

which are coiled, as it were, into a knot; by which means the different cavities acquire relative situations more nearly corresponding to their positions in the developed and finished organ.

The blood-vessels, in like manner, undergo a series of changes quite as considerable as those of the heart, and totally altering their arrangement and distribution. Serres maintains that the primitive condition of all the organs, even those which are generally considered as single, is that of being double, or being formed in pairs; one on the right, and another exactly similar to it on the left of the middle, or *mesial* plane, as if each were the reflected image of the other.* Such is obviously the permanent condition of all the organs of sensation, and also of the apparatus for locomotion; and it has just been shown that those portions of the nervous system which are situated in the mesial plane, such as the spinal cord and the brain, consisted originally of two separate sets of parts, which are brought together, and conjoined into single organs. In like manner we have seen that the constituent laminæ of the heart are at first double, and afterwards form, by their union, a single cavity. The operation of the same law has been traced in the formation of those vascular trunks, situated in the mesial plane, which are usually observed to be single, such as the aorta and the vena cava; for each were originally formed by the coalescence of double vascular trunks running parallel to each other, and at first separated by a considerable interval; then approaching each other, adhering together, and quickly converted,

* A remarkable exemplification of this tendency to symmetric duplication of organs occurs in a very extraordinary parasitic animal, which usually attaches itself to the gills of the *Cyprinus brama*, and which has been lately examined by Nordmann, and named by him the *Diplozoon paradoxum*, from its having the semblance of two distinct animals of a lengthened shape, each bent at an obtuse angle, and joined together in the form of the letter X. The right and left halves of this cross are perfectly similar in their organization, having each a complete and independent system of vital organs, excepting that the two alimentary canals join at the centre of the cross to form a single cavity, or stomach. (Annales des Sciences Naturelles, xxx. 373.)