

years, it was more distinctly delivered in the publications of Mr. John Shaw, Sir C. Bell's pupil. Soon afterwards it was further confirmed, and some part of the evidence corrected, by Mr. Mayo, another pupil of Sir C. Bell, and by M. Majendie.⁸

Sect. 2.—The Consequent Speculations. Hypotheses respecting Life, Sensation, and Volition.

I SHALL not attempt to explain the details of these anatomical investigations; and I shall speak very briefly of the speculations which have been suggested by the obvious subservience of the nerves to life, sensation, and volition. Some general inferences from their distribution were sufficiently obvious; as, that the seat of sensation and volition is in the brain. Galen begins his work, *On the Anatomy of the Nerves*, thus: "That none of the members of the animal either exercises voluntary motion, or receives sensation, and that if the nerve be cut, the part immediately becomes inert and insensible, is acknowledged by all physicians. But that the origin of the nerves is partly from the brain, and partly from the spinal marrow, I proceed to explain." And in his work *On the Doctrines of Plato and Hippocrates*, he proves at

⁸ As authority for the expressions which I have now used in the text, I will mention Müller's *Manual of Physiology* (4th edition, 1844). In Book iii. Section 2, Chap. i., "On the Nerves of Sensation and Motion," Müller says, "Charles Bell was the first who had the ingenious thought that the posterior roots of the nerves of the spine—those which are furnished with a ganglion—govern sensation only; that the anterior roots are appointed for motion; and that the primitive fibres of these roots, after being united in a single nervous cord, are mingled together in order to supply the wants of the skin and muscles. He developed this idea in a little work (*An Idea of a new Anatomy of the Brain*, London, 1811), which was not intended to travel beyond the circle of his friends." Müller goes on to say, that eleven years later, Majendie prosecuted the same theory. But Mr. Alexander Shaw, in 1839, published *A Narrative of the Discoveries of Sir Charles Bell in the Nervous System*, in which it appears that Sir Charles Bell had further expounded his views in his lectures to his pupils (p. 89), and that one of these, Mr. John Shaw, had in various publications, in 1821 and 1822, further insisted upon the same views; especially in a *Memoir On Partial Paralysis* (p. 75). MM. Mayo and Majendie both published *Memoirs* in August, 1822; and these and subsequent works confirmed the doctrine of Bell. Mr. Alexander Shaw states (p. 97), that a mistake of Sir Charles Bell's, in an experiment which he had made to prove his doctrine, was discovered through the joint labors of M. Majendie and Mr. Mayo.