

to preserve, an ideal form, while through them flows a steady stream of energy and matter which is ever changing, yet momentarily molded by life; organized, in short. This idea, to which we must later return, could not possess in the early nineteenth century the significance and value which now attach to it. It needed the explanation which the study of metabolism has at length provided.

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METABOLISM

Metabolism is the term applied to the inflow and outflow of matter and energy and their intermediary transformations within the organism. Its serious investigation began with Lavoisier, the principal founder of mod-

cation et a ce mouvement perpétuel, qui rendent si difficile l'application des sciences générales." ("Rapport," p. 150, etc.) "Dans les corps vivans chaque partie a sa composition propre et distincte; aucune de leurs molécules ne reste en place; toutes entrent et sortent successivement: la vie est un tourbillon continu, dont la direction, toute compliquée qu'elle, est, demeure constante, ainsi que l'espèce des molécules qui y sont entraînées, mais non les molécules individuelles elles-mêmes. . . . Ainsi la forme de ces corps leur est plus essentielle que leur matière," etc. (*Ibid.* p. 200.) — "Eloges historiques," Vol. I, p. 200. Quoted by Merz, "A History of European Thought in the Nineteenth Century," Vol. I, p. 129. Edinburgh and London, 1898.