

PSYCHIC GRADATIONS

IV. The fourth stage is characterized by the *centralization* or integration of the *nervous system*, and, consequently, of sensation; by the association of the previously isolated or localized sensations presentations arise, though they still remain unconscious. That is the condition of many both of the lower and the higher animals.

V. Finally, at the fifth stage, the highest psychic function, *conscious perception*, is developed by the mirroring of the sensations in a central part of the nervous system, as we find in man and the higher vertebrates, and probably in some of the higher invertebrates, notably the articulata.

All living organisms without exception have the faculty of *spontaneous movement*, in contradistinction to the rigidity and inertia of unorganized substances (e.g., crystals); in other words, certain changes of place of the particles occur in the living psychoplasm from internal causes, which have their source in its own chemical composition. These active vital movements are partly discovered by direct observation and partly only known indirectly, by inference from their effects. We may distinguish five stages of them.

I. At the lowest stage of organic life, in the chromacea, and many protophyta and lower metaphyta, we perceive only those *movements of growth* which are common to all organisms. They are usually so slow that they cannot be directly observed; they have to be inferred from their results—from the change in size and form of the growing organism.

II. Many protists, particularly unicellular algæ of the groups of diatomacea and desmidiacea, accomplish a kind of creeping or swimming motion by *secretion*, by ejecting a slimy substance at one side.