

force upon the memory when considered with relation to the retention of those subjects presented to it solely by the aid of symbols. The process that takes place in symbolical mental imagery is much overlooked. When we see a group of say three persons engaged in a combined act,—for example, A. struggling with B., while C. is in the act of rifling B.'s pocket,—the mental image is regulated in its accuracy by the distance, light, background, costume, and similarity or dissimilarity of the actors and other circumstances. Having seen the act in question, if we desire to reflect that image in writing, we are necessitated to employ symbols, which we take it for granted signify the same thing to the reader as to the writer; but it is manifest that the actual spectacle has lost by conversion into symbols, even admitting that it is accurately symbolized. Again, the process must be inverted by the reader: first, he must grasp and retain the symbol *seriatim*, and in their proper places; and secondly, he must convert the symbols into mental imagery, and see as it were before him the whole affair as it was seen by the spectator who reduced it to symbols. It is unnecessary to spend time in examining the series of difficulties that have attended this double process; but we remark that the difficulty of reconstruction must be greater than that of reduction, and must require considerable time in order to give that materiality to the scene that will render it as permanent upon the mental canvas of the reader as it is upon that of the writer. If it does not assume that reality, it is perishable, so perishable as not to be worth the effort of realization. Rapid reading, much to commit to memory, are thus obviously the sure precursors of superficiality, confusion, and forgetfulness.

If, then, our mental lore has a material origin: if its worth depends upon its accuracy, and its accuracy upon the correctness of minute observation; the proper study and practice of drawing is one of the best methods of cultivating memory. I am of opinion that the Chinese largely owe their remarkable power of imitation, and their great skill in elaborate art, to the fact that, not having an alphabet, their written language is composed of symbols so infinite in their variety as to cultivate and necessitate the most accurate observation; which accuracy, once habitual, manifests itself in their ordinary labours.

What we have already seen is sufficient to commend illustrated books, diagrams, and every possible reduction of knowledge to the material form—provided it is well done—to the master who desires at the same time to educate and to instruct his pupil.

Immediately connected with this branch of our subject is "the art of reading," concerning which the most ludicrous and baneful ideas and practices prevail. Suffice it to say, that of oral reading it is exceedingly difficult to meet with a decent specimen either in the Church or out of it. But it is not so much to what is generally termed elocution—which, however, should be diligently studied by all who seek to receive or give the pleasure they are capable of when endeavouring to acquire or communicate the written ideas of others—that we now turn our attention, as to the more important subject, the cultivation of the mental process of reading. We have already observed, that reading is a complex act; and that in reading, it is not the words, but the ideas for which the symbolic words stand, that we seek. The difficulties that the reader meets with are—first, the composition of the fractional symbols, letters, into the individual symbols, words; second, the mental substitution of the idea for the individual symbol; third, the erection in the mind of what we may term the grammatical symbol, *i.e.*, phrases or distinct parts of the pictorial composition; fourth, the realizing, as a whole, the different parts. This process, and these difficulties, exist in the reading of the most simple form of composition; but beyond these there are others, and difficulties which arise from the complexity of the ideas, or even from the existence of what may be termed reflections or symbols of complete pictures. Take for example a sentence selected at hazard from the first volume of Austin's Jurisprudence:—"Governments which may be styled *aristocracies* (in the generic meaning of the expression) are not

unfrequently distinguished into the three following forms:—*viz.*, *oligarchies*, *aristocracies* (in the specific meaning of the name), and *democracies*." Is it too much to say that but few could readily seize the force of his sentence? The word government is a simple symbol for a most complicated idea or picture; for in the sentence quoted it is employed to indicate at least two genera of government; one of which is divisible into three different species, each description having, therefore, at the least, one distinctive feature. The difficulty of fully and readily grasping this sentence is at once apparent; and it is equally clear that that difficulty would be infinitely increased by its being lengthened: hence the necessity of the power of concentration, accurate and instantaneous appreciation of minute differences and the ability to fix and retain the several parts in the memory during the construction of the whole, and finally the power of contemplating it in its entirety, objectively.

Such power is possessed, and there is no reason why it should not be widely enjoyed, but the neglect of the proper training to secure it while at school and college, is the main, if not the sole, reason why the reading public occupy their leisure with light literature, and besmear their minds with misty recollections of useless things.

The course that suggests itself as that which should be followed to ensure the easy reading of difficult books, is somewhat this:—The pupil being able to do what is commonly called "read," should be taken through a course of books (not such as are usually styled Readers or Reading Lessons, for with those we are supposed to be finished), say, for the sake of illustration:

1. Any good ordinary History of England.
2. A portion of Macaulay's History of England.
3. Hallam's Constitutional History.
4. Austin's Jurisprudence.
5. Locke on The Human Understanding.

During morning school, parts of these should be read aloud slowly, page or chapter at a reading, according to time and the strength of the pupil, he being skilfully questioned to ascertain the extent of his memory, accuracy, and comprehension. During the afternoon they should be continued by mental reading, the pupil being required from memory to commit the substance of what he has read to writing.

The result of such a system would be, first, the power of reading with pleasure—by the time compulsion is removed—useful works; second, a taste for such works and information; third, the strengthening of the mental faculties: fourth, rendering school more attractive, fifth, teaching the pupil to distinguish between the different modes of learning and the different degrees of knowledge, sixth, it would render strict memory work less laborious, and, seventh, it would effectually prevent the hypocrisy of knowledge inseparable from the cramming system.

The scope of this paper does not permit the further pursuit of this subject; but what has already been advanced, if correct, is ample to show that, in this particular, popular notions concerning the very elements of the tutor's art are far from correct; and it is submitted that the same reasoning is largely applicable to the two other subjects which, together with reading, are supposed to be the essentials of elementary instruction. It is, we apprehend, thus clear that reading, writing, and arithmetic are matters of instruction, and that it is only when treated in a scientific manner that they become instruments of education; as such, however they are invaluable, and cannot be too attentively studied.

We should not, however, dismiss this part of the subject without calling attention more particularly to the division of memory into the three classes or degrees which universally obtain, to the necessity of these degrees, and to the consequent advisability of providing for each. To illustrate the present point, let us recall the scene already used by way of illustration. The facts—that there were three persons present; that two were struggling; and that the third was attempting to rifle the pockets of one of those struggling—are so sharply impressed upon the