" 7. That the muscular system, though independent of the nervous system, is so influenced by it that the power of the former may even be destroyed through the nervous system. Exp. 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, compared with Exp. 18, 20, and 23.

" 8. That both the muscular and nervous systems, though independent of the sensorial system, are so influenced by it, that they may even be destroyed through it. Exp. 8, 10, 11, 17, and two last paragraphs under Exp. 19, compared with Exp. 20, 21, and 22.

" 9. That although, in the less perfect animals, we find the muscular life existing alone, and the muscular and nervous existing without the sensorial life, in the more perfect animals they are so connected that none can exist long without the others. See the last paragraph under Exp. 19.

" 10. That nutrition, circulation, and respiration, are the means by which they are so connected."

VII.

Experiments to ascertain the influence of the Spinal Marrow on the action of the Heart in Fishes. By Mr WILLIAM CLIFT.
From the Philosophical Transactions of 1815.

THESE experiments relate to the same subject. Mr Clift was led to make them upon the carp, as an animal exceedingly tenacious of life, and having a simple mode of respiration. They furnished him with the following results:

" 1. That the muscles of the body of a carp, four hours after the brain and heart are removed, can be thrown into powerful action.

" 2. That the moment the spinal marrow is destroyed, these muscles lose all power of action.

" 3. That when water is admitted into the pericardium, and the fish allowed to swim about, the action of the heart ceases sooner than when that organ is exposed to air, and the fish kept quiet.

" 4. That whether the heart is exposed or not, its action continues long after the spinal marrow and brain are destroyed, and still longer when the brain is removed without injury to its substance.

" 5. That the action of the heart is accelerated for a few beats, by exposure of that organ; by exposure of the brain; injury to the brain; destruction of the spinal marrow while connected with the brain; by the connection between the brain and spinal marrow being cut off: while removing the whole brain produces no sensible effect upon the heart's action, and destroying the spinal marrow after it is separated from the brain, renders the action of the heart slower for a few beats."