

other animals on the globe. Indeed, the microscope has laid open a field into the infinitesimal forms of organic and inorganic nature quite as boundless, both in number and extent, as the telescope discloses in infinite space. Nor can we find any limits in the one direction more than the other; and thus does the microscope, in the same manner as the telescope, prodigiously enlarge our conceptions of the perfections of the infinite Author of the universe.

These researches have cast not a little light upon a certain hypothesis, that has been, in one form or another, often thrown before the world since the days of Democritus and Epicurus, usually for the purpose of sustaining a system of atheism. It supposes an inherent power in nature, capable of producing plants and animals without parentage, by an imagined vital force, essential to some forms of matter. The ancient philosophers imputed these effects to a "fortuitous concourse of atoms." In modern times this general statement has been made more definite by Lamarck, Geoffroy St. Hilaire, Bory St. Vincent, and others, who suppose that Nature—in their vocabulary sometimes dignified by the title of Deity, but still unintelligent, and merely instrumental—gives origin only to "monads," or "rough draughts" of organic beings; and that these, by "an inherent tendency to improvement," and "the force of external circumstances," become animals of higher and higher organization; until at last the orang-outang abandoned his quadrupedal condition, and stood erect as man, with all his lofty powers of intellect. Before the invention of the microscope, a multitude of insects and worms were thought to have this equivocal origin, and to pass through these transmutations—an example of which every Latin scholar will recollect in the directions of Virgil for the production of a swarm of bees out of the carcass of an animal. But as op-