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ORIGINAL ARTICLES.

OUR POSTERITY.

The Address of the Retiring President, before the Allegheny County Medical Society, April 19, 1887.

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The constitution of this Society makes it obligatory upon the retiring President to deliver an address on medicine or one of kindred topics. The subject of my address has been treated of before more ably than I could even hope to do; but the good results from frequent presentment of a subject will as surely follow as will the wearing of the granite stone follow the constant falling of raindrops upon it. The subject which I wish to present for your consideration to-day is

OUR POSTERITY.

The question, What shall we do to be saved? is just as pertinent a question now as it was two thousand years ago. My object principally, in this address, is to make a few remarks, briefly, bearing upon the laws of heredity, upon the great importance of proper selection, and upon a correct system of education of the people's physical, intellectual and moral powers.

It has been, I believe, truthfully asserted that in each generation, in all civilized countries, there have risen to the surface a few men who are the ideals of perfection, physically, intellectually and morally. If the ancestry of such men were traced, it would be found that they were the offspring of parents for several generations who presented just such qualities with which their descendants were endowed. Suppose A. was one of these ideal men; it is likely that his father and mother were persons above the average physical, intellectual and moral development, and that their parents were blessed with the same attributes. We have had many instances in our own country where an A. rose to a position of eminence, power and trust in which he exercised a mighty influence in church or in State, and justly so, by having inherited a good moral, intellectual, and physical development. It has also been noticed that his descendants have exercised the same influence for several generations, and then lost sight of entirely. It would seem to be adhering to the laws of heredity that like begets like, and therefore A.'s children, if he made proper selection, morally, intellectually and physically, would be on the ascending scale of de-

velopment; and, other things being equal, would be stronger physically, intellectually and morally than their parents, and so on *ad infinitum*. And such would be a fact, but some of A.'s descendants make improper selection, and consequently their children fall below the plane of development of their parents; and once below this plane of development it requires many generations, even though proper selection were made, for the descendants who had thus fallen below A.'s plane of development to ascend again to that plane.

Suppose A. to have selected a wife whose plane of development, morally, intellectually and physically, was far below his own plane; it would follow that his children would be also below his plane of development, and so on indefinitely, or until A.'s posterity would become extinct, provided his descendants continued to make improper selections. Sometimes, however, a few of A.'s children, who inherit the constitutional development of the father, may possibly not descend below the father's plane of development, but his children and his grandchildren who inherit A.'s wife's inferior physical, intellectual and moral development will, according to the laws of heredity, descend below A.'s plane of development. The question might be asked: Would it be possible for any of A.'s descendants, who had thus fallen below his plane of development, to ascend again to the plane from which they had descended? I believe the answer to this question might be made truthfully in the affirmative; that is, if a wise vigilance was exercised in their selection. For example, suppose A. and B. (brothers), being both equal in moral, intellectual and physical development, should each make a selection—the former of C. and the latter of D. The plane of D.'s development is far below that of C.'s. The law of heredity would place B.'s children on a plane of development far below that of A.'s; and consequently, in order that B.'s children should rise to the plane of development of A.'s children, it would require many generations, even though wise selections were made.

An exception to the above law might be when B.'s children would inherit the constitution of the father, in which case some of B.'s posterity, through proper selection, might not be affected, but B.'s children who inherit the constitution of the mother would be the most affected, and would require the longest time, through proper selection, to ascend to the plane of development of A.'s children.

By our present custom of selection, there must

naturally be a sort of zigzag or shuttlecock scale of development—some families are on the ascending scale of development, whilst others are on the descending scale. Some of those families' descendants who are on the ascending scale may place their descendants on the descending scale by improper selection, whilst those on the descending scale may rescue a few of their descendants from such a scale of development by proper selection; but the posterity of many families who are placed thus on the descending scale of development are never rescued from such a scale of development by proper selection, but so continue along the downward scale of development till their posterity becomes extinct. So, too, occasionally along the ascending scale of development there may be found an offspring of weakly development; and, on the other hand, along the descending scale there may be found quite a perfect development physically, intellectually and morally; but on the latter scale of development there is more likely to be found a feeble body, possibly with a good development intellectually and morally.

