

great length⁹ that the brain is the origin of sensation and motion, refuting the opinions of earlier days, as that of Chrysippus,¹⁰ who placed the *hegemonic*, or master-principle of the soul, in the heart. But though Galen thought that the rational soul resides in the brain, he was disposed to agree with the poets and philosophers, according to whom the heart is the seat of courage and anger, and the liver the seat of love.¹¹ The faculties of the soul were by succeeding physiologists confined to the brain; but the disposition still showed itself, to attribute to them distinct localities. Thus Willis¹² places the imagination in the *corpus callosum*, the memory in the folds of the *hemispheres*, the perception in the *corpus striatum*. In more recent times, a system founded upon a similar view has been further developed by Gall and his followers. The germ of Gall's system may be considered as contained in that of Willis; for Gall represents the hemispheres as the folds of a great membrane which is capable of being unwrapped and spread out, and places the different faculties of man in the different regions of this membrane. The chasm which intervenes between matter and motion on the one side, and thought and feeling on the other, is brought into view by all such systems; but none of the hypotheses which they involve can effectually bridge it over.

The same observation may be made respecting the attempts to explain the manner in which the nerves operate as the instruments of sensation and volition. Perhaps a real step was made by Glisson,¹³ professor of medicine in the University of Cambridge, who distinguished in the fibres of the muscles of motion a peculiar property, different from any merely mechanical or physical action. His work *On the Nature of the Energetic Substance, or on the Life of Nature and of its Three First Faculties, The Perceptive, Appetitive, and Motive*, which was published in 1672, is rather metaphysical than physiological. But the principles which he establishes in this treatise he applies more specially to physiology in a treatise *On the Stomach and Intestines* (Amsterdam, 1677). In this he ascribes to the fibres of the animal body a peculiar power which he calls *Irritability*. He divides *irritation* into natural, vital, and animal; and he points out, though briefly, the gradual differences of irritability in different organs. "It is hardly comprehensible," says Sprengel,¹⁴ "how this

⁹ Lib. vii.

¹¹ Lib. vi. c. 8.

¹³ Cuv. *Sc. Nat.* p. 434.

¹⁰ Lib. iii. c. 1.

¹² Cuv. *Sc. Nat.* p. 384.

¹⁴ Spr. iv. 47.