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The Training of Sub-normal Children

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THE first known attempt to educate a mentally deficient person was in the year 1800 when Itard, physician in chief to the National Institution for the deaf and dumb in Paris, undertook the training of a boy, who had been found in the forest of Aveyron. This boy gave few marks of intelligence, walked sometimes on all fours, fought with his teeth, and had no articulate language. Itard, who did not believe that idiots were curable thought that this boy was a savage. So in devoting himself to this case, his object was not to improve or cure an idiot; it was to solve the meta-physical problem of determining what might be the degree of intelligence, and the nature of ideas in a lad, who, deprived from birth of all education, should have lived entirely separated from the individuals of his kind. Itard endeavoured for five years to develop the intelligence of his pupil; but becoming finally convinced that the boy was an idiot, gave up the attempt to educate him. Several attempts were made to teach others of more intelligence, both in America and in France; but they were not successful enough to be continued.

In 1837 Dr. Edward Seguin, a pupil of Itard, began the private instruction of idiots at his own expense. He continued his school in Paris until the Revolution in 1846, when he came to America, where he was the means of establishing several schools for idiots. In 1846 Dr. Seguin published his "Treatise of Idiocy." This book gives in an elaborate and systematic manner, the training of the defective brain by the physiological method, that is by the training of the special senses and the muscular system. His principles of education were at first thought visionary, but for many years his methods have been adopted by all schools that make an effort to teach the feeble minded. Dr. Seguin devoted his whole life to the bringing of light into these darkened lives, and when in 1854 he was privileged to be present at the laying of the cornerstone of the first school in America built expressly for idiots, at Syracuse, N.Y., it must have been with the deepest gratification that he saw recognized at last the claims of this most afflicted class of humanity;

and with a heart overflowing with love, he exclaimed: "To see that stone—token of a new alliance between humanity and a class hitherto neglected, is the greatest joy of my life."

Rev. Samuel May, nearly 100 years ago, expressed the feeling of his time when he said, "The time would come when access would be found to the idiotic brain; the light of intelligence admitted into its dark chambers, and the whole race be benefited by some new discovery on the nature of mind"; and about twenty-five years later Seguin said "Idiots have been improved, educated and even cured."

Although it has been known for many years, that an individual born with a defective mind cannot be cured, this knowledge gives us no reason for a lack of interest in their training. Indeed greater efforts should be made, since we are finding out what a power for evil they can be on account of their incurability, and in their untrained state. By all laws of right and justice, feeble-minded children should be given the same opportunities (according to their ability) for education, that is given their normal brothers and sisters. And all except the lowest grade, or absolute idiot, have some latent possibilities that can be cultivated. This is the aim of education, together with the repression and elimination of the vices; therefore, unless they have the proper training during their childhood and youth, they will be a serious burden to the country—a burden both in regard to what they do, and to what they do not do.

Until comparatively recent years "idiocy" referred to all the graver mental defects; now we use the descriptive terms "mental-defective" and "feeble-minded." They apply to all degrees of congenital defect, from the high grade child not far below normal to the lowest grade or absolute idiot.

The following data give a little idea of the prevalence of mental subnormality in some of our reformatory institutions, and of the need of more enlightened treatment: The mental examinations of 92 girls and boys in two of the reform schools in Nova Scotia shew 26 feeble-minded, 23 borderline cases, that is below normal; but with a little more intelligence than that possessed by a feeble-minded person, and 43 normal cases, which gives 28 per cent. feeble-minded, and altogether 53 per cent., who are mentally subnormal, and have not enough judgment and will power to keep them out of mischief. From personal work and observations among delinquents in Nova Scotia, the percentage of subnormal delinquents is usually in the neighborhood of 50 per cent. So nearly half of

the inmates in our reformatories will benefit very little from their confinement there, are a pernicious influence on the normal boys and girls, and a big expense to the country. With normal youthful offenders, the cause of delinquency is usually attributable to poor environment, as deplorable home conditions or bad associates, and a term of two or three years in a well-conducted reformatory is often just what these young people need. The justice of being punished for misdeeds, healthy surroundings and sufficient work must have a lasting influence for good on normal individuals; but on subnormals the effect is very different. Many do not know why they are punished; and it is rare to find a child of low mentality who does not resent correction; and those who have intelligence enough to understand, have such weak powers of resistance, that when not under restraint, they will easily become tools for unscrupulous persons. Even fear of what may follow or promises of reward cannot keep them from wrong doing. Here are a few cases which are not unusual, and will show the tendency of the untrained feeble-minded:

CASE 1. A high grade feeble-minded girl—a moron, age 20, mental age 10 years, good home, although mother is dead, neat and attractive appearance. For the last five years she has been disappearing from home for about four or five days at a time. This happens about every two months and she stays away until found by friends or the police. She always arrives home in a dirty exhausted condition, and will not talk of where she has been or what she has been doing. Several times she has been found on the street late at night; and it is believed that she was out for immoral purposes. Twice her father has had her confined in institutions, hoping that she might be helped to overcome her dreadful habits; then she would make so many promises of future good behavior, that her father, not listening to advice, would be sure that she would do better; but instead of being reformed, she is becoming more clever in eluding her family and the police. Although lazy and untruthful, she is very likeable, and has many friends among younger children.

