

like manner, unable to resist the slower, but equally destructive agency of water and atmospheric air; and they are also liable to various spontaneous changes, such as those constituting fermentation and putrefaction, which occur when their vitality is extinct, and when they are consequently abandoned to the uncontrolled operation of their natural chemical affinities. This tendency to decomposition may, indeed, be regarded as inherent in all organized substances, and as requiring for its counteraction, in the living system, that perpetual renovation of materials which is supplied by the powers of nutrition.

It would appear that, during the continuance of life, the progress of decay is arrested at its very commencement; and that the particles, which first undergo changes unfitting them for the exercise of their functions, and which, if suffered to remain, would accelerate the destruction of the adjoining parts, are immediately removed, and their place supplied by particles which have been modified for that purpose, and which, when they afterwards lose these salutary properties, are, in their turn, discarded and replaced by others. Hence, the continued interchange and renewal of particles which take place in the more active organs of the system, especially in the higher classes of animals. In the fabric of those animals which possess an extensive system of circulating and absorbing vessels, the changes which are effected are so considerable and so rapid, that even in the densest textures, such as the bones, scarcely any portion of the substance which originally composed them is permanently retained in their structure. To so great an extent is this renovation of materials carried on in the human system, that doubts may very reasonably be entertained as to the identity of any portion of the body after the lapse of a certain time. The period assigned by the ancients for this entire change of the substance of the body, was seven or eight years: but modern inquiries, which show us the rapid reparation that takes place in injured parts, and the quick renewal of the bones themselves, tend to prove that even a shorter time than this