total absence of such facilities for anybody. Let us try to give the best minds a chance to obtain the best training, let us try to discover these best minds wherever they may be, and if their owners have not the means to avail themselves of training, let us try to furnish the means. But to do this, one of the first and most essential steps is to provide somewhere the teachers, and the buildings and apparatus, necessary for giving such instruction, and where is a better place to do this than in connection with an university? or, if you please, in connection with this University?

PHYSICAL EDUCATION.¹

BY WALTER CHANNING, M.D.

I SUPPOSE there is no one who is more conscious that some terrible mistake has been made in our system of civilization than the physician engaged in the treatment of the insane.

Whenever he looks at the noble men and women, and the children of other noble men and women, who are hopeless mental wrecks, never to be any better, and destined to descend into a state, essentially animal in character, he is startled and shocked, and feels almost impelled to say: "Here is the real fall of man, here is man become beast!"

To me the cause of this degeneracy never became fully apparent, until my attention was directed toward "physical education." Then the scales fell from my eyes, and I found the explanation wide and deep to be sure, but still a fairly satisfactory explanation, resting on a perfectly rational basis.

In the first place, I found the doctrine of evolution was of great assistance in solving the problem. This showed me man, beginning as the slightest possible sentient unit, slowly and by almost imperceptible steps, developing from a creature with a simple uniform structure, to one with a complex, multiple structure. First, with a nervous system like that of very low animals, then by slow stages, after thousands of years, reaching the highest point of development, so far.

I also saw further, which impressed me with the nearness of man to the animals, that each human being before birth possesses a fundamental likeness to different animal forms.

Here I was brought face to face with the fact that man is physically essentially animal and equally dependent for further growth on physical laws. Obey these laws, and growth would continue; disobey them and it would be interfered with, and finally stopped.

And what has happened? Is it not true that the body has been treated like a watch or a special piece of mechanism, to use an illustration of Fiske, created for a special purpose and not like a flower, a plastic organism of slow growth, slowly adapting itself to its surroundings?

Nature works slowly and thinks little of centuries, but is inexorable in the end. Is it not true that the nervous mechanism, the mental side of man, has been subjected to a process of forcing, perhaps for centuries, which is only just beginning to be felt?

The body, the plastic organism, has been neglected during all these centuries, and at last, as an incident, in what I believe to be a pushing or reaching upward to a still higher state of existence, a temporary break-

down, a lack of harmony with, a want of adjustment to, the environment, asserts itself.

Just here it is well to remember the immense importance of heredity. An English writer² has well said: "The stability or instability of a person's highest nervous arrangements, depends primarily and chiefly on inheritance. Every man is the outcome and product of his ancestry . . . the small amount of new character that circumstances can produce in any individual in comparison with the character transmitted to him by his ancestry, may be gathered from the length of time that circumstances can act on him, in comparison with the aggregate length of time during which the long line of his ancestry have been subject to modification by circumstances."

We are suffering now from the effects of mistakes made by our ancestors for unknown centuries. Physical instability of certain kinds has resulted. Correct these mistakes along properly indicated lines, and in the end we shall see healthy growth, where now we see threatened decay.

What is the brain? An immense double organ of nervous centres made up of millions of cells, receiving primarily their whole knowledge of existence through the muscular structure, and retaining this knowledge, not only for its own use, but for that of succeeding generations. Systems of education, forms of government, social institutions, are the outgrowth of temporary needs, and can be both established and destroyed arbitrarily, they are not a vital, organic part of *life*. But every movement of a muscle, every tremor of a nerve fibre, every shock of a brain cell, has a fixed, definite, organic value, which has a bearing on the health and growth of the human organism.

We cannot afford to forget or lose sight of the fact that through muscular movement and effort man has struggled to his present preëminence. But we also cannot afford to forget that this preëminence has been reached by a sacrifice, through ignorance of a certain amount of the vitality and strength of the organism itself.

Our steps must be retraced or turned in a new direction, until the external impression, and the internal expression are mutually adjustable and convertible.

Finally, it is to the cumulative and transmitted effects of physical education on future generations that we are to look, in applying methods now. The more nearly adapted naturally to the organism, the more in keeping with the laws of its growth and development, the more valuable will be the final results.

HONORS TO MEDICAL MEN.—When they want to honor medical men in the monarchies of Europe, they present them with different orders, generally of some bird. We notice, for instance, that the practising physician and health counsellor Schmidborn, of Saarbrücken has been given the red eagle order of the fourth class. But imagine the feelings of a doctor on receiving such honors as this: "His Majesty, the King, has been most graciously pleased to give his most august permission that the staff surgeon, Dr. Brunhoff, shall wear the Mecklenburg grand ducal house order of the Vandal crown, the Medschidje order of the third class of the Turkish grand-signior, and the commander cross of the royal Portuguese military order of the conception of our beloved lady of Villa Viçosa."

² Charles Mercier.

¹ Address to the Graduating Class, Boston Normal School of Gymnastics, June 4, 1891.