CASE 2. A feeble-minded girl, age about 16 years, mental age 9 years, was committed to a reformatory for a serious sexual offence, and was detained there for nearly four years. Great efforts were made to help her, and she received much religious and moral training. At last it was decided to allow her to have a chance; but on the very day she was released, she started again her life of crime, and within a year became a mother.

CASE 3. A 15-year-old boy, borderline deficiency, committed for stealing. When his year was nearly up he got out the fire escape one night and was in the act of breaking into a nearby store, when he was caught. It was some time after this that he was allowed his freedom, but was only out for a short time, when he had to be committed to the school again for stealing.

The object of moral training of the normal youth is the inculcation of the love of righteousness. The young defective must get the habit of righteousness by long years of training.

Rousseau said in referring to the education of his time, "Do just the opposite of what has been done and you will do right." His advice seems to fit our period in regard to the treatment and training of the feeble-minded.

If anything can be done to train these persons to become more social in their behavior, and of more economic value to the country, to say nothing of adding happiness to their own lives, it is our duty, just as in treating bodily disease or defect, to use skilled methods that will obtain the best results.

The training should begin just as soon as it is found that the child is mentally deficient. The mother, if she has normal intelligence, usually knows quite early that her baby is not like other children. A baby of seven months should be able to balance its head, to turn its head towards a source of sound as bell or voice, to reach for objects, and to hold them when placed in the hand, and to oppose the thumb in grasping. The average child will do these things in six months. A normal child of one year sits and stands without support, tries to repeat or imitate syllables, imitates some simple movements, and recognizes objects. If at this age the child cannot sit, stand or balance its head, and will not grasp or hold objects, and does not turn its head when spoken to, it does not take a psychologist to diagnose the condition as extreme backwardness. When the mother goes to her family physician for advice, she fears but almost expects that he will tell her this. And it is not a kindness to say that probably the child will grow out of it in a few years. The mother of a mentally defective child has a big task ahead of her; and the sooner she knows of the defect the better; and as in the case of her normal child, she should not expect to do the work alone. After a certain period of home training, the school should take its place in helping to mould the young life. But until the time when the child can be under the care of specially trained teachers, the mother, guided intelligently by the doctor or nurse, should do her part, so that when the child reaches

adult life he will not be useless, or worse, a danger and a menace to the community.

When the little hands are flabby, they must be encouraged to hold objects, especially bright-colored objects that appeal to the eye. The muscles of the thigh and leg, that in a normal infant are made strong by kicking and squirming, must be encouraged to exercise by the mother, who trains and helps the little one to walk. When the child is listless, it should be given bright and attractive toys, and helped to play. The following is one of Dr. Seguin's methods of correcting faulty habits: After he has learned to walk, he will probably drag his feet. This habit can be partly or wholly overcome by having him walk over the rungs of a ladder, which is placed on the floor, the child stepping between the rungs. This will teach him to lift his feet; and, too, it will be a play for him. These first lessons are always discouraging to mother or teacher; but patience and an understanding of the little one's capacity will finally secure results that are sometimes wonderful. The mother should be made to realize that by teaching her child to dress himself, and to do simple tasks, instead of doing everything for him; and by demanding a willing and prompt obedience, she is making him less of a burden to her, and is beginning his moral training. Seguin says: "It is true that his habits are sad, droll or repulsive, that his doings are often worse than none; but these manifestations exhibit as much the carelessness and want of intelligence of the parents or keepers, as they do the primary character of the infirmity. Does not the idiot in making his silly gestures tacitly say, 'See what I am doing, if you knew how to teach me better and more, I would do it'."