There are many other causes besides improper selection which may place families and their descendants on the downward scale of development, only a few of which causes we have time at present to refer to, namely: acquired disease, our present system of education, together with the high-pressure education of women. I have taken it for granted that both acquired and hereditary diseases are the prime factors in the cause of the physical, the intellectual and the moral disability of those on the descending scale of development, and such should be avoided in selection.

Our present system of education has a tendency to develop the intellect at the expense of dwarfing the development of the body. We should have such a system of education as would develop simultaneously the physical, the intellectual and the moral powers of the child. Dr. Charles K. Mills says: "Education should be so arranged as to develop the brain by a natural process—not from within outward; not from the centre to the periphery; not from above downward—but as the nervous system itself develops in its evolution from a lower to a higher order of animals, from the simple to the more complex and more elaborate. Any system of education is wrong, and is calculated to weaken and worry an impressionable nervous system, which attempts to overturn or change this order of the progress of a true development of the brain. To develop the nervous system as it should be developed—slowly, naturally and evenly—it must also be fed, rested and properly exercised." It might be added that the same scrupulous care as recommended by Dr. Mills in the development of the brain ought also to be exercised, at the same time and in the right direction, in the development of the moral and physical powers.

HIGH-PRESSURE EDUCATION OF WOMEN.

To be convinced of the fact that this high-pressure education of women will be conducive to weaken them as a class physically, and prevent them from being healthy mothers, and finally affect the health of their offspring, one need only open the door of

any institution of high-pressure education of women, and there observe, too frequently, the pale faces, the sunken cheeks, the flat breasts, the wasp waists, and the stooped forms among many of its inmates. Even Napoleon, with his keen perceptive mind, nearly a century ago observed the evil tendency of high-pressure education of women; when he was asked the question, by a high-pressure educated French lady: who was the greatest woman then living? although the latter expected a different reply, Napoleon curtly answered: "The mother of the greatest number of children." A better reply would have been: the mother of the greatest number of healthy children. The first requisite to success in life, says Mr. Herbert Spencer, is to be a good animal, and to be a nation of good animals is the first condition to national prosperity. In order that children be good animals it is necessary for their mothers as well as their fathers to be good animals. A woman who throws herself in the current of competition either for higher literary honors, or in the professions, or in business, cannot for a long time remain a healthy animal, and therefore cannot be a healthy mother, and consequently cannot bear a healthy offspring. Hence Napoleon's reply to Madame De Staël was correct, when he stated that a woman's proper sphere in life is to be a mother. If Napoleon's answer was correct—and we have no reason to doubt the correctness of the answer—then it follows that to be a mother is the proper sphere of woman, and any education that would lead a woman to be other than a healthy mother, will be not only detrimental to her own offspring, but will finally affect the offsprings of the nation. Dr. Emmet says that one effect of this higher education of women, of which we hear and read so much, will be to hinder those who would be good mothers of men from being mothers at all. In its full sense, says Herbert Spencer, the reproductive power means the power to bear a well developed infant, and to supply that infant with the natural food for the natural period. Most of the flat-chested girls who survive their high-pressure education are unable to do this. Were their fertility measured by the number of children they could rear without artificial aid they would prove unable to do this. It might be added parenthetically, that one effect of this higher education of women in this country is the increase of the number of nursing-bottles. It might be interesting to the advocates of such an education to know how rapidly the nursing-bottle is gaining admittance for use in families of America. According to a Paris letter, since his recent centenary celebration, M. Chevreul has received hundreds of letters from all parts of his country asking him for the secret of his strength, with minute inquiries as to what he eats and what he drinks; when he goes to bed and rises; how he exercises, and so on. To all these inquiries the old scientist replies through the Paris press that the secret of his long life consists of two words: "good health." For this gift he says he is indebted to his parents, for which he thanked them in the dedication of his works published in 1870.

The descendants of those now living in large cities will be ultimately placed on the descending scale of

development if they and their descendants continue to remain denizens thereof, for it has been said, and I believe observation bears out the truthfulness of the assertion, that if an embarrassment were placed around a large city preventing healthy, robust recruits from the country, the inhabitants of such a city would become extinct before many generations.

