

I shall have to refer to immediately, in connection with Perigenesis. Darwin's theory seems to me incompatible with the chief fundamental facts of histology and ontogeny; both the construction of the tissues from cells, as well as the origin of the differentiated cells from germ-layers, and their development from the fructified egg-cell, appear to me to stand in irremediable contradiction with the hypothesis of Pangenesis; consistently carried out, it leads to the "Pre-formation theory" of Haller and others. The same may be said also of the modification of this theory which W. K. Brooks has given in his work on the "Law of Inheritance" (1883). His Pangenesis does not essentially differ from Darwin's except for his assumption that the cells do not continually throw off minute atoms or gemmules, but only when they find themselves in new and unusual circumstances. And the male sperm-cell he thinks much more full of gemmules than the female egg-cell; hence the male sperm-cell he thinks represents the more progressive, the female egg-cell the more conservative element in propagation and inheritance.

II. *The Theory of Perigenesis* was established by me in 1876, in a treatise entitled, "On the Wave-production of Vital Particles, or the Perigenesis of the Plastidules," and termed a provisional attempt at a mechanical explanation of the elementary processes of development, more especially of heriditivity (in No. II. of my "Collected Popular Lectures," Bonn, 1879, pp. 25-80). The theory of Perigenesis endeavours to explain the nature of inheritance by a simple, mechanical principle, namely, by the well-known principle of *inherited motion*. I assume in every process of reproduction that not only the peculiar chemical substance, the