In order to make the child think and reason, the special senses need training, as in developing the sense of touch. Let the child feel a hot object, then a cold one, or a wet object, and a dry, then a rough and smooth; doing this over and over until the contrasting sensations make an impression on the mind. In developing the sense of taste, the child is given that which is sweet, sour, salt and bitter until he has learned that there is a difference; although he should not be expected to express it in words until he has reached the mental age of seven years; but very early in life his brain should register a difference. In a similar manner the other senses are trained. In a normal child the sense development is natural; but the subnormal child has not that inherent capacity for development. It is through the hands performing some task, the eyes seeing objects and conveying impressions to the brain, and by various other sense impressions, that the child gets the habit of thinking.

Handwork is useful in training muscles that are unsteady, as in threading beads, sewing on paper and cloth, knitting and simple wood-work. Weaving has been found to be very useful in controlling the moods of children of unstable mental equilibrium. Indeed, a very considerable number of the feeble-minded lack balance. In weaving, the muscles all over the body are brought into play, mind and eye are kept busy; and very soon the one who is irritable and in a bad temper forgets his trouble, and is happily working. One girl in our home, whose muscular action is very poor, can weave, sweep, make beds, and do many kinds of work that require large motions; but she cannot thread a needle, and is just beginning to knit after three years of training. Although she has known for some time how to knit, the motions were too complex for her fingers. At first, in making baskets she broke all the spokes—now she is one of the best basket-makers in the home. She will never be capable of taking care of herself on account of her low mentality and unmoral tendencies; but when she is a little older, she could be almost self-supporting in an institution. At 13 years, with a mental age of seven, she came to us useless, quarrelsome, with an almost insane temper, and a nervous habit of staying awake and roaming about the house until late at night. Now she sleeps and works well, and her disposition is as good as that of the average child. We attribute the change in her condition to wholesome environment, and enough work and play to keep her healthy and happy. It sounds simple, and it has been more simple than the next case of a girl of lower mentality. This girl was fourteen when she was admitted; mental age $4\frac{1}{2}$ years, both parents mentally subnormal. She had low tastes, repulsive habits and negative disposition. At first to watch this poor low grade creature, one would feel sure that time and labor would be wasted if spent on such a specimen of humanity, and in that word we have the reason for our labor of love. She is a human being and she must be lifted up, if ever so little, from her state of ignorance and degradation. After a while we noticed that she had three good qualities, crude and undeveloped though they were—an affectionate nature, ambition and carefulness of her own belongings. These qualities were a big help in her training. She had very good muscular action, although her hands were untrained and useless. Work that included the coarser and larger movements was first begun, as dusting, weaving and simple basketry, then more complicated work as knitting, sewing, crocheting and more difficult housework, until now, after only $3\frac{1}{2}$ years of training, she has

become a useful member of the household, doing her work faithfully and well. Often she is found just quivering with happiness because she has accomplished something new, or she has learned how to do some work that she has been trying so hard for months to do, and we are amply paid for days of discouragement and seemingly hopeless work by hearing her delighted screams of "I'm learning! I'm learning!" She is still far from being an ideal child, and has many bad habits that it may be impossible for her to overcome. If back in her old environment, she would, no doubt, in a short time go back to her old manner of living. Her mental condition is not much higher than it was before, but the little intelligence that she has is in process of training, and bye and bye, if she is fortunate enough to remain in a training school, she will probably for many years contribute largely to her own support, and will be happy and contented. Otherwise we see nothing ahead but a life of misery, wretchedness and immorality.

There are many similar to these, who, although they form good habits of work and of living, have such low mentality, and are so unmoral, that they are not safe or useful when not under supervision. Not all children with a mental age as low as $4\frac{1}{2}$ or 5 years could be taught to be as useful as the above example, no matter how perfect the training; and some could be taught to be more useful and less disagreeable in their habits. Dr. Fernald, of the Massachusetts School for Feeble Minded, once assembled in a room 252 individuals with a mental age of eight years. He says of them: "The individuals in this group varied in physical age from 12 to 50 years. Some of them had learned to read, while others had not been able to do so; some were capable of elementary computations, while others found the simplest concept of numbers almost beyond their capacity. We had been able to develop some of them to become fairly expert mechanics; but others were able to do only the simplest sort of manual labor. Some were conscientious and relatively trustworthy; others were most untruthful, dishonest and unmoral. In some, sex proclivities seemed to be the dominant interest, while in others, the sex interest seemed to be normal. This variability shows that a measurable intellectual level is not the only factor in the study of the feeble-minded, and in the working out of the type of case, and training that they need."

