All the older studies in embryonic development concern man and the higher vertebrates, especially the embryonic bird, since hens' eggs are the largest and most convenient objects for investigation, and are plentiful enough to facilitate experiment; we can hatch them in the incubator, as well as by the natural function of the hen, and so observe from hour to hour, during the space of three weeks, the whole series of formations, from the simple germ cell to the complete organism. Even Baer had only been able to gather from such observations the fact that the different classes of vertebrates agreed in the characteristic form of the germ layers and the growth of particular organs. In the innumerable classes of invertebrates, on the other hand —that is, in the great majority of animals—the embryonic development seemed to run quite a different course, and most of them seemed to be altogether without true germinal layers. It was not until about the middle of the century that such layers were found in some of the invertebrates. Huxley, for instance, found them in the medusæ in 1849, and Kölliker in the cephalopods in 1844. Particularly important was the discovery of Kowalewsky (1886) that the lowest vertebrate—the lancelot, or amphioxus—is developed in just the same manner (and a very original fashion it is) as an invertebrate, apparently quite remote, tunicate, the sea-squirt, or ascidian. Even in some of the worms, the radiata and the articulata, a similar formation of the germinal layers was pointed out by the same observer. I myself was then (since 1886) occupied with the embryology of the sponges, corals, medusæ, and siphonophoræ, and, as I found the same formation of two primary germ layers everywhere in these lowest classes of multicellular animals, I came to the conclusion that this impor-