

the Nose-vertebra, in his work *On the Signification of the Bones of the Skull*, published in 1807: and in various degrees, with similar views promulgated by Spix (1815), Bojanus (1818), Geoffroy (1824), Carus 1828. And I believe that these views, bold and fanciful as they at first appeared, have now been accepted by most of the principal physiologists of our time.

But another aspect of this generalization has been propounded among physiologists; and has, like the others, been extended, systematized, and provided with a convenient language by Mr. Owen. Since animal skeletons are thus made up of vertebræ, and their parts are to be understood as developements of the parts of vertebræ, Geoffroy (1822), Carus (1828), Müller (1834), Cuvier (1835), had employed certain terms while speaking of such developements; Mr. Owen in the *Geological Transactions* in 1838, while discussing the osteology of certain fossil Saurians, used terms of this kind, which are more systematic than those of his predecessors, and to which he has given currency by the quantity of valuable knowledge and thought which he has embodied in them.

According to his Terminology,<sup>3</sup> a vertebra, in its typical completeness, consists of a central part or *centrum*; at the back of this, two plates (the *neural apophyses*) and a third outward projecting piece (the *neural spine*), which three, with the centrum, form a canal for the spinal marrow; at the front of the centrum two other plates (the *hæmal apophyses*) and a projecting piece, forming a canal for a vascular trunk. Further lateral elements (*pleuro-apophyses*) and other projections, are in a certain sense dependent on these principal bones; besides which the vertebra may support *diverging appendages*. These parts of the vertebra are fixed together, so that a vertebra is by some anatomists described as a single bone; but the parts now mentioned are usually developed from distinct and independent centres, and are therefore called by Mr. Owen "autogenous" elements.

The *General Homology* of the vertebral skeleton is the reference of all the parts of a skeleton to their true types in a series of vertebræ: and thus, as *special* homology refers all the parts of skeletons to a given type of skeleton, say that of Man, *general* homology refers all the parts of every skeleton, say that of Man, to the parts of a series of Vertebræ. And thus as Oken propounded his views of the Head as a resolution of the Problem of *the Signification of the Bones of the Head*,

---

<sup>3</sup> *Archetype and Homologies of the Vertebrate Skeleton*. 1848, p. 81.