

gratification, and reject those which are useless or hurtful, but may also move from place to place, and enlarge the sphere of its perceptions and of its power. The same mass of nervous substance which, under the name of brain, we have recognised as the organ of sensation, is also, as will afterwards be shown, the organ of volition; and the medium, by which the commands of the will are transmitted from the brain to the mechanical apparatus employed for motion, is again certain filaments of nerves; but these nervous filaments are distinct from those which are subservient to sensation.

Next in importance, then, to the organs of sensation and perception, are those of *Voluntary Motion*. They comprise two kinds of objects; first, the establishment of a certain mechanism having the cohesion, the strength, and the mobility requisite for the different actions which the animal is to perform; and, secondly, the provision of a power, or agent, which shall be capable of supplying the mechanical force for setting this machinery in motion. With these objects must be combined various subsidiary arrangements relating to the connexions, the support, the protection, and other mechanical conditions of the organs of the body. It will be convenient to comprehend these under one general head, considering them as composing the *Mechanical Functions* of the animal economy. They will engage a considerable share of our attention in this work, as affording the clearest and most palpable proofs of contrivance and design.

From the peculiar conditions of the living body, not only with regard to the mechanical properties of its various parts, and the powers by which their movements are effected, but also with regard to the chemical laws which regulate the combinations of elements composing the substance of the body, there is required, as will be more fully explained in the sequel, a continual renovation of that substance. For this purpose new materials are perpetually wanted, and must be as regularly supplied. Hence arises a new class of functions, comprising a great extent of operations, opening a wide