of cases, the ciliated canal is adapted to give the oxygenated sea-water access to the hæmoglobiniferous nerve-tissue. At the same time (*loc. cit.*, p. 35) I did not deny all sensory significance to the organ, but repeated that we had not found any specialised sensory epithelium in it, and could not judge of what kind the sensory impressions might be that were carried by the apparatus to the animal's sensorium. Since then I have been able to fix the exact mode of origin of the apparatus in at least one species of Nemertea (XIV, XV), and may here recall to mind that the central lining of the canal most decidedly takes its origin as an invagination of the epiblast. This invagination secondarily coalesces with the brain. In these two ontogenetic data we have only very vague indications. They allow of a comparison both with olfactory and with auditory pits. Strange as it may seem, I do not see that the first comparison has many more *a priori* arguments for it than the second. Otoliths, it is true, have not been found in this lobe, but who can tell what purpose the minute concretions, formed by the ensheathing gland-cells, and sometimes accumulated inside the lumen of the canal, may serve?

We have, however, to suspend our judgment. Graeffe's, Keferstein's, and Claparède's observations on the existence of special otolith capsules in the Nemertea require further confirmation. They may, perhaps, have mistaken the highly refractive globules in the gland-cells of the posterior brain-lobe for otoliths.

One more point may be mentioned, viz., that the comparison of the cavity of these lobes with a branchial slit of *Balanoglossus*, &c. (*cf.* Bateson, *loc. cit.*), which I tentatively attempted in a former paper (IX, p. 33) has to be definitely abandoned, now that the epiblastic origin of the cavity has been indubitably shown by myself and afterwards by Salensky (XIV, XXX), and since on this point the statements of earlier authors as to the hypoblastic origin of this cavity (Barrois, &c.), which led to my former suggestion, have to be definitely abandoned.

If the comparison with a gill-slit is no longer tenable on morphological grounds, this in no way changes my views as to the physiological importance that must be attached to the direct respiratory function of the nerve-tissue, which can nowhere be so perfectly accomplished as in the posterior canalised lobe. I have no doubt, however, that in some species—more especially of Hoplonemertea—its significance as an organ of sense may supersede its importance as a respiratory chamber, the hæmoglobin, though present in these species, being there much more diluted, at any rate colouring the brain less intensely red, and the connection between posterior and anterior lobes being at the same time less intimate.

Having now discussed all those parts of the organism which we have any—though sometimes even questionable—right to consider as sense-organs, I must pass on to those which are of a still more dubitable nature, and which fall under the head for which the further part of the superscription of this section was intended.

Since in some cases I find them in the head and directly innervated by the brain, since