

of the animal than of the vegetable system; as might, indeed, have been anticipated from the more active and energetic movements required by the functions of the former.

The cellular texture, in its simple form, admits of the ready transmission of fluids through it; but it is necessary, on many occasions, to interpose a barrier to their passage. Such barriers are provided in *membranes*, which are merely modifications of the same material, spread out into a continuous sheet of a closer texture, after the surfaces of the plates have been brought to cohere so as to obliterate all the cellular interstices, and become impervious to fluids. Though equally flexible and elastic with the original texture of which it is formed, the membrane has acquired, by this consolidation, greater strength and firmness, properties which adapt it to a great number of important purposes.*

Membranes are extensively employed to connect distant organs, and often serve to determine the direction and extent of their relative motions. They furnish strong coverings for the investment, the support, and the protection of all the important organs of the body. What Paley has termed the *package* of the organs is effected principally by their intervention. Membranes are also employed to line the interior of all the large cavities of the body, as those of the chest, and of the abdomen, or lower part of the trunk containing the organs of digestion. These membranes, after lining the sides of their respective cavities, are reflected back upon the organs which are enclosed in those cavities, so as to furnish them with an external covering. Their inner sides present every where a smooth and polished surface, over which the organs contained in the cavity may glide without injury. In all these cases, a thin fluid, called *serum*, is provided, which moistens and lubricates the surfaces that are in contact with one another, and obviates the injury that would otherwise arise from friction. From this

* With a view of ascertaining the actual strength of membranes, Scarpa stretched a portion of peritoneum, (which is a very thin membrane lining the abdominal cavity,) over a hoop, and placing weights upon its surface, found it did not give way till it was loaded with fifteen pounds.