If we should examine the brains of different persons of the same mental age, we would find that the lesions of the central nervous system, which cause the mental defect, vary as greatly as the be-

haviour characteristics of the group. And this from the teaching of Froebel: "The amount of development possible in any particular case, plainly depends on the original outfit, and partly on the opportunities there have been for exercise, and the use made of those opportunities. If we wish to develop the hand, we must exercise the hand; if we wish to develop the body, we must exercise the body; if we wish to develop the mind, we must exercise the mind; if we wish to develop the whole human being, we must exercise the whole human being. But only that exercise which is always in harmony with the nature of the thing, and which is always proportioned to the strength of the thing, produces true development."

The tendency to lead dissolute lives is especially noticeable in the high grade female. A feeble-minded girl has not sense enough to protect herself, and often by being bright and attractive, she is subjected to greater peril. It has been found that by keeping this type of girl under supervision, and training for ten or fifteen years, that is if the training is started very young, she will acquire such good moral and industrious habits, that in private homes where temptations are not too great, many will go on living useful and respectable lives. It is not so much that they have learned to distinguish right from wrong, for their will power and judgment are still very weak; but the habits of constant occupation and proper recreation have become fixed in the minds and lives of these girls, and their immoral tendencies, through disuse, are undeveloped.

The prospects are even brighter in the training of high grade boys. Nearly all who have been trained from childhood have been taught habits of industry and good behavior that will go with them through life. There are some mental defectives, however, on which years of training, even in an institution, have apparently little moral effect. This is the class that would come under the heading of "moral imbecile." In the Mental Deficiency Act of England the moral imbeciles are defined as "persons, who from an early age, display some permanent mental defect, coupled with strong vicious, or criminal propensities, on which punishment has had little or no deterrent effect."

Special classes should be organized in the public schools for the backward and feeble-minded, not only for their own benefit, but for the sake of the brighter pupils in the school. In order to teach backward children in a class, they naturally get more than their share of attention from the teacher, and that hinders the progress of the others. The backward pupils, themselves, in an ordin-

ary school, are not getting the training they need, for too much academic work is injurious to their weak minds. Their teaching must of necessity be very simple, and consist of reading, writing, nature study, language and numbers. It is worth while for them to go to school even though they can never learn to read and write, and for many it is only a waste of time to try to teach them these subjects, but it is no waste of time to teach them kindness and courtesy, personal cleanliness, physical training, music and hand-work.

Industrial training, besides being an educational factor of considerable importance, is a means of keeping their minds pure and their hands out of mischief, and of turning their energy to practical account. If it be possible they should be taught some definite occupation.

In many of our cities, we have Special Classes for the sub-normal, and the good that they are doing will far exceed their cost. Especially is this true of the very young, who will probably have 10 years or more of training.

We have heard of the wonderful work of the large number of auxiliary classes in Vancouver, where truancy is almost unknown. And we believe that in the years to come, that city will reap unheard of results, in the diminution of crime, and conservation of labor.

By humane and just treatment of an unfortunate and neglected class, who have sinned against themselves and the community because they were not taught the better way, the country will only exhibit a little of the wisdom that has been handed down to us from Solomon: "Righteousness exalteth a nation, but sin is a reproach to any people."

Soil Pollution*

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Read at the Ontario Health Officers' Association Convention, in Toronto, on
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DISCUSSIONS of soil pollution are generally limited to those types of pollution, which might have some relation to the spread of intestinal infections. Pollution of this character mainly arises from the solution or the distribution of faecal matter, introduced into the various types of privies and septic tank methods of sewage disposal. That such wastes have been popularly accepted as a source of danger is evident from the fact that there is considerable legislation on the Statute books relating to the rights of local councils of municipalities to pass by-laws:

- (1) For regulating the construction of cellars, sinks, cesspools, water closets, earth closets, privies and privy vaults; for requiring and regulating the manner of the draining, cleaning and clearing and disposing of the contents of them.
- (2) For requiring the use, within the municipality or a defined area of it, of dry earth closets.
- (3) For providing that the cleaning and disposing of the contents of cesspools, water closets, earth closets, privies and privy vaults shall be done exclusively by the corporation.
- (4) For requiring and regulating the filling up, draining, cleaning, clearing of any grounds, yards and vacant lots and the altering, relaying or repairing of private drains.
- (5) For requiring owners, lessees and occupants of land in the municipality or any defined area of it to close or fill up water closets, privies, privy vaults, wells or cesspools, the continuance of which may, in the opinion of the Council or Medical Health Office, be dangerous to health.
- (6) For establishing, protecting, regulating and cleaning public and private wells, reservoirs and other public and private conveniences for the supply of water; for prohibiting the fouling of them, or the wasting of the water, and for procuring an

*"Investigation on Soil Pollution and the Relation of the Various Types of Privies to the Spread of Intestinal Infections." October 10, 1921, the Rockefeller Institute for Medical Research.