

plants, so as to embrace likewise the imponderables—heat, light, electricity, &c. We find Mohr treating of heat and animal energy as substances which must be counted among the elements or prime materials known to chemists—just as the French chemists of Lavoisier's school enumerated the imponderable along with the ponderable elements of nature: even Liebig's first edition of the 'Chemical Letters' is not quite averse to such an interpretation. The ideas on this matter were, however, vague, and needed defining. When Mayer attempted a first step in this direction, Liebig did not see the value of it. The subject was only cleared up when Helmholtz, in 1847, showed that all so-called living forces were the different manifestations of a certain quantity of power to do work—later termed energy—and that this power could show itself in actual change and motion, or be stored up in tensions in the system, later called "potential energy." After this, "Stoffwechsel" appeared not only as an exchange of material, but also as a change in the form of energy, whereby potential or latent energy could be accumulated in the organism and let loose, as the latent power of an explosive substance is let loose by the pulling of a trigger.

One of the immediate consequences of these varied researches—all tending to show how the conception formerly established in chemistry, physics, and dynamics could be utilised in the description of the phenomena of living matter, how the complex phenomenon of life could be split up into a number of separate chemical and physical processes, which could be imitated in