HOW TO STRENGTHEN THE MEMORY;

OR,

NATURAL AND SCIENTIFIC METHODS OF NEVER FORGETTING.

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PREFACE.

Some years ago I commenced investigating the various systems of mnemonics in connection with my friend, Mr. John Fretwell, of Eisenach, Germany. Whatever came in my way I gave to him, and whatever he found in his extensive travels and reading he at once communicated to me. The result was a mass of incongruous material, much of it having little value.

We found that most systems of mnemonics are altogether too cumbersome—using them is like employing a large amount of machinery to accomplish a small amount of work. It is more difficult to handle the machinery than to do what is to be done by simple and natural methods. These methods are given in this book. They are all easy, and adapted to every class of persons, be they learned or unlearned.

Let no one, however, imagine he can train and discipline his memory by reading this book; he must apply its principles, and that, too, for a long time. A half hour given to the subject every day so keeps the matter in hand that in the course of time every person with a weak and defective memory may have a strong one. The extent of its strength will depend largely

upon the patience and perseverance of the pupil. I advise him to use the work as a text-book, and master every principle contained therein, so that they become a part of his mental organization. These principles are the laws of association, comparison, attention, repetition and the securing of a vivid first impression; minor details, important as they are, will easily be learned. Those who wish to possess memories of great power, and become able to master the most difficult subjects if nature has not given them the requisite ability, can do so by hard work, and by no other means. All will find that the rational methods of memory culture advised will not only strengthen this faculty, but every other intellectual faculty. That the work may prove useful to all who study it is my sincere desire.

M. L. H.

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HOW TO STRENGTHEN THE MEMORY.

CHAPTER I.

INTRODUCTORY.

Memory may be defined as that intellectual power which enables a person to recall, with more or less distinctness and accuracy, past experiences, facts which have before been in the mind, forms, faces, figures, words, phrases, emotions, sounds and colors which have previously exercised the brain. Or it may be defined as a kind of resurrection or reproduction of the past, or a perception of anything with reference to its past existence, or a vision of time past. Memory appears to be a property of living matter; at least a property of it after it has become organized into a nervous system.

There seems to be a close relation between memory and instinct; the latter being memory carried to a point in which forgetfulness is next to impossible. The bee, for instance, knows how to build its cell, because its ancestors have practiced building cells for countless ages, and organized their experience into an instinct. The child learns its letters, and in after years they are perfectly familiar to it, because its memory of them has become positive knowledge organized into the structure and action of the brain. At this point it is no longer memory, but what in animals we call instinct.

Memory is necessary because it is of the highest importance to us that we be able to recall past experiences and events, and because it is impossible for us to keep our acquisitions of knowledge constantly present in our minds. Most of our mental acquisitions we keep in the realm of unconsciousness, and call them up by various methods when they become necessary.

Memory is a limited faculty. It would be as impossible for a human being to recall all past experiences as it would be to lift the globe, or turn it from its orbit; we recollect only what

has been so well impressed on the brain as to have become a part of its structure. Other experiences we forget, and forgetfulness seems as necessary as memory; otherwise the brain would become so occupied in holding its acquisitions that it would not be able to attend to the new demands made upon it.

Memory is not a perfect faculty. It has been demonstrated that the human eye is not, mathematically, a perfect instrument for the reception of light. Opticians have pointed out several particulars in which it might be improved. It does not give a perfect image of what it sees. It is doubtful if any of our organs are so perfect that we cannot conceive of improvements in their structure. It would astonish most people to be made aware of the imperfections of their recollections—their crudeness, their inaccuracies, their frequent untruthfulness. To challenge the veracity of a person's memory is considered about as great an insult as one person can offer to another, and such an insinuation would be resented almost as much as to question his mental soundness. A majority of us are inclined to be very sure about matters of recollection until we have tested ourselves in a

most rigorous manner. The judge in court, and the lawyer at the bar know how imperfect the memory is, and how often it convicts an innocent man or saves a guilty one from punishment. The past rarely appears to us as it really is, but is in numerous ways altered and softened. It falls much below in vividness the reality, and the intensity of the first impressions of the recollection is so indistinct that the minor details disappear, and only fragments of our past experience are restored. Let any person who has nothing but his recollection to aid him undertake to write his autobiography, and he will find that only a few main features of his career have survived; all others have faded away, or the impression of them has become so feeble that they cannot be recognized. The memory drifts about helplessly, and at last, if the man is imaginative and not over honest he creates in his mind the facts, disarranges the incidents or puts them in the wrong place, and ends, finally, by reconstructing a new past, which never existed.

