

views of the future circumstances and wants of the animal. The double origin of all the parts of the frame, even those which appear as single organs, and the order of their formation, which, in each system, commences with the parts most remote from the centre, and proceeds inwards, or towards the mesial plane, are among the most singular and unexpected results of this train of inquiries.* We cannot but be forcibly struck with the numerous forms of transition through which every organ has to pass before arriving at its ultimate and comparatively permanent condition: we cannot but wonder at the vast apparatus which is provided and put in action for effecting all these changes; nor can we overlook the instances of express contrivance in the formation of so many temporary structures, which are set up, like the scaffold of an edifice, in order to afford the means of transporting the materials of the building in proportion as they are wanted; nor refuse to recognise the evidence of provident design in the regular order in which the work proceeds, every organ growing at its appointed time, by the addition of fresh particles brought to it by the arteries, while others are carried away by the absorbents, and are gradually acquiring the form which is to qualify it for the performance of its proper office in this vast and complicated system of animal life.

* The first of these two laws is termed by Serres, who has zealously prosecuted these investigations, "*la loi de symétrie;*" and the second, "*la loi de conjugaison.*" He maintains that they are strictly applicable to all the parts of the body having a tubular form, such as the trachea, the Eustachian tube, the canals, and perforations of bones, &c. See the preliminary discourse to his "*Anatomie comparée du cerveau,*" p. 25; and also his several memoirs in the "*Annales des Sciences Naturelles,*" vols. xi. xii. xvi. and xxi.

An excellent summary of the principal facts relating to the development of the embryo is given by Mr. Herbert Mayo, in the third edition of his "*Outlines of Human Physiology.*"