

been replaced by that of mass or inertia. And lastly, the term cause has not escaped a similar process of remodelling, both so far as efficient and final causes are concerned. The school represented by Prof. Mach inclines in the direction of abandoning, for scientific purposes, the special term cause, putting in its place merely antecedence and sequence in time; Prof. Wundt inclines in the direction of doing away with the conception of substance; and Prof. Ostwald opposes the conception of matter and substance in favour of the conception of energy, agreeing to some extent with—but further elaborating—the position already taken up by Tait in this country. Yet most of these thinkers have not refrained from constructing a philosophy of nature upon one or several of the older or more recent terms which are employed in purely scientific reasoning. Thus we have, *inter alia*, the modern cosmological theory of the gradual and ultimate equalisation of temperature in the universe, and the extinction of the phenomena of life;¹ a theory built up by Helmholtz, upon Lord Kelvin's conception of the degradation of energy and the irreversibility of all natural, as distinguished from purely mechanical, processes. We have Prof. Ostwald's recent "Philosophy of Nature," built up exclusively on the conception of energy, discarding the conception of matter and substance as leading to materialism, but introducing the conception of development in the form of the second law of thermo-

¹ It may be well to remark here that the discovery of radium by M. and Mme. Curie in 1898, and the remarkable phenomena of radio-

activity, may very considerably change our ideas as to the sources of heat and the gradual cooling of the sun.