

## OUR EMBRYONIC DEVELOPMENT

IV. In all the metazoa only two primary layers appear at first, and these have always the same essential significance; from the *outer* layer the external skin and the nervous system are developed; from the *inner* layer are formed the alimentary canal and all the other organs.

V. I called the germ, which always arises first from the impregnated ovum, and which consists of these two primary layers, the "gut-larva," or the *gastrula*; its cup-shaped body with the two layers encloses originally a simple digestive cavity, the primitive gut (the *progaster* or *archenteron*), and its simple opening is the primitive mouth (the *prostoma* or *blastoporus*). These are the earliest organs of the multicellular body, and the two cell layers of its enclosing wall, simple epithelia, are its earliest tissues; all the other organs and tissues are a later and secondary growth from these.

VI. From this similarity, or *homology*, of the *gastrula* in all classes of compound animals I drew the conclusion, in virtue of the biogenetic law (p. 81), that all the metazoa come originally from one simple ancestral form, the *gastrea*, and that this ancient (Laurentian), long-extinct form had the structure and composition of the actual *gastrula*, in which it is preserved by heredity.

VII. This phylogenetic conclusion, based on the comparison of ontogenetic facts, is confirmed by the circumstance that there are several of these *gastræades* still in existence (*gastreaemia*, *cyemia*, *physemaria*, etc.), and also some ancient forms of other animal groups whose organization is very little higher (the *olynthus* of the sponges, the *hydra*, or common fresh-water polyp, of the *cnidaria*, the *convoluta* and other *cryptocæla*, or worms of the simplest type, of the *plattodes*).