

though matter and energy be indestructible, the succession of phenomena, the changes and processes which we call the genesis or history of things, are dependent on the condition in which energy exists; it being a general tendency for energy not to be lost, but to become unavailable; change and action, the life of things everywhere, depending on an equalisation of existing differences, say of level or temperature, or quicker and slower motions. This great property of natural, as distinguished from purely mechanical, processes, explains the fact that the processes of nature are irreversible, that the clock cannot be turned back, that everything moves in a certain direction. Various attempts have been made to explain mechanically this remarkable property of all natural processes, which seems to lead us to the conception of a definite beginning and to shadow forth a possible end—the interval, which contains the life or history of nature, being occupied with the slow but inevitable running down or degradation of the great store of energy from an active to an inactive or unavailable condition.

54.
Mystery of
the actual
processes of
nature.

This doctrine of the degradation or dissipation of energy leads us one step farther towards an understanding, or at least a description, of the processes of nature, but also of their mystery. It has been urged that, as we always only deal with a small portion of existing things, we have no right to apply conceptions which are based upon a restricted observation to the totality of things in the universe. For instance, we know nothing of what becomes of the energy radiated away into empty space. This is a reflection we should always bear in