different kinds of membranes, this view has been found to be untenable. It has been shown that sodium oleate, a colloid, dissolved in pyridine passes through a thin rubber sheeting such as used by dentists, while sugar and other so-called crystalloids in the same solvent do not pass through to any appreciable extent. It has been found possible to separate by dialysis one crystalloid from another. Experiments such as these have led to the view that osmosis is a solution phenomenon dependent on solvent, dissolved substance and membrane. It is believed that if a substance is to dialyse it must be soluble in the membrane. For instance, crystalloids are diffusible and colloids non-diffusible through bladder tissue and parchment because the former are soluble and the latter insoluble in these membranes. Again a membrane of copper ferrocyanide allows water to pass through because it is hydrated and is therefore capable of picking up water on one side and of liberating it on the other.

This view of osmosis should prove of great value in studying physiological processes, and it has already been applied by Meyer and others in explaining the action of anesthetics. From the behavior of nerve cells in various solutions it is thought their cell membranes contain lipoid substances such as cholesterin, lecithin and protagon. Now ether and chloroform are good solvents of these lipoid bodies, and it is probable this character is a factor in their pharmacological action.

The subject of solution is thus of first-rate importance in studying processes in the animal body. Nowadays the term is held in a much more general sense, solid and gaseous as well as liquid solutions being recognized. The old distinction between solvent and dissolved substance has been given up. Thus we may speak of a solution of a liquid in a solid as well as of a solid in a liquid. For instance, we may say that ether is soluble in cholesterin, and cholesterin in ether.

The action of cell walls in modifying chemical changes will be referred to in my remarks on double decompositions.

The study of catalysis has likewise had a marked influence in the development of physiological and pathological chemistry. Catalytic agents are looked upon as very similar to enzymes. Both are augmentors of the rate of chemical change. Thus ethyl butyrate can be synthesized from ethyl alcohol and butyric acid by the influence of either the enzyme lipase, or the catalytic agent, platinum black. In this connection the preparation of colloidal solutions of platinum, gold, silver, etc., by striking an electric arc between metallic wires under pure