

ORGANISM AS NATURAL BIOCOMPUTER

The computer model of the organism assumes importance and relevance in view of its ability to explain the non-physical biological program. A living organism can be viewed as natural biocomputer or biorobot (particularly animal) whose development and functioning are determined by an integrated software program, the bioprogram. The cell, the basic unit of a living system, is a biochip. All the visible structures in the cell (organelles and nuclear structures including DNA), tissues and organs at the level of the organism constitute the hardware. Since the hardware components (chemical structures) are intended for the execution of the program, they are produced in the cell in accordance with the software program as can be inferred from the cytological differences among the tissues of the body. In computer parlance *the biosoftware is an integrated program or sets of instructions in the right sequence for the development of the organism, execution of various bioprocesses, its behaviour, instincts, habits and every other task performed by the natural biocomputer, the organism.* While introducing the concept of the gene in 1909, Wilhelm Johannsen cautioned that there is no gene for each character, and the gene is not a physical entity. However, in the 1950s the non-physical gene metamorphosed into molecular gene (physical gene). The Quranic revelation of *rooh* (or *nafs*) as the cause of life validates the non-physical nature of the biosoftware (*ghayb*) and Wilhelm Johannsen's concept. Therefore, it is justifiable to consider that biological program is not constituted by a chemical structure. It has no visible features and is comparable with a computer program stored on a storage medium (e.g., disk). The storage device (biomemory) of an organism is the chromosome in the cell (Fig. 1). In this way, Johannsen's "non-particulate gene" can be conceived and applied to biological systems in the light of the Quran.

The existence of non-physical biological program in the cell is quite similar to the program (or information) stored in our computer. Effectively, the program stored on a computer disk is intangible to us, and for all practical purposes it is 'non-physical' and can be considered as the "soul" of the computer. All it needs is a physical medium for storage. For instance consider a memory disk before and after storing some information. The disk is virtually identical in its chemical structure before and after storing the information, and the stored information is literally non-physical. On the same lines the divine biosoftware stored on the chromosome of the cell can also be thought of. The stored program in our computer forms the artificial counterpart of the biosoftware stored in natural biocomputer, the organism.

Death is the result of deletion of the *rooh* (or *nafs*) from body cells while life is the manifestation of the execution of the divine biosoftware.



