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Washington is rapidly becoming not only one of the most beautiful cities in the world, but also one of the most desirable places as a residence for those who have the time and taste to avail themselves of literary and art culture, and the scientific problems constantly being worked out under the auspices of the Government, by some of the ablest minds in the nation, who find more facilities for work and interchange of thought than can be found anywhere else. The lecture rooms of the Smithsonian Institute are constantly occupied by men who have made a life long study of some specialty in nature, and who have information to impart which can be obtained nowhere else. Among the most brilliant of these students of nature is Prof. Elmer Gates, whose lectures the last winter have been so full of thought and real instruction in that department of psychology, which has heretofore been considered beyond the reach of investigation, that he has been placed at the head of the new psycho-physical laboratory which the Government is now establishing, in connection with its other scientific work. We know that great grief, fright, or intense anger, may so poison the milk of the nursing mother as to carry death to the child. Prof. Gates has not only isolated this poison and shown it in crystals, but has demonstrated that bad and unpleasant feelings create harmful chemical products in the body which are physically injurious, while good, pleasant and benevolent feelings, create beneficial chemical products and, these products may be detected by chemical analysis in the perspiration and urine. Prof. Gates claims that this is not a theory but an actual fact. By exciting definite emotions in individuals and analyzing the perspiration, he has already been able to identify forty poisons and as many beneficially chemical products. If with every bad or good emotion there is a corresponding chemical change in the tissues, the one depressing and poisonous, and the other exhilarating and life promoting, the secret of heaven and hell in our present life, and how to avoid the one and secure the other is in a measure unfolded.

A simple illustration will give some idea of Prof. Gates' line of investigation, and the correctness of his inferences. Three puppies were taken from the same litter. No. 1 received no special

attention. The eyes of No. 2 were covered so that not a ray of light could enter from its birth. No.3 was subjected to a careful course of education of the sight. The animal thus trained, learned to discriminate fifteen different shades of colors.

After a while the three dogs were killed and examined. The parts of the brain which have to do with the function of sight were wholly undeveloped in the pup that had been blinded. In the educated pup they were twenty-five times better developed than in the ordinary dog, as represented by No. 1, being in fact nearly equal to the same proportions of a man's brain. Those portions of the brain substance were more dense, were supplied by more blood vessels, contained more cells, and had more highly developed cells than the corresponding structures in the normal dog.

The important inference is, that what is accomplished for puppies and cats can be done with human beings. Just as the brain of the young dog is developed by such training as has been described, so the child's mind maybe built up. This plan, adapted to teaching, produces results very different from those obtained by the hit-or-miss processes of common school instruction.

Brain-building is, par excellence, the science of the future. How is man to get. more mind? Upon the answer to that question the prospects of the race depend. Who can doubt that the human brain of 10,000 years hence will produce ideas far beyond the capacity of the best piece of thought-mechanism of today?

The psycho-physicist states it as an axiom that the mind can only be educated through the senses. Let a child be blind from birth, and the part of the brain that records the impressions of vision will remain rudimentary. Suppose the same infant

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to have been born deaf, and the areas of hearing will be likewise undeveloped. If the baby were born without any senses whatever, and acquired none, it would have absolutely no mind. People think of the mind as if it were something purely spiritual. In truth, it is a piece of physical mechanism. Beginning with a child, it may be put together bit by bit.

Every thought which enters the mind is registered in the brain by a change in the structure of its cells. The change is a physical change, more or less permanent. Bad thoughts build up structures of cells which engender evil ideas, and good thoughts contrariwise. Cheerful thinking makes a happy disposition, while indulgence in melancholy has an opposite effect.

The psycho-physicist can take a discouraged, ambitionless and melancholy person and within six weeks transform him. He will be put through a course of mental lessons. To begin with, he will be taught to rehearse for one hour each day all the pleasurable

memories he can summon up. He will deliberately devote more time to cheerful and agreeable thoughts. By this means more blood and nourishment will be directed to those parts of the brain which produce such pleasant ideas. Correspondingly, the parts that give birth to unpleasant feelings and recollections will be deprived of nutrition, and at length will become atrophied. Following this plan, the man is transformed from a victim of melancholy and despair into a happy citizen, a joy to himself and to others.

Let the esoteric mind-builder systematically devote an hour each day to calling up pleasant ideas and memories. Let him summon those finer feelings of benevolence and unselfishness which are called up in ordinary life only now and then. Let him make this a regular exercise, like swinging dumb-bells. Let him gradually increase the time devoted to these psychical gymnastics, giving to them 60 or 90 minutes per diem. At the end of a month the change will be apparent in his actions and thoughts. Morally speaking, the man will be a great improvement on his former self.