

although his object, equally with that of Democritus and Epicurus, was to dispense with an intelligent, personal Deity. Lamarck, Geoffrey St. Hilaire, and Bory St. Vincent, assuming the existence of matter and its laws, have endeavoured to show, by the inherent vitality of some parts of matter, how the first or lowest classes of animals and plants may have been produced; and how, from these, by the theory of development and the force of circumstances, all the higher families, with their instincts and intellects, may have been evolved. A still more recent but anonymous writer has had the boldness to unite these nebular hypotheses, with those of spontaneous generation and transmutation, into a single system, and to attempt to clothe it with the garb of philosophy; nay, to do this in consistency, not only with Theism, but with a belief in revelation. This theory is what I denominate the *hypothesis of creation by law*. And judging from its wide reception, we should be led to infer that it had strong probabilities in its favour. It should, therefore, at least receive a careful and candid examination. For though many of its statements and conclusions are absurd, and some of them are highly ridiculous, the hypothesis, at least in some of its parts, falls in with certain loose notions that have got possession of the public mind, and which nothing but cogent reasoning can eradicate.

Before entering upon such an examination, however, it seems necessary to go somewhat more into detail in illustration of the nature of this hypothesis. It may conveniently be described under the heads of *cosmogony*, which attempts to account for the origin of the world; *zoogony*, which explains the origin of animals; and *zoonomy*, which describes the laws of animal life.¹

The cosmogony of this theory is embraced in what is denominated the nebular hypothesis, propounded by the eminent mathematician La Place. He supposes that, originally, the whole solar system constituted only one vast mass of nebulous matter, being expanded into the thinnest vapour and gas by heat, and more than filling the space at present occupied by the planets. This vapour, he still further supposes, had a revolution from west to east on an axis. As the heat diminished by radiation, the nebulous matter must condense, and consequently the velocity of rotation must increase, and an exterior zone of vapour might be detached; since the central attraction

¹ I adopt this division from an able American review of the 'Vestiges.