And not only is the memory an imperfect and limited faculty, but it is subject to illusions. We all know that in diseased mental states illu-

sions are common; but all do not know that persons in perfect health are also subject to them, especially if they have not trained and disciplined themselves in a rational manner. What is an illusion? It may be defined as a partial displacement in the mind of a fact for a fiction, of a truth for a falsehood. If we remember a past event imperfectly it is not an illusion; but if we remember it differently from what it was, it is. For instance, a friend who would not falsify for anything, argued for several weeks with me that on one occasion I wrote a letter on a certain subject, at a certain time, relating to a business transaction which I knew I could not have written. So firmly was this fixed in his mind that he became quite irritated at my statement that the letter to which he referred was written a year previously and related to a different transaction. The letter was at last found, when it was proved that I was correct and he incorrect. He had remembered that there was a letter, but had substituted another date for the true one, and another subject; or, in other words, there had been an illusion by a partial displacement in the mind of a fact for a fiction. Such illusions

are common to all of us, but especially to children, and persons of an imaginative turn of mind, and to those whose mental faculties are not well-balanced and carefully disciplined.

The physiology of memory is a subject of profound interest, and our students of mental science have done much to throw light upon it; but there is grave doubt if they can ever entirely penetrate the mystery. Still some things are known. In the first place, it is a settled fact that it is the brain which remembers, and not any spiritual organ which we cannot take cognizance of. And then it is probably true that when we remember anything it is the same region of this organ which revives the former experience. That is to say, memory is a localized faculty. Not that every variety and description of memory has exactly the same location in the brain, but that every special memory has. For instance, the memory of color, of form, of words, have their places in the brain, though we may not be able to point them out. Then, again, the memory depends on the integrity and soundness of the brain ganglia. If these are diesased memory may be entirely wanting; or, if present, manifest abnormal

states, such as illusion, hallucination, etc. Then, again, memory depends upon the flow of blood to the ganglia, so that what we call nutrition may go on. A brain cell can no more work without the force which it derives from the blood than a mill can work without the force derived from water, or wind, or steam. The difference is, one is a vital while the other is a physical process. If the blood is deficient, then the memory is, for the time, feeble; if the blood is modified in any way, the memory will also be modified. Even a dimunition of the oxygen of the air which the person inhales affects the memory unfavorably. There are some drugs, as the bromides of potash and soda, which depress the memories of those who take them for a long time, and there are other substances which temporarily increase our memories. All are familiar with the fact that a man will remember things when partly drunk that he will forget when sober, though intemperance injures the faculty in the long run. Loss of sleep deteriorates the memory, and so does overwork, and mental and physical exhaustion, the lowering of the circulation, and other similar conditions.

But still we have not answered the question, How do we remember? One old theory was that facts were impressed on the mind like a stamp on wax. This was very simple, and for a while served to explain the subject, but it does not answer now for any but children. Facts are not impressed on the mind like a seal on soft wax. Another theory is, that memory is a molecular action in certain brain ganglia. No doubt molecular action does take place when these ganglia work, just as it does when any other tissues are in action. Still, this is not an explanation that explains. Who knows anything about molecular action in the brain? The nearest we can get to an explanation of the subject is, I believe, that the brain cells have the power of reproducing certain conditions, either by acting in a certain way or taking on a certain form which reproduces in them the same state of mind that occurred before. We may compare memory to muscular action; if the biceps contract it flexes the arm, and if it is trained to contract in a certain way it will reproduce the same conditions again and again. So, too, if the brain cells are trained to act in a certain way they bring forth the same result,

no matter how often repeated. Physiologists speak of the brain as registering impressions. This is all very fine to read; but it seems about as far-fetched as to say that impressions are stamped upon it. The truth is, the brain has the power to reproduce certain conditions just as the muscles have, and if we are conscious of these conditions, this is memory.

