

stems in what was originally a uniform plexus are preserved; whereas, in ancestral Nemertea, two lateral longitudinal trunks in the plexus were undoubtedly characteristic features.

That one medio-dorsal stem in this plexus, in which all the impressions made by outward agencies on both halves of the body might be concentrated, and from whence the corresponding movements might be regulated, will more fully answer the purpose than two lateral stems, however they may be united by an intervening plexus, is *a priori* probable, and would explain the first impulse towards the formation of such a longitudinal concentration in the uniform plexus.

And when once such a dorso-median stem is present, in addition to two lateral ones, a struggle for supremacy, presided over by natural selection, may lead to a diminution of the lateral stems, and to an increase of the dorso-median one.

This, in my opinion, as will be more fully developed below, was the case in the ancestors of the Chordata, traces of this struggle and of the competing structural elements being duly preserved.

If we suppose the bilateral symmetry to be established in one of the lower representatives of the Metazoa, and the type to go on increasing in length in the course of generations; then this increase, indeed, exposes it to very different, and perhaps more numerous dangers and enemies than would threaten it were the same bulk concentrated in a spherical or radial circumference. And if, even in the latter case, injuries to the specimen might prove fatal were it not provided with strong powers of regeneration (*cf.* Star-fishes, Ophiurids, Crinoids, &c.), still it needs no comment that, when bilateral symmetry and increase in length so considerably enlarges the surface which is open to attacks, and so enormously facilitates the rupture of the specimen, or the severing of parts by rapacious enemies preying upon it, similar regenerative powers are none the less required to insure the persistence of the type.

*These dangers, continually threatening the existence of the specimens, and thus injurious to the species, counteracted as they are by regenerative processes (power of reproduction of lost parts), I hold to be at the base of all those cases of metamery in the animal kingdom which do not fall under the head of strobilation, the latter being comparatively rare with respect to the former. Incipient metamery, once established by this cause, may further differentiate in the most diverse directions (heteronomous segmentation, &c.), even after the absolute cessation of the causes that in the first instance have provoked it.*

The explanation has, moreover, the advantage of being applicable to radial as well as to serial metamery.

These propositions must now be more fully developed. The power of reproduction of lost parts comes, without doubt, under the general laws of formation and growth. We find it even in the lowest Protozoa. If the material which heredity has accumulated, either in such a unicellular being or in the egg of a Metazoon, and out of which the elements of