

VII.—*Nutrition, physiologically and pathologically considered.* By
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As introductory to the more immediate subject of this paper, we conceive it essential to premise an inquiry into what might be called the primary basis of nutrition, viz., the *nature of organic life*—the agencies which originate, maintain and arrest the vitality of animate particles, and the laws which govern matter so called organized—points which, if ascertained *a priori*, will aid materially in our forming clear conceptions relative to nutrition, in its ultimate physiological and pathological conditions.

In viewing, respectively, the two great kingdoms of Nature—the animate and inanimate world—the first peculiarity which serves to arrest the attention of the observer in the condition of *motion* in matter: In the inorganic or inanimate creation, we observe this phenomenon of motion imparted to mineral matter, otherwise inert or motionless. Whether we view this inorganic matter, in its whole, as an aggregate mass, or consider it in its elementary condition, in the form of simple individual atoms, we discover agencies acting upon it, serving to maintain the inert mass or atom in a state of activity. These agencies are of two kinds—general and specific. The general agencies or powers are strictly physical in their nature, and actuate in common upon every species of inorganic matter. Such are, gravity, caloric, electricity, &c. The special or specific forces which operate on inert matter, are those with which nature itself was originally endowed, and are in their nature essentially chemical.—We have strong experimental evidence for believing, although we cannot reduce it to the validity of *fact*, that matter, which in the aggregate mass forms unnumbered separate systems or worlds, is, when ultimately viewed, constituted of different species of minute particles or atoms, each having a definite form, and possessing distinct properties of its own. The atoms of the same species of matter, possessing properties alike, will not act on one another so as to produce activity in any one of their number, even though placed in the closest contact, since they are all in a state of *equilibrium* in relation to their forces or powers, which are identical. Now, what is required in order to excite action in these atoms or particles and produce the phenomenon of motion? It is clear that forces of the same nature cannot excite this activity. In order to the active operation of matter, or an atom of matter, we must conceive the existence of some stimulus or reciprocal power, which would act *antagonistically* to those powers already existing. The result of this antagonistic force, which operates as soon as it comes within reach of its *sphere of*