There are some other questions that should be considered. It has become a proverb that "what is soon learned is soon forgotten." This is not always true, but most frequently it is. It is difficult to understand why this is so, unless we take a broad view of the subject. There is a great difference between knowing a thing and remembering it. A person possessing a clear understanding and quick perceptions will glance at a subject, have a perfect knowledge of it for the moment, but not be able to remember it after it has passed from his mind. The faculty of memory has not been called into play, but only his understanding. We say, he learns easily, which may be true; but he remembers with difficulty. On this subject Dr. J. Mortimer Granville makes the following remarks: "Just as a man works out a prob-

lem or performs a mathematical calculation with perfect command of the data and processes involved, but in no way burdens his mind with the details, or even the results of his work if they do not personally concern him, he may concentrate attention and bring his reasoning faculties to bear on a subject of study, and master its details so as to obtain a clear comprehension of the whole, while he is not registering any impression to form the basis of memory. Indeed it is a notable circumstance, that in a large class of minds the faculty of apprehension is developed, so to say, at the cost of memory ; the whole force of the intellect being, as it were, expended in understanding, while the storing of impressions is left to chance, which generally means it is wholly neglected. It is, therefore, important to bear in mind that a quick understanding does not either involve or imply an aptitude for study. It is simply an effectual power of perception, and is not uncommonly associated with a tendency to forget, which is, in truth, the effect of an absence or inefficiency of the faculty of remembering. The distinctness and almost antagonism of these two functions of the brain, understanding

and memory, is curiously apparent in the fact that idiots have often extraordinary powers of retention and recollection, while the most intelligent hearers and readers often find to their cost that they are the most forgetful. The student should not allow the consciousness that he has a quick understanding to encourage him to neglect to cultivate his memory, or to be mislead by a good memory to assume that he is endowed with a high intellectual ability."

THE BEST FOUNDATION FOR A GOOD MEMORY.

Robust health is the best foundation upon which a good memory may be built. I do not mean that all healthy persons have good memories, but that persons with good health, other things being equal, will remember more than those who are in a low physical condition.

A good memory cannot be preserved with an impaired nervous system. Not only may a long-continued wakefulness change the temper of a mild and gentle person, completely alter his features and expression and occasion a de-

velopment of singular and most uncomfortable whims, but also cause great deviation in the powers of intellect and imagination, and ruin the ability to recall facts and ideas.

The gift of remembering is dependent upon the power of strict attention. And this is dependent not only upon discipline, but upon the comfortable condition of the body, which only comes from a good circulation and abundant blood. Great orators usually have powerful memories. Without readiness and quickness in the flow of words oratory is impossible. Sometimes orators temporarily paralyze their memories by physical exhaustion. Mr. G. J. Holyoke said in a little work of his own on oratory: "When traveling expenses were the only thing that I received for my lectures, I used to walk to the place of their delivery. On my walk from Birmingham to Worcester, a distance of 26 miles, it was my custom to recite on the way portions of my intended address. In the first part of my walk my voice was clear and my memory was good; but towards the end I could scarcely articulate or remember the thread of my discourse. If I lectured the same evening, as sometimes happened, I spoke with-

out connection and produced little effect upon my audience. The reason was that I had exhausted my strength and paralyzed my memory. One Saturday I walked from Sheffield to Huddersfield to deliver two lectures. It was my first appearance there, and I was anxious to make a good impression; but in the morning I was unable to do more than talk half inaudibly and incoherently. In the evening I was tolerable, but my voice and memory were weak. My annoyance was excessive. I was a paradox to myself. My power seemed to come and go by some eccentric power of its own. I did not find out until some years after, that exhaustion of my strength had exhausted my powers of speech, thought and memory, and that entire repose instead of entire fatigue should have been the preparation for public speaking."