

consists in forcing the cells of respective organs to produce these side chains in excess in harmony with Weigert's "lesion-theory" (Schädigungstheorie). It is, according to Ehrlich, highly probable that the side-chains must have, according to their special function, different properties. If relatively simple bodies are to be assimilated by the side chains, the presence of a single combining group of atoms will probably suffice. Side chains with such constructed groups of atoms evidently attach to themselves the toxins. But it is entirely different where the assimilation of giant-molecules (*i. e.*, molecules of albumen) is concerned. In this case there is only a preliminary condition for cell nutrition established by the fixation of molecules. Such a "giant-molecule" is useless to the cell until it is divided into minute fragments by fermentative processes. This object is most readily attained when a cell stretches out its protoplasmic process as a bearer of a fermentative group of atoms to bring into closer contact its booty, the giant-molecule of albumen, which then may be digested and assimilated. An analogous practical mechanism where the protrusion of an organ, which catches the booty, possesses at the same time a digesting function, is found in the whole series of the higher digesting plants. The tentacles of the *Drosera*, for instance, which surround the caught object, secrete a fluid which has strongly digesting properties.

That a lysin-action does not take place with reference to toxins, but only in the presence of cell substance, whether it concern bacteria or blood cells, is explained, then, by the fact that the molecules of the latter have a much more complicated chemical structure than the molecules of toxins which represent only a cell secretion. According to Ehrlich, it is to be presumed, therefore, that for the "seizure" of cell substance and other bodies of a highly complicated chemical structure, side-chains of a particular kind exist which possess, besides the "catching" atom-complex, another group of atoms which by the fixation of suitable ferments is capable of creating a process of digestion. If one compels, by the process of immunization, the excessive production of side-chains, the entire side-chain with its two functioning groups of atoms is detached and enters the blood as an immune-body. By Ehrlich's ingenious side-chain theory the surprisingly practical mechanism of specific immunity is made clear and comprehensible, and the phenomenon, that by the entrance of a bacterium into higher living organisms a substance is produced by which the bacterium is destroyed by a process of solution (digestion), made amenable to scientific explanation by an hypothesis which most strikingly harmonizes with exact ex-