In these times of such a craze for wealth, and power, and fame, the powers of the intellect are so pressed at the expense of the body that endurance ceases, causing in many wrecked constitutions, if not premature deaths. With such there should be called a halt, and less work and more recreation before it is too late, if they would prevent themselves and their posterity from being placed on the descending scale of development. The great importance of proper and wise selection in marriage should be indelibly impressed upon the young, soon to become fathers and mothers not only of this, but of all future generations, at the home firesides, at the schools of education, and from the pulpits. It is a question which is of vastly more interest and value to the American citizen, if he wishes to have transmitted to America's posterity America in the ascending scale of development, than all the mathematics and languages that might be taught in our schools of education, and all the dogmas and isms that might be proclaimed from our pulpits. Dr. Samuel D. Gross, shortly before his death, in an address at the dedication of the McDowell monument, after discussing the importance of skilful and successful laparotomy operations, skilful and successful operations for stone, and skill and success in other capital operations, said: "But the question of skill and success in capital operations sinks into insignificance compared with the great problem of the people's welfare." He further said: "The day has arrived when the people must be aroused to a deeper and a more earnest sense of the people's welfare, and suitable measures adopted for the protection as well as the better development of their physical, moral and intellectual powers. This is the great problem of the day, the question which you, as the representatives of the rising generation of physicians, should urge in season and out of season upon the attention of your fellow citizens; the question which alone and beyond all others should engage your most serious thoughts and elicit your most earnest coöperation."

Consequently, no father should suffer his son or his daughter to marry a person who could not present him with a satisfactory certificate from a competent physician as to the physical fitness of that person for marriage. No license should be granted by county or State officials to any individual without a like satisfactory certificate. In fact, the State Board of Health, in each State, composed of competent physicians, after careful examination, should issue such certificates to applicants. The family history of candidates for matrimony should be well studied by parties most interested, and by physicians granting such certificates. If more attention were paid to proper selection, and to a correct system of education of the people's physical, intellectual and moral powers, there would be no need for so many eleemosynary

institutions, which are now dotted thickly all over our land; there would be fewer courts of justice needed, and consequently fewer prisons. Much suffering would be prevented; there would be happier homes, and in the end America would be populated by a more robust, a more intellectual, and a more noble people. By our present mode of selection, I might say, as I wrote on a kindred subject six years ago, that if it were not that every birth is a regeneration, and were the constitutional diseases which diseased parents transmit to their offspring not modified by an inalienable bequest of an older world, and by the redeeming instincts which our All-Mother grants to every new-born child on earth, the people of the world long ere this would have become extinct. Are we not aware of the fact that a powerful people once inhabited this fair land of ours, known as the Mound Builders? We do not know that the Indians, a powerful race, did inhabit this country in years gone by. Where are the Mound Builders now? and where is the Indian race? Then, since these two once powerful races have disappeared from our land, does it not behoove us to use all proper means, to throw out all possible safeguards that God and nature have placed in our hands, to preserve this great American people from eventually being placed on the descending scale of development, and consequently following in the footsteps of their predecessors, the Mound Builders and the Indian races?

THE GALVANIC CURRENT IN THE TREATMENT OF CERTAIN FORMS OF CATARACT.

Read before the Chicago Society of Ophthalmology and Otol-ogy, February 8, 1887,

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The following extract is from Erb's "Handbook of Electro-Therapeutics:" "Among diseases of the lens, cataract has been drawn recently into the field of electro-therapeutics. Neffel created no little excitement in the ophthalmological camp by a report of two cases of undoubted beginning cataract, in which all the symptoms of the cataract were relieved by methodical galvanic treatment, and visual power restored completely. After a sharp criticism of these statements by Hirschberg, Neffel acknowledged that the opacities of the lens, demonstrable with the ophthalmoscope, had not disappeared entirely, and explained the undoubted improvement of the eyesight to a removal of a molecular opacity, which was not recognizable upon ophthalmoscopic examination. He adds also that galvanic applications exert an influence, though not to any great extent, upon the opacities of ripe cataracts."

This subject is, therefore, still in its infancy, but its importance justifies further careful experiments, mainly with reference to beginning cataract. In 1879, or before, my attention was called to the use of electricity as a remedy for the treatment of cataract. The following case came under my observation: