tentacula of the lower animals. These animals use those instruments to grope their way: and they consist of a rigid tube containing a pulpy matter, in which there is a branch of a nerve that possesses, in an exquisite degree, the sense of touch. Now when this instrument touches a body and the vibration runs along the pulp of the nerve, the animal can be sensible only of an obstruction: but where is that obstruction, and how is the creature's progress to be directed to avoid it? We must acknowledge that the instrument moves about and feels on all sides, and that it is the action of the muscles moving this projecting instrument, and the sense of their activity, which convey the knowledge of the place or direction of the obstructing body. It appears, therefore, that even in the very lowest creatures, the sense of touch implies the comparison of two distinct senses.

That insects have the most exquisite organs of sense must be allowed: but we do not reflect on the extraordinary accuracy with which in their movements they measure distances. This can only be an adaptation of the muscular exertion to the sense of vision. The spider which I have already alluded to in a former chapter—the *aranea scenica*, when about to leap, elevates itself upon its fore legs, and lifting its head, seems to survey the spot before it jumps. When this insect spies a small gnat or fly upon the wall, it