

*action*, is manifested in the excitement of those forces which formerly were latent or dormant—the complete disturbance of the inert atoms—their consequent disarrangement and their subsequent re-arrangement in a new form. This is just what is observed to take place in every active process in the inorganic or inanimate world, and cannot be better exemplified than in the congelation of water by the melting of ice.

The process of combination and decomposition—the union and disunion of individual particles of different species of matter—the destruction of one compound and the formation of another, as well as the manifestation of motion in aggregate masses of inorganic matter, are all referable, as phenomena of activity, to the operation of existing forces, which are resident in matter and lie dormant or latent in each species of matter till excited to a state of activity, so soon as they are brought to bear to each other that relation which is antagonistic or reciprocal.

Asserting, then, our belief in the existence of antagonistic forces, as essential to the activity of the inert atoms of inorganic matter, we may, reasoning from analogy, also conceive the existence of forces and powers which would operate in originating and maintaining the living atom of organic nature.

Matter, as presented to us in the organized form, is compound in its nature—that is to say—it is composed of an infinite number of particles or atoms, not only distinct from each other as constituting different species, but distinct also from those atoms which we observe as constituting the inorganic world. Although received as ultimate particles in the organized structure, they are chemically compound and built up of constituents which, we know, are derived from the inorganic world, and, as such, subject to chemico-physical laws.

But the ultimate atoms of organized structure are not inert, as those of the inorganic world. They exhibit an incessant or *perpetual* motion; and this is manifested in the formation, growth and decay of organized textures. In order to constitute it a living particle, and one fitted to enter into and form a portion of an organized texture, it must be endowed with a power or force to actuate it. This force, which may be properly designated an *organizing agency*, is one which is essential to the very existence of an organizable and organized atom. It cannot be considered apart from, or independent of, organized matter; nor can we maintain the idea, as some physiologists do, that it is a superaddition to matter, when the latter is brought, as it were, into a condition of being organized. Matter cannot be organized or brought into a state of organization without its actuating influence. All organized matter is