

consciousness determines the direction which the activity of the cell shall take. For example, hunger leads to migration which changes the environment. This directly influences the individual and causes a certain number of changes, but the greater number are attributed by them to the use or disuse of parts, the results of which they claim is inherited. Environment is by them thus made to occupy a secondary place, and consciousness and peculiarities arising during life are claimed to be the great controlling factors. This Weismann denies:—He believes that what the individual becomes is determined by the ovum itself and that any variations which show themselves must arise from variation in the ovum itself. Brooks combines the two theories, those of Darwin and Weismann.

The sum up then, if we are to accept the theory of Darwin, environment exercises as it were a passive function in evolution. The origin of species is due to variations very minute, which arising spontaneously give to the individuals possessing them an advantage over its rivals in the struggle for existence: this going on through countless ages gives rise to species.

Later writers, Cope, Lamarh, institute consciousness and the use and disuse of parts of the great controlling factors giving environment but a secondary place. Brook gives environment more prominence, attributing to its influence changes in the gemmules constituting the ovum, and according to the theory of Weismann, thus modifying the individual springing from the ovum. What then are we to conclude. It is a big question and I think I cannot do better than quote Professor Mills. "In viewing heredity and modification it is impossible to get a true insight without taking into consideration both original natural tendencies of living matter and the influence of environment, and so far as our experience goes, life is impossible apart from the influence of its surroundings." He concludes that the various authorities are right in concluding that evolution is universal.

Stable equilibrium is an idea incompatible with our fundamental conception of life. Altered function implies altered molecular action, which sometimes leads to appreciable structural change. From our conception of the nature of living matter it naturally follows that variation should be greatest, as has been observed, under the greatest alterations in the surroundings.