

creation. If a certain egg grows into a plover with three toes it is a "Beetlehead," which must continue to produce Beetleheads; but let a rudimentary hindtoe be added and there results a "Blackbelly"; and this is special creation. Every physiologist knows that the observed permanent addition of a hindtoe in an embryo would be an event in embryology comparable to the French revolution in politics.

We hear much of "laws" of nature and of their "immutability." Our only idea of immutability is absolute sameness, and absolute sameness would be nature in everlasting rest. Definition so exact is, however, not needed to show that the laws of nature are far from immutable. Such laws are known only by their results; and these results show, on every side, clashing, disorder and interference. There are millions upon millions of tendencies which are checked, warped, or destroyed by other millions. Animal nature preys on itself and on vegetable nature, and vegetable on animal. Nor is this work of destruction and recomposition a regular and compensating one. Sometimes there is compensation and balance; but again there may be annihilation of certain forms. Astronomy, with its noble formulæ, is really no better off. Its accuracy is only comparative, as concerning vast times and spaces. It is not possible to say that the earth has an absolute orbit, when we consider that the planet has irregular lumps, four miles high, on its sides, and that its path is affected by every petty meteor that approaches. In reply it may be said, that, behind this disorder, there stands an eternal order which corresponds to the higher conceptions of the human mind. I do not deny it; but such eternal order is a matter of faith, an ideal. The phenomena within our reach exhibit only enough order and law to prevent them from falling into chaos. In like manner human law has an ideal, but the observed results would not prove its existence. All we notice in communities is a tendency to law, which is feeble or strong according to the degree of their civilisation.

It is said that zoological forms are matter evolved under immutable laws, but these laws so far from being constant, are subject to perversion and interference. As for matter, it is introduced as the matrix of all properties, which properties may be latent, that is, hidden from our view, or active, and therefore observable. Matter itself is in its last analysis everywhere the same; from which it follows that the smallest division of matter contains all the properties, or, as they are called, potentialities, that are held by the universe. Each atom, or molecule, or cell, is cosmos in itself. Example: among the cells that form the human body, and whose number is so vast that no idea of it could be conveyed by figures, there appears one cell, microscopic in size, simple so far as we know simplicity, having no exceptional relations to light, heat, or electricity, showing no sign that foretells a peculiar career. It is a female cell, an egg. Among another collection of cells there appears, in like manner, a cell; that of the male, a spermatozoon. So long as they stay apart, each runs the common course of an organic element, ending in dissolution and in passing into the waste material of the general mass. But, when