EVOLUTION OF THE GERM-PLASM

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A definition of terms seems to be the first requisite in a discussion of this subject. By “germ-plasm” we mean a distinctive substance, endowed with all the properties of life, but especially with that of reproduction, which here is, in some measure, unique. Equivalence is an inherent characteristic of organic reproduction, and it holds in respect to the germ-plasm itself; but, whereas commonly the influence of a part is continuously the same, that of the germ-plasm is cyclically different. It involves elements which mark the race and so it may be denominated “racial material.” It is customary to distinguish between “germ-plasm” and “soma-plasm,” both being nuclear, one concerned with racial processes, the other with those of the individual. This distinction is, however, purely arbitrary and may lead to misunderstandings. Such a distinction was suggested by the presumed functional differences between the macro- and micronuclei of certain Protozoa. But if the germ-plasm is defined specifically as “that substance, or organization, which distinguishes a chromosome complex” then it is essentially the same in both germ and somatic cells. Mere observations tell us that the chromosome complement of germ and somatic cells is one, both being derived by direct descent from that of the original zygote. Finally, and in a more abstract sense, the germ-plasm may be defined as “the temporal record of racial experience.” However conceived, it has the properties of continuity, specificity and control of organic processes.

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