

Under our present law, which seems to be well enforced, it is a pleasure to say our birds are apparently free from that danger.

Changes still continue. The future will record them as has the past. Those to come promise to be more fruitful of results, to be of greater moment to mankind, to bring more earnest messages for human weal or woe. But no time in the future will the changes in the aspects of nature here be so noticeable, so incomprehensible, because of their vastness, as have those of the century just closing.

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UNCONSCIOUS MENTAL CEREBRATION. BY C. E. NEWLIN.

If it be true, as Dr. Kay says, that "our mental progress is in the direction of our becoming unconscious, or largely unconscious, of many of our activities," and "the great object of education should be to transfer as much as possible of our actions from the conscious to the unconscious regions of the mind," it seems to me our efforts should be more largely directed to the training of the mind in its *method of acting*, and less to the accomplishing of definite tasks. It seems to me that much of our failure in accomplishing results is caused by the very *effort* to accomplish them. The worry over the effort and the intense desire to succeed incapacitates the mind for clear action. If we could only be oblivious to the effort to think out a problem in any phase of life we would more easily reach the desired end. As in riding on a smoothly moving train, we are unconscious of the motion until we look out on the passing objects, so we should be entirely unconscious of the vehicle of thought and the ends to be attained, and let the mind attend to its *thinking* unhindered.

Dr. Mandsly says: "The interference of consciousness is often an actual hindrance to the association of ideas."

Much of this desired condition is attained through cultivation of the faculties. When an action becomes a habit the reflex action is unconscious. Dr. Kay says: "The more we cultivate and train any faculty or power, the more easily and rapidly does it perform its work; the less consciousness concerned in it the more work does it accomplish and the less does it fatigue."

Dr. Morrell says: "A purely unconscious action is accompanied by no fatigue at all." In my investigation I am convinced he is very nearly, if not entirely, correct. For example, the receiving teller of a bank will run up the long columns of figures in adding with ease, and fatigue only to the extent of his consciousness of his acts.

But I am convinced this is not altogether a matter of practice. It is partly due to the *method* of thought. He reads the figures and their combinations much as one reads words, without thinking consciously of each letter in the words. A

bill clerk will extend the totals of goods as quick as he can write them when the number of articles or yards and the price are given. Some accountants will add two or three columns at once almost as rapidly as he would read the same length of printed words.

When in school I was given the problem of running a railroad much in the shape of a letter S through three given towns. After working four days on it and late into the night I decided to give it up, and prepared to retire. My instruments and figures still lay spread out on the table, and as I passed the table to hang up my coat unconsciously my eyes fell on the figures, and the solution came to me instantly, and I solved it and drew the figures in less than a minute. I do not believe I would ever have solved it if I had not given it up and thus relieved my mind of the intense consciousness of the effort to solve it.

When my father was a young man teaching school he had given his class a long problem in partial payments. The class failed to solve it, and when he tried it he failed also. Being unwilling to let them know he had failed, he worked on it every spare moment for several days. One night he worked at it until late at night, failed again, decided to give it up, and retired. In the night his mother heard him marking on the slate in the dark room and asked him what he was doing. He told her in his sleep he was trying to solve the problem. She let him work on for some time, when he again retired. He did not waken until called to breakfast the next morning, and when questioned in regard to the problem said he had failed to solve it and had given it up for good. In the meantime his mother had turned the slate over. His father insisted he should not give it up, and induced him to try it again. He did so, working on the other side of the slate, but he again failed. On turning the slate over they found he had solved the problem correctly, covering the entire side of the slate with his work, in his sleep and in a dark room, and yet remembered nothing of it and could not solve it the next morning. This seems such a remarkable case that I thought it worthy of giving to you as an illustration.

My conclusions are that we are wasting much time in life with simple mental acts that should be done unconsciously, and our very consciousness often defeats the effort. It seems to me we should spend more time learning *how* to think, and in concentrating our mind on the matter in hand regardless entirely of all accompanying subjects or the result of our thought. If this be true the "To learn to do by doing" does not cover all, nor the most important, of the ground.