

portion of French biologists, as well as those of other nations like Huxley and Du Bois-Reymond, derive their philosophical views concerning their science. Descartes perceived, apparently the first among the moderns, that the scientific explanation of vital phenomena must be a physical one, in terms of matter and motion. Far in advance of his time he applied such ideas to the nervous system, thereby establishing the nature of reflex action and invading the very citadel of animism. Outside natural science, however, Descartes was far from being a mechanist. Since the early seventeenth century the conflict between vitalism and mechanism has ranged over the whole field of biology, and its history is most complicated. After Descartes, Lavoisier, by his studies of combustion within and without the body, made the next very important step. He was then followed by Liebig, Wöhler, and a host of later chemists.

In the main the growth of exact science has steadily delivered over one vitalistic stronghold after another to the mechanists. And though in the first flush of triumph mechanism has sometimes seemed to gain more in a particular engagement than later proved to be the case, vitalism has perhaps not had a