

brain; but on arriving at Man, the continuity of the series is suddenly disturbed by the great expansion of the hemispheres, (Fig. 461,) which, compared with those of quadrupeds, bear no sort of proportion to the rest of the nervous system. Both Aristotle and Pliny have asserted that the absolute, as well as the comparative size of the human brain is greater than in any other known animal; exceptions, however, occur in the case of the *Elephant*, and also in that of the *Whale*, whose brains are certainly of greater absolute bulk than that of man. But all the large animals, with which we are familiarly acquainted, have brains considerably smaller; as will readily appear from an examination of their skulls, which are narrow and compressed at the part occupied by the brain; the greater part of the head being taken up by the development of the face and jaws. In Man, on the other hand, the bones of the skull rise perpendicularly from the forehead, and are extended on each side, so as to form a capacious globular cavity for the reception and defence of this most important organ. It is chiefly from the expansion of the hemispheres, and the development of its convolutions, that the human brain derives this great augmentation of size.*

* This will be apparent from the vertical section of the human brain, Fig. 461; where, as before, *s* is the spinal marrow; *x*, the medulla oblongata; *c*, the cerebellum, with the *arbor vitæ*; *t*, the optic tubercles, or corpora quadrigemina, dwindled to a very small size, compared with their bulk in fishes; *p*, the pineal gland, supposed by Des Cartes to be the seat of the soul; *v*, one of the lateral ventricles; *a*, the corpus callosum; and *h*, *h*, *h*, the hemispheres.

Several expedients have been proposed for estimating the relative size of the brain in different tribes of animals, with a view of deducing conclusions as to the constancy of the relation which is presumed to exist between its greater magnitude and the possession of higher intellectual faculties. The most celebrated is that devised by Camper, and which he termed the *facial angle*, composed of two lines, one drawn in the direction of the basis of the skull, from the ear to the roots of the upper incisor teeth, and the other from the latter point, touching the most projecting part of the forehead. Camper conceived that the magnitude of this angle would correctly indicate the size of the brain, as compared with the organs of the principal senses which