

THE PHYLOGENY OF THE SOUL

psychic life of the multicellular animals and plants is merely the sum total of the psychic functions of the cells which build up their structure. In the lower groups (in algæ and sponges, for instance) *all* the cells of the body have an equal share in it (or with very slight differences); in the higher groups, in harmony with the law of the "division of labor," only a select portion of them are involved—the "soul-cells." The important consequences of this "cellular psychology" were partly treated in my work on *The Perigenesis of the Plastidule* (1876), and partly in my speech at Munich, in 1877, on "Modern Evolution in Relation to the Whole of Science." A more popular presentation of them is to be found in my two Vienna papers (1878) on "The Origin and Development of the Sense-Organs" and on "Cell-Souls and Soul-Cells."

Moreover, the cell-soul, even within the limits of the protist world, presents a long series of stages of development, from the most simple and primitive to a comparatively elaborate activity. In the earliest and simplest protists the faculty of sensation and movement is equally distributed over the entire protoplasm of the homogeneous morsel; in the higher forms certain "cell-instruments," or *organella*, appear, as their physiological organs. Motor cell-parts of that character are found in the pseudopodia of the rhizopods, and the vibrating hairs, lashes, or cilia of the infusoria. The cell-nucleus, which is wanting in the earlier and lower protists, is considered to be an internal central organ of the cell-life. It is especially noteworthy, from a physiologico-chemical point of view, that the very earliest protists were plasmodiomous, with plant-like nutrition—hence *protophyta*, or primitive plants; from these came as a secondary stage, by metasitism, the