

## SECTION III.

## CONSEQUENCES OF ALTERNATE GENERATION.

351. These various examples of alternate generation render it evident, that this phenomenon ought not to be considered as an anomaly in Nature; but as the special plan of development, leading those animals in which it occurs to the highest degree of perfection of which they are susceptible. Moreover, it has been noticed among all types of invertebrate animals; while among the Vertebrates it is as yet unknown. It would seem that individual life in the lower animals is not defined within so precise limits as in the higher types; owing, perhaps, to the greater uniformity and independence of their constituent elements, the cells, and that, instead of passing at one stride as it were, through all the phases of their development, in order to accomplish it, they must either be born in a new form, as in the case of alternate generation, or undergo metamorphoses, which are a sort of second birth.

352. Many analogies may be discovered between alternate reproduction and metamorphosis. They are parallel lines that lead to the same end, namely, the development of the species. Nor is it rare to see them coexisting in the same

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first, we have all the generations united in a common trunk, as in the lower Polyps and in plants; then in the Medusæ and in some of the Hydroid Polyps the third generation begins to disengage itself. Among some of the intestinal worms, (the Distoma,) the third generation is enclosed within its nurse, and this, in its turn, is contained in the body of the grand-nurse, while the complete Distoma lives as a parasitic worm in the body of other animals, or even swims freely about in the larva state, as Cercaria. Finally, in the Plant-lice, all the generations, the nurses as well as the perfect animals, are separate individuals.