

the intervention of any common centre of action. It is at the same time remarkable that their movements are not effected by means of muscular fibres, as they are in all other animals, the granular flesh, of which their whole body is composed, appearing to have a generally diffused irritability, and perhaps also some degree of sensibility; so that each isolated granule may be supposed to be endowed with these combined properties, performing, independently of the other granules, the functions both of nerve and muscle. Such a mode of existence exhibits apparently the lowest and most rudimental condition of the animal functions. Yet the actions of the *Hydra*, of which I have given an account, are indicative of distinct volitions; as are also, in a still more decided manner, those of the *Infusoria*. In the way in which the latter avoid obstacles while swimming in the fluid, and turn aside when they encounter one another, and in the eagerness with which they pursue their prey, we can hardly fail to recognise the evidence of voluntary action.

To seek for an elucidation of these mysteries in the structure of animals whose minuteness precludes all accurate examination, would be a hopeless inquiry. Yet the indefatigable Ehrenberg has recently discovered, in some of the larger species of animalcules belonging to the order *Rotifera*, an organization, which he believes to be a nervous system. He observed, in the *Hydatina senta*, a series of six or seven gray bodies, enveloping the upper or dorsal part of the œsophagus, closely connected together, and perfectly distinguishable, by their peculiar tint, from the viscera and the surrounding parts. The uppermost of these bodies, which he considers as a ganglion, is much larger than the others, and gives off slender nerves, which, by joining another ganglion, situated under the integuments at the back of the neck, form a circle of nerves, analogous to that which surrounds the œsophagus in the mollusca: from this circle two slender nervous filaments are sent off to the head, and a larger branch to the abdominal surface of