or *Aorta*, is seen at A,) to every part of the system; thence returning by the *veins* (V, *v*, *v*,) to the heart. The various modes in which these functions are conducted in the several tribes of animals will be described hereafter. It will be sufficient for our present purpose to state, by way of completing the outline of this class of functions, that, like the returning sap of plants, the blood is made to undergo farther modifications in the minute vessels through which it circulates; new arrangements of its elements take place during its passage through the subtle organization of the glands, which no microscope has yet unravelled: new products are here formed, and new properties acquired, adapted to the respective purposes which they are to serve in the animal economy. The whole is one vast Laboratory, where mechanism is subservient to Chemistry, where Chemistry is the agent of the higher powers of Vitality, and where these powers themselves minister to the more exalted faculties of Sensation and of Intellect.

The digestive functions of animals, however complex and varied, and however exquisitely contrived to answer their particular objects, yet afford less favourable opportunities of tracing distinctly the adaptation of means to the respective ends, than the mechanical functions. This arises from the circumstance that the processes they effect imply a refined chemistry, of which we have as yet but a very imperfect knowledge; and that we are also ignorant of the nature of the vital agents concerned in producing each of the chemical changes which the food must necessarily undergo during its assimilation. We only know that all these changes are slowly and gradually effected; the materials having to pass through a great number of intermediate stages before they can attain their final state of elaboration.

Hence, whenever we can ascertain the degrees of difference existing between the chemical condition of the substance taken into the body, and that of the product derived from it, we are furnished with a kind of scale whereby we may estimate the length of the process required, and the