

middle of their development are widely different from one another. Still more striking cases could be given with respect to the Echinodermata. With the Medusæ or jelly-fishes Professor Allman observes, "The classification of the "Hydroïda would be a comparatively simple task if, as has "been erroneously asserted, generically-identical medusoids "always arose from generically-identical polypoids; and, on "the other hand, that generically-identical polypoids always "gave origin to generically-identical medusoids." So again, Dr. Strehill Wright remarks, "In the life-history of the "Hydroïdæ any phase, planuloid, polypoid, or medusoid, may "be absent."³²

According to the belief now generally accepted by our best naturalists, all the members of the same order or class, for instance, the Medusæ or the Macrourous crustaceans, are descended from a common progenitor. During their descent they have diverged much in structure, but have retained much in common; and this has occurred, though they have passed through and still pass through marvellously different metamorphoses. This fact well illustrates how independent each structure is from that which precedes and that which follows it in the course of development.

The Functional Independence of the Elements or Units of the Body.—Physiologists agree that the whole organism consists of a multitude of elemental parts, which are to a great extent independent of one another. Each organ, says Claude Bernard,³³ has its proper life, its autonomy; it can develop and reproduce itself independently of the adjoining tissues. A great German authority, Virchow,³⁴ asserts still more emphatically that each system consists of an "enormous "mass of minute centres of action. . . . Every element has "its own special action, and even though it derive its stimulus "to activity from other parts, yet alone effects the actual "performance of duties. . . . Every single epithelial and

³² Prof. Allman, in 'Annals and Mag. of Nat. Hist.,' 3rd series, vol. xiii., 1864, p. 348; Dr. S. Wright, *ibid.*, vol. viii., 1861, p. 127. See also p. 358 for analogous statements

by Sars.

³³ 'Tissus Vivants,' 1866, p. 22.

³⁴ 'Cellular Pathology,' transl. by Dr. Chance, 1860, pp. 14, 18, 83, 460.