

I should give it, "the changing" or "unravelling from an embryo to a perfect state." Development, then, is an abstract idea which turns us back to look for the concrete, which we find as an embryo or germ, or what is known as the mental capacity, the "mens." Here, in the "mens," as soon as the child breathes the breath of life, we find this germ perfect. Whatever is not there contained in that germ as the child comes from its Creator can never be put there of the teacher. Just as in the acorn we see in germ the full grown oak, trunk, branches, leaves, wrapt up in so little a parcel, so in this embryo we see, in a crude state, all the powers which are afterwards to be educated or developed. The stately oak, in all its grandeur, is the little germ (favorable circumstances, of course, co-operating) fully developed. The puny, sickly tree owes its character to its germ. The fully-developed man is just that germ unravelled by favorable circumstances which education gave it. But the mental capacity lacking in any of these qualities, which we shall speak of after, will defy the skill of the teacher. So we see the work of the teacher is purely and simply to (if we understand it in a right sense) educate. The child comes to him with powers wrapt in this germ, which it should be his duty to unfold, to bring those hidden capacities to light, and, especially, to show him how to apply them.

Such being the case, then, it may be well to look and see what the child brings to the teacher wrapped up in this germ. There are characteristics brought to him which, if he has the qualification implied of the words "apt to teach," he will try to discover, and having discovered them, will make use of the same characteristics which he has had developed in himself to bring out and expand the mind entrusted to his care. These characteristics are Perception, Imagination, Memory, and Judgment, being the elements contained in the germ. I shall treat of the first three in the foregoing order.

*The Perceptive Faculty.* Observation is that exercise of the mind by which we obtain our ideas of external objects. We may view it as comprising two parts, distinguished respectively as Perception and Conception.

The child's observation is from his birth, but this early form, which is merely an animal act, bears the name of *Sensation* to distinguish it from the higher forms of observation of which we shall speak. The child, in this early stage, is not conscious of any distinction between himself and the world without. As he advances in age, he awakens to the consciousness that what he observes is no part of himself, and that there is an existence without him as well as an existence within him. *His eye is fixed on an object. He puts forth his hand and grasps it.* The consciousness of its separate existence, which only glimmered within him in the exercise of one sense, is confirmed when he verifies the result of one sense (sight) by that of another (touch). At this point his intelligent constitution begins to operate; his mind is acting through his senses. *This higher observation, which leaves a distinct impression on the observing mind, is called Perception.* It is the child's first intellectual activity; the first process, accordingly, which we have to consider in speaking of intellect, or mental development.

Now, the Perceptive faculty requires specific cultivation. If with untrained sight the child looks at colors, he does not accurately distinguish them; if he see a number of forms, say lines on a board, he cannot tell their divergence from the straight; if he see a group of things together, he cannot make an approximate estimate of their number; if, with untrained hearing, he listen to an incorrectly toned melody, he is not offended, nor does he derive the pleasure he is capable of doing from perfect time. The object of the cultivation we have in view is to substitute sensibility for sluggishness, and, through that quality, to impart trustworthiness of the operations of the senses. How, then, is this perceptive faculty to be

cultivated? The medium through which we observe is the senses. These senses are to be cultivated by directing them, in the first instance, to the objects which each is fitted to observe. The sight is cultivated by seeing, for which end it must be made to observe light, and colors and their various shades, and those physical properties of bodies which it belongs to sight to discern, such as form, size, number, motion, and distance. The touch is cultivated by touching, for which end it must exercise itself on bodies to perceive those properties which touch reveals, such as weight, hardness, smoothness, toughness, elasticity, and heat. The sense of hearing grows in the presence of the various kinds of sounds, such as high and low, loud and soft, sustained and broken, lively and plaintive; whether they be sounds of the voice in speaking, musical sounds, or the sounds of bodies in contact with each other. And, similarly, the senses of tasting and smelling are stimulated by distinguishing, through actual observation, the pleasant and the unpleasant, the sweet and the bitter, the salt and the acrid, and the like. The senses must be exercised to discern the several kinds of qualities, each sense acting for itself; qualities cognizable by one sense, e. g., touch must not be taken on trust on the testimony of another, such as sight. The entire course of observation must be accompanied with suggestive questions and information by the teacher. Mere sensation will not of itself lead to the result which we aim at. A sense may continue sluggish where circumstances present the most abundant materials for its exercise. Some friendly guide must awaken the slumbering curiosity by the incidental remark or query, and by manifesting interest in the result of observation. The teacher's duty is, therefore, twofold: he must present materials of sufficient variety to evoke the power of observation, and he must guide and notice the results of the pupil's observation and turn these results into a stimulus to proceed further with the process.

We divided you will remember, observation into its two parts, Perception and Conception. Perception, we have seen, is the faculty by which we recognize objects, when they are presented to the senses, as having a separate existence and as displaying various qualities.

*Conception* is the faculty by which we take off from any object perceived an impression which may remain with it when the object is absent, and by which we may recognize the object when it comes under our notice again. This it does by distinguishing those features which are essential to the object, and combining them into a whole; dismissing those which, being accidental, vary with different specimens. The image the mind may construct from one specimen or from more than one. Thus of "tree," the image is trunk and branches rooted in the ground; of "table," flat surface and legs; in both cases, the mind tacitly dismisses such considerations as the particular size of the tree and the form of leaves, or the color and peculiar shape of the table, and rests in the combination of the several features as giving an image of which it will recognize all trees and tables in time to come. The mind, in fact, takes a likeness of the object for its own possession, and the object itself is, therefore, free to go. But that likeness, once in possession, serves to identify the object again; and, moreover, for the mind's future use, it serves the purpose of the object itself. This is a step evidently very much in advance of perception. If the mind were not thus to take stock of its perceptions, and create an internal world the counterpart of that without, it must always remain in the state of intellectual infancy. It could think and speak of nothing but what it may at the moment be looking at. Every fresh perception would be a new course of wonder, there could be no comparison and no classification; in short, no experience of things would make us wiser. Conception, or, in common language, the formation of ideas, removes all these obstacles to knowledge and progress.