

#51

MECHANICAL LIFE

by

RICHARD R. SLOMON

Copyright © 1973 by Richard R. Slomon
all rights reserved

50

MECHANICAL LIFE
Richard R. Slomon
May, 1973

Life is a local reduction of entropy and as such it can be conceived as biomechanical, organomechanical or even purely mechanical. In essence, life must be greater than biology. Thus far, biological life has been effectively mutable only on the species level. The individual has been a nonelective vehicle of mutation. Individuated control of adaptive mutation is minimal in biological life. This is ultimately inefficient and could possibly lead to the extinction and replacement of biological life by other more efficient life forms. In sum, life must outreach probability through its adaptive complexity and diversity if it is to survive.

Nonbiological life of a conscious order could be mechanical and as such, mechanical life could be electively mutable on the individual level. The discrete individual would become the arbiter of mutation. I.e., the individual replaces the species as the effective unit of change. The discrete unit becomes a species unto itself. Mechanical life, then can be conceived as adaptively more efficient by providing a potentially infinite variation. And the lifespan of each variant discrete unit can be seen as perpetually extendable through continuous self mutation. Accordingly, mechanical life would exhibit a much greater adaptive complexity and diversity.

Some forms of biolife such as insects have what could be called quasi-mechanical qualities in the rapidity of adaptive mutation.

By comparison, more complex forms of biological life suffers an exceedingly high loss rate of information through the death of its units. Conscious level bioforms devote large amounts of energy in the rearing and education of new replacements. At this level, the loss of old units represents a higher net cost to the species since information is primarily extragenetic. Some information is retained from past units, however, this represents only an incremental growth. The problem for incremental structures lies in the instability of probability. In general, biological life is further limited by the chance occurrence of positive mutation, leaving an infinite number of potential niches unfilled. The level of speciation in biological life is relatively limited.

Terrestrial life is conceivably to be supplanted by conscious mechanical mutations. These will most likely radiate from the most advanced forms of biological life. This can be seen as analogous to the early evolution mammaloid features in Mesozoic reptiles. Logically we should expect the appearance, first of composite biomechanical units e.g. cyborgs and neurocyborgs rather than conscious mechanical systems. Biogenetic engineering and other organic manipulations such as cloning will provide some adaptive efficiencies, however, these will tend to be primarily preventative or other than innovative adjustments.

Composite biomechanical units will be used in the exploration of space. Organic features will remain primary due to the compactness of the neurological payload and the relatively low cost supply and maintenance of biounits. The availability and versatility of the human will for some time obviate the need for advanced mechanical units. Computers and various servomechanisms will increasingly replace non-adaptive biofeatures in non-terrestroid environments. Eventually, the inefficiencies of biological adaptation to space environments will promote the transition to synthetic mechanical body replacements. The mechanical extension of the organic neurocerebral system will bring about a totally mechanical consciousness. From that point, many niches in this solar system may well be filled by mechanical life.