to the single cells of which the organs are composed, and finally even to the active molecules of which the plasma of the cells and their kernels are composed (Plastidules or Micells). The correlation between the division of labour (or the physiological function) of every single part and its nutrition is of great importance here; for while every functional irritation reacts upon the change of substance of the active part, and thus accomplishes a "trophic effect," it at the same time causes variations in its form and structure (that is morphological differentiations). Hence Roux traces *Adaptation*, in its widest sense, back to the vital activity of *nutrition*, as I had already done in 1866, in my "General Morphology."

By means of numerous excellent examples, Roux points out that the increased activity of an organ strengthens its special functional capacity, whereas, on the contrary, a lessened activity will diminish it (in Lamarck's sense); and further, that through the influence of functional stimulus *parts that appear designed for a definite purpose, and which have attained the highest conceivable perfection, are produced and formed in a directly mechanical way*, without any other final cause, with a purpose, coming into play. This gives a most simple explanation of the remarkable perfection in the delicate structure of the bones, muscles, blood-vessels, etc., that appear so extremely suitable for definite purposes. The minute supporting plates of the bones run in the direction of the stronger pressure and drag, and thus, with the smallest amount of material, acquire the greatest amount of supporting force; the delicate fibres of the muscles of the flesh run only in the direction in which their contraction takes place; and when muscular tubes