

sensorial function. The perfection of the senses is evinced by the small antennæ; for we infer therefrom, not only that the organ is exclusively an organ of sense, but also, that the delicacy of the sense itself is such, as not to require a long-jointed appendage to aid the function.

This *cephalization* of the animal is farther observed in the structure of the rest of the thorax and the abdomen. The abdomen, in the first place, is reduced to its minimum size. Vegetative elongation is here cut short, as in the anterior part of the animal; and the sphere of growth has a narrow limit, owing to the very intensity of its concentration; and we find that the limit widens as the intensity diminishes.

Again: the central power is indicated by the fact, that the first pair of legs is the strong pair; being properly hands, they contribute especially to the higher functions, that is, the support of the living animal, through their strength and powers of prehension, and not like the following, to locomotion. Thus, as we pass from the centre, the organs are of more and more humble function.

This *centre*, as we have observed in another place, is properly between the second antennæ and mandibles. The second antennæ and the rudimentary mouth, are among the first parts that appear in the embryo. If we look at it as a centre of force or of growth, we remark that the radii on opposite sides of this centre, before and behind, are very unequal, the latter being six or eight times as long as the former,—a relation which is the inverse of the functional importance of the parts pertaining to each.

Our idea of the condition of highest centralization is thus drawn from a study of the species.

The most perfect state of it is seen in the *Maia* group, in which the bases of the antennæ and eyes are crowded into the narrowest possible compass, and the mouth organs are well compacted within the buccal area, and the legs and whole system have the highest completeness.

The form of the body of a *Maia* is a somewhat flattened ovoid, narrowest in front; and the middle point between the mouth and the second antennæ, which we call the potential centre of the animal, is situated near the front, say about half an inch from the front outline (excluding the beak), supposing the cephalothorax three inches long. We may call the part anterior to this centre, A; the part posterior, B; and the length of the former, measured on the axis, *a*; of the latter, *b*. These parts may be viewed, as regards development, as