

SECTION II.

DEVELOPMENT OF THE YOUNG WITHIN THE EGG.

290. The formation and development of the young animal within the egg is a most mysterious phenomenon. From a hen's egg, for example, surrounded by a shell, and composed, as we have seen, (Fig. 101,) of albumen and yolk, with a minute vesicle in its interior, there is produced, at the end of a certain time, a living animal, composed apparently of elements entirely different from those of the egg, endowed with organs perfectly adapted to the exercise of all the functions of animal and vegetative life, having a pulsating heart, a digestive apparatus, organs of sense for the reception of outward impressions, and having, moreover, the faculty of performing voluntary motions, and of experiencing pain and pleasure. These phenomena are certainly sufficient to excite the curiosity of every intelligent person.

291. By opening eggs which have been subjected to incubation during different periods of time, we may easily satisfy ourselves that these changes are effected gradually. We thus find that those which have undergone but a short incubation exhibit only faint indications of the future animal; while those upon which the hen has been sitting for a longer period include an embryo chicken proportionally more developed. Modern researches have taught us that these gradual changes, although complicated, and at first sight so mysterious, follow a constant law in each great division of the Animal Kingdom.

292. The study of these changes constitutes that peculiar branch of Physiology called EMBRYOLOGY. As there are differences in the four great departments of the Animal