

of the power, a most wonderful one certainly, of the animal, to determine, by an effort of its will, that concurrence of conditions on which its activity depends. This remained, as it probably ever will remain, mysterious and inexplicable ; but the principle once established, that there exists in the animal economy a power of determining the developement of electric excitement, capable of being transmitted along the nerves, and it being ascertained, by numerous and decisive experiments, that the transmission of Voltaic electricity along the nerves of even a dead animal is sufficient to produce the most violent muscular action, it became an easy step to refer the origin of muscular motion in the living frame to a similar cause ; and to look to the brain, a wonderfully constituted organ, for which no mode of action possessing the least plausibility had ever been devised, as the source of the required electrical power.*

(380.) It is not our intention, however, to enter into any further consideration of physiological subjects. They form, it is true, a most important and deeply interesting province of philosophical inquiry ; but the view that we have taken of physical science has rather been directed to the study of inanimate nature, than to that of the mysterious phenomena of organization and life, which constitute the object of physiology. The history of the animal and vegetable productions of the globe, as affording objects and materials for the convenience and use of man, and as dependent on, and

* If the brain be an electric pile, constantly in action, it may be conceived to discharge itself at regular intervals, when the tension of the electricity developed reaches a certain point, along the nerves which communicate with the heart, and thus to excite the pulsations of that organ. This idea is forcibly suggested by a view of that elegant apparatus, the dry pile of Deluc ; in which the successive accumulations of electricity are carried off by a suspended ball, which is kept by the discharges in a state of regular pulsation for any length of time. We have witnessed the action of such a pile maintained in this way for whole years in the study of the above-named eminent philosopher. The same idea of the cause of the pulsation of the heart appears to have occurred to Dr. Arnott ; and is mentioned in his useful and excellent work on physics, to which, however, we are not indebted for the suggestion, it having occurred to us independently many years ago.