

a double nerve-centre, which occurs in all vertebrated animals, and the two parts of which are called the cerebral hemispheres. In man this double nerve-centre is so large that it completely fills the arch of the skull, as far down as the level of the eyebrows. The two hemispheres of which it consists meet face to face in the middle line of the skull, from the top of the nose backwards. Each hemisphere is composed of two conspicuously distinct parts, called respectively the grey matter and the white matter. The grey matter is external, enveloping the white matter like a skull-cap, and is composed of an inconceivable number of nerve-cells connected together by nerve-fibres. It is computed that in a human brain there cannot be less than a thousand millions of cells, and five thousand millions of fibres. The white matter is composed only of nerve-fibres, which pass downwards in great strands of conducting tissue to the lower centres of the brain and spinal cord. So that the whole constitutes one system, with the grey matter of the cerebral hemispheres at the apex or crown.

That the grey matter of the cerebral hemispheres is the exclusive seat of mind is proved in two ways. In the first place, if we look to the animal kingdom as a whole, we find that, speaking generally, the intelligence of species varies with the mass of this grey matter. Or, in other words, we find that the process of mental evolution, on its physical side, has consisted in the progressive development of