

[2nd Ed.] [The hypothesis of the progressive developement of species has been urged recently, in connexion with the physiological tenet of Tiedemann and De Serres, noticed in B. xvii. c. vii. sect. 3;—namely, that the embryo of the higher forms of animals passes by gradations through those forms which are permanent in inferior animals. Assuming this tenet as exact, it has been maintained that the higher animals which are found in the more recent strata may have been produced by an ulterior development of the lower forms in the embryo state; the circumstances being such as to favor such a development. But all the best physiologists agree in declaring that such an extraordinary development of the embryo is inconsistent with physiological possibility. Even if the progression of the embryo in time have a general correspondence with the order of animal forms as more or less perfectly organized (which is true in an extremely incomplete and inexact degree), this correspondence must be considered, not as any indication of causality, but as one of those marks of universal analogy and symmetry which are stamped upon every part of the creation.

Mr. Lyell¹¹ notices this doctrine of Tiedemann and De Serres; and observes, that though nature presents us with cases of animal forms degraded by incomplete developement, she offers none of forms exalted by extraordinary developement. Mr. Lyell's own hypothesis of the introduction of new species upon the earth, not having any physiological basis, hardly belongs to this chapter.]

Sect. 5.—Question of Creation as related to Science.

BUT since we reject the production of new species by means of external influence, do we then, it may be asked, accept the other side of the dilemma which we have stated; and admit a series of creations of species, by some power beyond that which we trace in the ordinary course of nature?

To this question, the history and analogy of science, I conceive, teach us to reply as follows:—All palætiological sciences, all speculations which attempt to ascend from the present to the remote past, by the chain of causation, do also, by an inevitable consequence, urge us to look for the beginning of the state of things which we thus contemplate; but in none of these cases have men been able, by the aid of science, to arrive at a beginning which is homogeneous with the

¹¹ *Principles*, B. iii. c. iv.