

interest to us if such breaks were destroyed, and monotony or uniformity reigned throughout. Such a state would become tedious and intolerable, leading probably to weakened consciousness, and ultimately to its temporary or permanent disappearance.

It is more difficult to maintain the first part of our thesis, which in the emphatic statement in which we have given it, belongs only to recent times, though the natural philosophy of older times had already arrived at the two well-known adages of the *horror vacui* and *natura non facit saltum*. It is, however, only within the last hundred years that the doctrine of the continuity of a substance which fills all space, of the uniformity of nature, and of the slow progress of changes and variations, has formed one of the leading features in the theory of evolution.

And yet just at the moment when continuity has been pronounced to be a supreme rule in the natural order of things, when space has been filled with a continuous substance and the organic creation declared to be a product of imperceptible variations; natural philosophers have, once again, resorted to the older hypothesis of the atomic nature of physical things, involving action at a distance, and have filled space with corpuscles flying about, while naturalists have invented the term Mutations in order to explain the sudden appearance of new species.

This may be so; yet the fact remains that the mathematical treatment of single phenomena is only possible on the assumption of continuity of some kind. In the visible world of living things, on the contrary, the vital principle seems bound up with discontinuity.