

the second of these questions, but its solution depends upon our having a thorough understanding of the first.

The methods by which a subject may be developed and presented to the mind are two—the *Synthetic* and the *Analytic*. It is not proposed, however, in a brief address of this kind, to balance these two methods against each other, and to determine which of them ought to be employed in any given instance; for the judicious teacher will employ either according as he finds it suitable to the subject of instruction, to the proficiency of his pupils, and to the accomplishment of the end he has in view.

Synthesis commences with principles and rises from these by regularly connected steps to the conclusion aimed at; it ascends from the particular to the general; it is the logical method of developing truth. Admirable specimens of this method are furnished in the propositions of Euclid, where the reasoning, based on a few axioms or universally admitted truths, proceeds in regular logical sequence, until the conclusion sought is arrived at. Analysis, on the other hand, commences with the general and proceeds to the particular.

While the Synthetic method may be admirably adapted for presenting truth in a systematic form, it can hardly be said to be the best method of communicating truth in all cases, especially in the case of the young. Children long for realities, for things; but by this method they are kept too long on the outskirts of the subject; the way has to be cleared; definitions have to be settled, and first principles laid down on which to rear the intended structure. All this preparatory work, however, is very wearisome to children, for they are unable to appreciate what is not near and tangible. Now analysis possesses this advantage, that it takes things as they really exist, presents them in their every day dress to the minds of children, and thus not only interests them by the exhibition of things that are familiar, but exercises their ingenuity in leading them to discover their properties. If synthesis be the logical method of developing truth, analysis may be called the natural and should always precede synthesis. In childhood, and on to a considerably advanced state of boyhood, we know that the perceptive faculties are principally exercised and that the logical do not manifest themselves until a later period. Indeed there is no doubt that the exercise of the perceptive faculties prepares the way for the due exercise of the logical. The observations made in childhood and boyhood, and the facts collected during this period of life form the basis on which the person of mature mind reasons and compares. It follows therefore, that with children the analytic method should be most frequently employed.

Let me illustrate my remarks by referring to two very opposite methods of teaching Geography. In the

synthetic method, a book of definitions would be put into the hands of the child, who is compelled to commit the definitions carefully to memory without any great care being exercised to see that they are practically understood. When the definitions have been carefully memorized, the child is then led gradually on step by step and ends exactly where he ought to have begun, viz., with things around him. This method would be admirable, if our sole object was to give the pupil a strictly systematic view of the subject; indeed, by no other method could this be accomplished so well. But while we are thus laying down our definitions, and our first principles, the child is pretty certain to be completely disgusted, for he cannot see the far off object we have in view, and ceases to take any particular interest in what has no immediate concern with him.

By the analytic method, on the other hand, we begin at home. The small hill seen from the school window, with the stream running down its sides, is made the basis of a lesson on the mountain and river systems. The interest of the child is at once aroused, for he knows the hill; he has often crossed the stream; he has played on the slopes of the one, and cast his tiny line into the other. The teacher who commences in this method will find that he has touched a sympathetic chord in the breasts of his scholars, and will be enabled to lead them almost at will. As the lesson proceeds, it becomes an easy matter to work in the definitions, and after a time, when analysis has cleared the way, synthesis steps in and arranges into a beautiful whole the "membra disjecta" which have hitherto floated on the surface of the child's mind.

While the analytic and synthetic methods are, strictly speaking, the only two methods that can be used in presenting truth to the mind, the practical application of them may, and often does, vary according to circumstances. Thus class teaching may be conducted individually or simultaneously. It is to be observed, however, that these plans have reference not to the method by which truth is developed, but to the particular way of handling, if we may so term it, the pupils. Whether the teaching be individual or simultaneous, it must proceed on one or other of the methods that have been described above. In individual teaching, each pupil is brought immediately and directly into contact with the mind of the teacher, and may thus be expected to receive a more powerful and lasting impression than when he is addressed as one of many. Indeed, it is only by individual teaching that the teacher can come into direct and immediate contact with each scholar, and that he can effectually secure that the prescribed task has been performed, or the necessary explanations received and understood. If it be true that education owes its chief value to the direct influence which a thoroughly equipped and well furnished mind