

Attention must be called to the contrast in the method of interference in the head-region of my embryo and that in Kaestner's (No. 6, Taf. VII) where the ventral surfaces have interfered more than the dorsal, the result being a single heart and a double brain, instead of a double heart and a single brain (cf. my figure 9). The plane of interference becomes caudad more and more truly sagittal, so that the chordae, at first widely divergent (Fig. 10), eventually fuse. (Fig. 13).

I now proceed to the description of the various systems of organs.

NERVOUS SYSTEM.

As a starting-point, I select section 12 (Fig. 5) through the region of the optic vesicles. It is easy to understand how the condition here pictured is arrived at—we proceed from the normal state as seen in Duval's Figs. 253 and 4. The two embryos have been inclined with their dorsal surfaces towards each other, and have interfered in such a way that the right and left lips of the neural groove of the one, have fused with the right and left lips of that of the other. In this way, room is left for the complete development of the "median" optic vesicles which, consequently, are very minute (ov'). The points of fusion are still noticeable and it is obvious that that of the left and right lips of the right and left components respectively (which now form the floor of the composite neural canal), is less complete, in such a way that some mesoderm cells have intruded into the neural canal at this point. The double character of the neural canal is brought strongly out by the two infundibula which diverge laterally towards the two blind foregut ends (ph.) beneath which the slightly thickened patches of ectoderm already indicate the hypophyses.

It is less easy to interpret the preceding sections (Figs. 1 to 4), but if two components such as are represented in Duval's Fig. 252 have interfered in such a way as materially to reduce in size the contiguous halves, then it becomes apparent that the convex floor of the composite neural canal in figure 4 is formed of the left and right brain-halves of the right and left components which have fused in the region of their dorsal neural sutures, while their ventral sutures are still widely separated. Still further forward (Fig. 3) these brain-halves are fused so that the most anterior end of the neural canal (Fig. 1 and 2) is formed of the lateral brain-halves only of the two components. It is noticeable that the separation of the brain from the ectoderm has apparently taken place sooner than is normal (No. 3, Vol. 2, page 252).

In the diencephalic region (Fig. 6) the brain is much compressed from side to side but it soon widens out into the mid-brain (Fig. 7).