which possessed an entirely peculiar type or structure (compare above, vol. i. p. 53). In each of these main divisions there is a tree-shaped and branching gradation from most simple and imperfect forms to those which are exceedingly composite and highly developed. The *degree of development* within each type is quite independent of the peculiar *plan of structure*, which forms the basis of the type and gives it a special characteristic. The "type" is determined by the peculiar relations in position of the most important parts of the body, and the manner in which the organs are connected. The degree of development, however, is dependent upon the greater or less division of labour among organs, and on the differentiation of the plastids and organs. This extremely important and fruitful idea was established by Bär, who relied more distinctly and thoroughly upon the history of individual development than did Cuvier. Cuvier based his argument upon the results of comparative anatomy. But neither of them recognized the true cause of the remarkable relationships pointed out by them, which is first revealed to us by the Theory of Descent. It shows us that the common *type* or plan of structure is determined by *inheritance*, and the degree of development or differentiation by *adaptation*. (Gen. Morph. ii. 10).

Both Bär and Cuvier distinguished four different types in the animal kingdom, and divided it accordingly into four great main divisions (branches or circles). The first of these is formed by the vertebrate animals (Vertebrata), and comprises Linnæus' first four classes—mammals, birds, amphibious animals, and fishes. The second type is formed by the articulated animals (Articulata), containing Linnæus' insects, consequently the six-legged insects, and also the