

different from the chemical or physical properties of its constitutive elements. But what is that principle? It is the same something which distinguishes the parent, as an individual, from every other individual; for that immeasurably small egg grows to be another individual of the same kind, and never produces any thing else. It is the result of an organic impulse, acting as we see thought act in another sphere, when, in consequence of the utterance of a new view or a new truth, a new social organization is called into existence. As truly as the mind of man acts beyond the sphere of its organic functions when it pours forth its conceptions, so truly is the principle of life, characteristic of any parent being, transmitted to the egg when a new individual begins to grow. The comparison may be carried further. The results of the mental activity of one individual may be modified or stimulated by the action of other minds; as the progress of a new individual is modified by the different parts which the parents take in its formation. So the growth of the egg, begun prior to fecundation, is influenced by that act in a manner similar to the development of an idea which is modified by the influence of other ideas. We feel justified, therefore, in saying, that conception and fecundation must be, in a measure, intellectual acts, in however instinctive a way they may be accomplished.

SECTION VII.

FOLDINGS OF THE EMBRYONIC DISC.

In a former section of this chapter,¹ in which are investigated the changes through which the yolk of the fecundated egg passes, it has been shown, that the cells of which this body is composed undergo a series of transformations, ending with their embodiment in the embryonic disc, where each segment of the self-dividing mesoblasts becomes individually a component part of the future cellular tissue. In a succeeding section,² the segmentation of the yolk was traced till this process terminated in shaping out a well-defined disc upon one side of the egg, though its further effects extend to a much greater area, if not all over the surface of the egg.

We will now consider the development of the embryo from a different point of view. This well-defined disc, the so-called "embryonic disc," marks the place where the earliest and the most important organs of the animal originate. It is

¹ See Sect. 4, p. 516.

² See Sect. 5, p. 523.