

stability and variability manifested by every organic form is determined solely by the actual condition of the equilibrium between these two opposite functions. *Inheritance is the cause of the stability of species, adaptation the cause of their modification.* When therefore some naturalists say that, according to the theory of descent, there ought to be a much greater variety of forms, and others again, that there ought to be a much greater equality of forms, the former under-estimate the value of inheritance and the latter the value of adaptation. *The ratio of the interaction between inheritance and adaptation determines the ratio of the stability and variability of organic species at any given period.*

Another objection to the theory of descent, which, in the opinion of many naturalists and philosophers is of great weight, is that it ascribes the origin of organs which act for a definite purpose to causes which are either aimless or mechanical in their operation. This objection seems to be especially important in regard to those organs which appear so excellently adapted for a certain definite purpose that the most ingenious mechanician could not invent a more perfect organ for the purpose. Such are, above all, the higher sense-organs of animals, the eye and ear. If the eyes and auditory apparatus of the higher animals alone were known to us, they would indeed cause great and perhaps insurmountable difficulties. How could we come to the conclusion that the extraordinarily great and wonderful degree of perfection and conformity to purpose which we perceive in the eyes and ears of higher animals, is in every respect attained solely by natural selection? Fortunately, however, comparative anatomy and the history of develop-