

perhaps a recognition of this weakness that led Darwin to leave Lamarckism more and more out of account as he grew older, and it is a recognition of this weakness that has led Prof. Ray Lankester to say that perhaps the greatest step of progress in modern ætiology will be the complete removal of all taint of Lamarckism.

As we shall see later on, a recent suggestion has made it possible to retain an evolutionary, as opposed to a merely physiological interest in modifications, even although their transmission is denied.

In 1866, when Hæckel's *Generelle Morphologie* was published, Cope and Hyatt independently stated certain evolutionary ideas which were afterwards developed into what is often called Neo-Lamarckism. The former based his conclusions primarily on a study of Amphibia, the latter on a study of extinct Cephalopods, and they agreed that the variations which result in evolution "are not multifarious or promiscuous, but definite and direct".

The Neo-Lamarckian school, which might perhaps be called Nägelian, includes those to whom the evolution of organisms is pre-eminently a story of growth, of progressive variation in definite directions. Their contention, phrased in many different forms, seems to amount to this: that the nature of the organism is self-differentiating and self-integrating, that its very nature implies self-adaptation and a potentiality of progress, that its racial growth tends to be cumulative, selective, determinate, and harmonious like crystallization. This school has never commanded attention as the Darwinians and the Lamarckians have done, partly, perhaps, because its members have so often lost themselves in what seems to outsiders mere meaningless babbling, not unnatural, perhaps, since our knowledge of the nature and conditions of growth is so infantile. But while it is easy to scoff at the verbalism of this school, and to nickname them "Topsians" for the naïveté of their discovery that the cosmos *grows*, there was behind their verbalism and naïveté, as Nägeli's work well shows, a firm grip of the idea—perhaps Utopian—that a complete ætiology must carry on the laws and lessons of the inorganic to a solution of the problem of organic evolution.