at one time. In the justly celebrated Copenhagen system the ratio of teachers to taught is as one to ten.

The course of study to be pursued must of necessity be sufficiently elastic to meet the needs of the individual. Nothing can be taken for granted in the case of the dullard. He is as a rule possessed of the faculty of imitation to a marked degree, but lacks the curiosity of the normal child. Many of the dull must even be taught to play. "Playthings for them are not luxuries but necessities."

"Physical education," in the words of Wilbur, "should form the basis of all the dullard's education." Gymnastics by reason of the association of sight and movement form a mental as well as a physical exercise and have a true educational value. Military drill with its setting-up and deep breathing exercises, is for this reason strongly commended by all
instructors of the dull. Other than these subjects the special course should include for the lower grades the three R's, singing, and manual occupations. The brighter pupils will naturally pursue the studies of the regular curriculum to the extent of their ability, in the case of the duller, however, education of the senses must precede the education of the mind. This was the doctrine formulated by Seguin half a century ago—one founded on the well-known physiological law that appropriate stimulation of the peripheral ends of sensory nerves tends to promote the development of the centers to which such nerves extend. All early lessons must therefore, to a greater or less extent, be object lessons. The same truth has frequently to be presented in a variety of forms, that the interest of the child be maintained, and not only the illustration but the subject of the lesson must be frequently varied. Moderate application to one topic for but a few minutes suffices to induce, in the dull child, a fatigue which prevents further attention.

The equipment of the special class-room must include a large variety of materials for object-lessons, and for causing sense impressions including the appreciation of different colors, tastes, textures, sounds, and odors. Many of the children are ear-minded and for this reason Johnson recommends that the phonetic method of instruction be used in the teaching of reading. It has been found that music, a subject of which the children are very fond, may often be used as an inducement to lead them to learn to read and recite the songs they wish to sing. Some, indeed, become very fair musicians, several special schools boasting orchestras composed of pupils from the upper grades. Binet and Courtier experimenting upon dull children ascertained that playing to them major chords and melodies, actually accelerated the respiration and increased their heart action. This doubtless accounts in part for its exhilarating effects upon them.

It has been aptly said, however, that ‘many defectives learn more with their hands than with their heads.’ Manual training must with them proceed hand and hand with mental training. Manual training with the defective stands for more than the learning to do certain mechanical operations. In the completion of the exercise, be it in paper, wood, or clay, there occur a series of sequences, the orderly execution of which is for these children not only a physical but a moral drill. Besides
offering, in the study of modeling, opportunities for imparting knowledge of form and size—subjects of no small difficulty even to the normal child—many of the manual occupations interest the dullard in his most difficult study, that of number, and from their direct utility give him that which is of more service than is knowledge gained from books. The importance of these occupations is to be most strongly emphasized. At least a third of the entire time spent in school by the defective should be devoted to the different manual pursuits, that he may not, in the words of Johnson, have "that idiocy of hand which is far worse than ignorance of book knowledge." At Elmira there are confined a large number of the criminal defective class. For three distinct types of these youths, manual training has been found highly beneficial. First, is the class of mathematical defectives, who are aided by the necessity in the shop of calculating the position of a line and then of working to it; second, are those deficient in self-control for whom the regular order of exercises has manifest advantages. Last, is a class of dullards who are sent to the work-shop to gain that "general mental quickening" of which they stand so much in need. More striking testimony to the value of manual work could scarcely be adduced.

In the special class-room of a public school, the advantages of a shop can be realized, if there are placed in the same room with the desks, benches arranged to accommodate several of the class at once. Few and simple tools are required while the bench thus near at hand affords to the teacher opportunity to frequently vary the occupations of her pupils.

Dull children, except those of the morally defective type, rarely exhibit cruelty to others. On the contrary, their fondness for their pets or their weaker companions is very marked. To as great an extent as is possible the liking for animals should be encouraged, as it offers frequent opportunities for the illustration of lessons, both moral and scholastic. Their affection for their class-mates is not infrequently made to serve a most practical purpose in some schools for the dull, by causing the brighter pupils to act as assistants to their feebl cooler companions. "No children," says Dr. Knight, "make more tender care-takers of their weaker brothers and, under supervision, more watchful ones. The bond of fellowship so engendered is of lasting benefit."
The children who form the special class in a city school, it is generally possible to divide according to school standards into three grades; those who with special assistance are, after a time, enabled to take up the regular school work, those whose talents are not of an order high enough to enable them to leave the special class until the close of their school life, and those who are found after fair trial to be incapable of receiving benefit from such instruction as it is possible to give. The latter, after medical examination has sustained this verdict, should, if they cannot be properly sequestered and cared for at home, be committed to some custodial institution where they may receive appropriate treatment.

With the growing differentiation in schools and in teaching, the special class must in time appear in some form in our American school system. The demand for it will arise when it comes to be recognized that one of the most unfortunate things which can happen to the defective child is that he be obliged to labor in competition with children of active intelligence. "Remember," says Kipling's schoolmaster, "when you find a variation from the normal, always meet him in an abnormal way."