

only in connection with the life and construction of the individual organisms. But of no less importance, indeed of even greater and more general importance, is that struggle for existence which takes place everywhere and at all times between all the different constituent parts of the organism; its transformation is, in fact, only the total result of the peculiar development of all its constituent parts.

Darwin himself never broached the question of these elementary, structural transformations. The first comprehensive account and critical explanation of these elementary transformations was presented in 1881 by Professor Wilhelm Roux, of Breslau, in his admirable work, "The Struggle of the Parts in Organisms: a Contribution towards the Completion of the Doctrine of the Mechanical Origin of what is Suitable." I consider this work as one of the most important contributions to the doctrine of development that has appeared since Darwin's chief work (1859), and as one of the most essential supplements to his theory of selection. In the first part of his work Roux discusses the functional adaptation of the several organs, and the transmissibility of these effects, more especially the *functional self-formation of suitable structures*, and explains them as a necessary result of the increase or lessening of habits (compare above, p. 221). In the second portion of his work he investigates the struggle of the parts in the organism, and shows that the inequalities of the parts, the unequal relations of their activity and nutrition, and of the change of their substance and growth, must necessarily lead to a struggle among them for existence; and that this applies as much to the several organs, and to the tissues of which they are composed, as