

different activities of its nature. Further, having taken these small food particles into its interior, it changes their nutritive parts into the substance of its own body, and thus maintains its life, while it casts out what is of no use to its economy. In other words it can *digest* food.

I might go further into the life history of this interesting creature, but I think I have said enough for my purpose. I have shown that this structureless speck of protoplasm has distinct powers—contractile, sensitive, digestive. Whence have these powers come?

1. So far as scientists know the Protamœba has had no ancestor. While an ancestor is not inconceivable, it is as yet undiscovered, and till it is discovered we may safely assume that Protamœba was among the first of organisms. Haeckel calls it "the most primary of all organisms without exception." Protamœba then received its powers from no parent, and the law of heredity disappears.

2. Neither has environment imprinted these powers on the soft protoplasm. Environment could not ever produce the protoplasm, much less could it originate active powers. When on a Summer's day, the great heat (environment) makes us perspire (form of activity), we say that the heat is the *occasion* of the perspiration, but that the *cause* is the influence exerted by an excited nervous system on blood-vessels and sweat glands. But the nervous system and blood vessels and sweat glands must be *there* in order to be affected. In the same way, the active powers of the Protamœba must be there to be stimulated by the environment in which it is placed. In short, passive environment cannot produce active organism.

3. From the mere statement of the case it is evident that neither Protamœba nor its powers are the product of the struggle for existence. Existence is granted; while struggle implies a present power to cope with an adversary.

4. The next possible hypothesis is that of Haeckel's—*Spontaneous Generation*. He holds that "there exists no insurmountable chasm between organic and inorganic nature."* He thus prepares us for his subsequent conclusion, that "the simple cytodes, naked particles of plasma without kernel, like the stil