

death, and have been called by Selmi, their discoverer, Corpse-alkaloids or Ptomaines. Some of these compounds are very poisonous, and Brieger calls them Toxines. To such substances are to be attributed the cases of sickness and death we frequently hear of from eating unsound meat and meat preparations. All decaying animal and vegetable matter produces substances dangerous to health in various ways, and among the most dangerous and disagreeable of these products are those resulting from the decomposition of the albumenoids.

But why is it that organic substances when left to themselves are so prone to decomposition? We have seen that they can exist and pass through vegetable and animal organisms, nourishing and sustaining them, and exercising most beneficent influences in the economy of living organised bodies. Why is it that outside of these they behave in an altogether different and most dangerous fashion? What is it that regulates and controls their chemical affinities for good when they form part and portion of an active living organism? More than forty years ago Justus Von Liebig put forth a theory according to which the force which controls the affinities is the vital principle. This theory I have never seen any reason to abandon, and I shall try to state it in Liebig's own words.

"The production of organs, the co-operation of a system of organs, and their power not only to produce their component parts from the food presented to them, but to generate *themselves* in their original form and with all their properties, are characters belonging exclusively to organic life, and constitute a form of reproduction independent of chemical powers.

"The chemical forces are subject to the invisible cause by which this form is produced. Of the existence of this cause we are made aware only by the phenomena which it produces."

"The chemical forces are subordinate to this cause of life just as they are to electricity, heat, mechanical motion and friction."

"Such an influence, and no other, is exercised by the vital principle over the chemical forces."

"The vital principle opposes to the continual action of the atmosphere, moisture and temperature upon the organism, a resistance which is, up to a certain point, invincible. It is by the constant neutralisa-