

of the evaporation from the surface and the pressure of the atmosphere; and the molecular and other conditions, necessary to overcome the force of capillary attraction, and the attraction of the parietes of vessels and ducts. These ought properly to form parts of the curriculum of study, for chemico-hygiene and medicine. They unfold the conjoint mechanical and chemical causes, by which the juices of plants and fluids of animal bodies are moved in the circulation, and also in the process of endosmosis. Like many collateral branches of science, hydrostatics and pneumatics are indispensable to the student of chemico-medicine. In this department, Professor Liebig has done great service, no less to general philosophy than to chemistry, by his treatise on the analogy of the causes of the motion of the sap in plants, and the fluids in animal bodies. These hydrostatic and pneumatic branches open up a new and wide field, from the further cultivation of which the most important results may be anticipated. They are too comprehensive, however, for a work like this, which is designed to give simply an outline of the leading principles of the chemistry of health and disease; and, therefore, are not included in the present treatise.

The analogy between the chemistry of plants and of animals, which is more immediately indispensable to the elucidation of our subject, relates to the unchangeableness of the primary elements, and the equilibrium of the chemical functions of organized bodies. Under the two heads, identity and equilibrium, what is said in the following pages has reference, accordingly, as much to the vegetable as to the animal kingdom. The additional chapter, on displacement, as it relates to the action of the nerves exclusively, is applicable only to animals.

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