

distinct part, inasmuch as they cover themselves with a capsule, by exuding an outer pellicle or *cell-membrane* (membrana). All other forms of cells, besides these, are of subordinate importance, and are of no further interest to us here.

Every organism composed of many cells was originally a single cell, and becomes many-celled owing to the fact that the original cell propagates itself by self-division, and that the new individual cells originating in this manner remain together, and by division of labour form a community or a state. The forms and vital phenomena of all many-celled organisms are merely the effect or the expression of all the forms and vital phenomena of all the individual cells of which they are composed. The egg, from which most animals and plants are developed, is a simple cell.

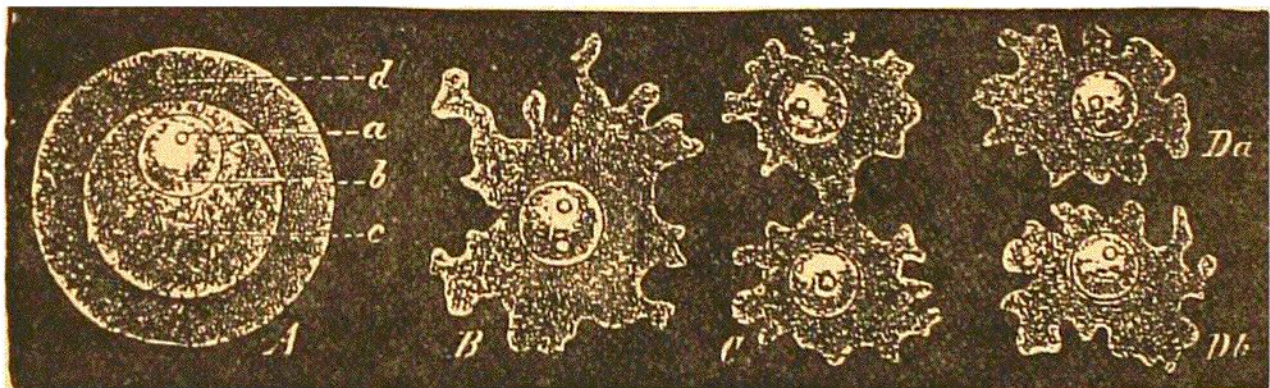


FIG. 2.—Propagation of a single-celled organism, *Amœba sphærocooccus*, by self-division. A. The enclosed *Amœba*, a simple globular cell consisting of a lump of protoplasm (c), which contains a kernel (b) and a kernel speck (a), and is surrounded by a cell-membrane or capsule. B. The free *Amœba*, which has burst and left the cyst or cell-membrane. C. It begins to divide by its kernel forming two kernels, and by the cell-substance between the two becoming contracted. D. The division is completed by the cell-substance likewise falling into two halves (Da and Db).

The single-celled organisms, that is, those which during life retain the form of a single cell, for example, the *Amœbæ* (Fig. 2), as a rule propagate themselves in the simplest way