

philosophical comprehension of their sensuous experiences and who do not strive after general knowledge, can promote science only in a very slight degree, and the chief value of their hard-won knowledge of details lies in the general results which more comprehensive minds will one day derive from them.

From a general survey of the course of biological development since Linnæus' time, we can easily see, as Bär has pointed out, a continual vacillation between these two tendencies, at one time a prevalence of the empirical—the so-called exact—and then again of the philosophical or speculative tendency. Thus at the end of the last century, in opposition to Linnæus' purely empirical school, a natural-philosophical reaction took place, the moving spirits of which, Lamarck, Geoffroy St. Hilaire, Goethe, and Oken, endeavoured by their mental work to introduce light and order into the chaos of the accumulated empirical raw material. In opposition to the many errors and speculations of these natural philosophers, who went too far, Cuvier then came forward, introducing a second, purely empirical period. It reached its most one-sided development between the years 1830–1860, and there now followed a second philosophical reaction, caused by Darwin's work. Thus during the last thirty years, men again have begun to endeavour to obtain a knowledge of the general laws of nature, to which, after all, all detailed knowledge of experience serves only as a foundation, and through which alone it acquires its true value. It is through philosophy alone that natural knowledge becomes a true science, that is, a philosophy of nature.

Jean Lamarck and Wolfgang Goethe stand at the head of