

changing those that already exist, a necessary or spontaneous impulse to change in certain directions, an evolution in short without any other efficient cause behind it. This, which may be termed causal evolution, is altogether different from the other, and is in a scientific point of view entirely inadmissible. Yet, there can be no doubt, that both in philosophical and popular writing, this causal evolution is often supposed, and underlies the theories suggested, though modal evolution alone is supposed to be in question.

So dangerous is this double use of the term evolution that it may become necessary to abandon the word altogether in purely scientific discussions, and to insist on the terms causation and development, as covering the two distinct ideas now mixed up under evolution. It is at least necessary in discussions on this subject, to be constantly on our guard as to the kind of evolution in question, whether modal evolution, of a direct or indirect, literal or figurative character, or the mere figment of a causal evolution.

With reference to the Darwinian system, this kind of definition is not difficult. Darwin's natural turn of mind and his scientific training were not of such a character as to lead him to seek for ultimate causes. He was content with a modal evolution. He took matter and force and their existing laws as he found them. He presupposed also life and organization with all their powers, and even seemed to postulate certain species of animals and plants as necessary raw material wherewith to begin his process of evolution. How all this vast and complex machinery came into being he did not concern himself, or was content to leave it as something beyond his ken. Nor did he, like many of his followers, attach a superstitious causal potency to evolution *per se*. On the contrary, he sought to discover natural energies competent to push it on and this in definite directions.

Though his great essay on this subject was entitled "The Origin of Species," it really did not touch the question of how the first species originated, but only, as the remainder of the title proceeded to show, that of their subsequent modification "by means of natural selection," or "preservation of favored races in the struggle of life."

Darwin thus did not concern himself with causal evolution, or the origin of things properly so-called. Indeed, when questioned on these points, he appears to the last to have been in uncertainty and to have desired not to commit himself. To men whose minds are not under the influence of positive theism or of a belief in divine revelation, and who attain to large acquaintance with nature, it either resolves itself into a Cosmos which manifests the power and divinity of a creative will, or it becomes disintegrated into a chaos of confused and conflicting forces battling with one another. Darwin's view was of the latter kind, and hence to him the life of organized beings was a struggle for existence, or at least this appeared to him far more potent than