the different organ systems will gradually develop, is hereditarily so disposed that a compensation for the loss of important parts is facilitated, this will, of course, constitute an advantage. Such a compensation may, *e.g.*, be obtained where the generative products are developed in very many separate centra, and not in one closed sac. Injury to the latter will, *ceteris paribus*, be more fatal than an equivalent injury destroying one or more of the former. The same holds good for diffused instead of concentrated nervous centra, for the case of liver saccules to the intestine, instead of one compact liver, for numerous apertures and deferent ducts to the nephridial system instead of one, &c. And all this is still more evident when we have before us a long, bilaterally symmetrical animal, which is easily snapped in two. In this case it must be of pre-eminent importance, that the remaining halves, which may in their turn be severed by the same cause into smaller parts, possess sufficient power of reproduction to repair the damage. Now, it cannot be doubted that an equal distribution of the important components of the organism (nervous centra, generative organs, nephridia, intestinal appendages, &c.) throughout the whole length of the animal meets this requirement. Any severed portion will then be provided with these more important parts, and will be more or less adapted for a separate and individual existence.

The formation of a new mouth and of new brain-lobes in a fragment of this description remains, of course, quite as wonderful and inexplicable as before, but still we cannot fail to see that such an arrangement as here indicated must somehow be beneficial to the species, and that we need not stop short with Bateson,[1] when he says that "the repetition of various structures is one of the chief factors in the composition of animal forms. . . . . The reason for their appearance is as yet unknown, and the laws that control and modify them are utterly obscured." Obscurity is not exchanged for broad daylight, but something is gained when we can see that a growth of the principal organ-systems in separate and more or less independent batches, which in an elongated and bilaterally symmetrical animal insensibly passes into the phenomenon of incipient metamery, may be of the highest value for the persistence of the species.

Now this is actually the way in which we find the important organ-systems distributed in the lower Nemertea. And out of this more irregular distribution a gradual metamery, in some incipient, in others more complete, is seen to evolve within the boundaries of the class. Even the nephridial system, in the primitive forms provided with only one opening to the exterior, participates in this tendency towards metamery, and acquires a greater number of apertures, serially arranged in pairs, thereby also tending towards a diminution of damage when artificial division into two takes place in the nephridial region. The metamery, the regular and serial repetition of parts, is thus seen to be of great importance in aiding towards repair after damage to a lengthened bilateral form, in the same way as the radial repetition of parts facilitates repair in the Echinodermata. In both cases the

[1] Bateson, The Ancestry of the Chordata, *Quart. Journ. Micr. Sci.*, vol. xxvi. pp. 545, 546, 1886.