

those distributed to the muscles of voluntary motion, arise. Here, then, we pass from mental phenomena to such as are purely physical; and the impression, whatever may be its nature, originating in the sensorium, is propagated along the course of the nerve to those muscles, whose contraction is required for the production of the intended action. Of the function of voluntary motion, as far as concerns the moving powers and the mechanism of the instruments employed,\* I have already treated at sufficient length in the first part of this work.

Every excitement of the sensorial powers is, sooner or later, followed by a proportional degree of exhaustion; and when this has reached a certain point, a suspension of the exercise of these faculties takes place, constituting the state of *sleep*, during which, by the continued renovating action of the vital functions, these powers are recruited, and rendered again adequate to the purposes for which they were bestowed. In the ordinary state of sleep, however, the exhaustion of the sensorium is seldom so complete as to preclude its being excited by internal causes of irritation, which would be scarcely sensible during our waking hours; and hence arise dreams, which are trains of ideas, suggested by internal irritations, and which the mind is bereft of the power to control, in consequence of the absence of all im-

\* A voluntary action, occurring as the immediate consequence of the application of an external agent to an organ of the senses, though apparently a simple phenomenon, implies the occurrence of no less than twelve successive processes, as may be seen by the following enumeration. First, there is the modifying action of the organ of the sense, the refractions of the rays, for instance, in the case of the eye: secondly, the impression made on the extremity of the nerve: thirdly, the propagation of this impression along the nerve: fourthly, the impression or physical change in the sensorium. Next follow four kinds of mental processes, namely, sensation, perception, association, and volition. Then, again, there is another physical change taking place in the sensorium, immediately consequent on the mental act of volition: this is followed by the propagation of the impression downwards along the motor nerve; then an impression is made on the muscle; and, lastly, we obtain the contraction of the muscle, which is the object of the whole series of operations.