arises the many-celled organism. These two different generative substances, the male sperm and the female egg, are either produced by one and the same individual hermaphrodite (Hermaphroditismus), or by two different individuals (sexual separation, Gonochorismus).

The simpler and earlier form of sexual propagation is through double-sexed individuals (Hermaphroditismus). It occurs in the great majority of plants, but only in a minority of animals, for example, in the garden snails, leeches, earthworms, and many other worms. Every single individual among hermaphrodites produces within itself materials of both sexes-eggs and sperm. In most of the higher plants every blossom contains both the male organ (stamens and anther) and the female organs (style and germ). Everv garden snail produces in one part of its sexual gland eggs, and in another part sperm. Many hermaphrodites can fructify themselves; in others, however, copulation and reciprocal fructification of both hermaphrodites is necessary for causing the development of the eggs. By this reciprocal action the disadvantages of in-breeding are avoided. This latter case is evidently a transition to sexual separation.

Sexual separation (Gonochorismus), which characterizes the more complicated of the two kinds of sexual reproduction, has evidently been developed from the condition of hermaphroditism at a late period of the organic history of the world. It is at present the universal method of propagation of the higher animals, and occurs, on the other hand, only in the minority of plants (for example, in many aquatic plants, e.g. Hydrocharis, Vallisneria; and in trees, e.g. Willows, Poplars). Every organic individual, as a nonhermaphrodite (Gonochoristus), produces within itself only