

BIOGENESIS, ABIOGENESIS, BIOPOESIS AND ALL THAT

CARL SAGAN

Laboratory for Planetary Studies, Cornell University Ithaca, N.Y. 14853, U.S.A.

The recent notes by myself (1974) and Kenyon (1975) in this journal underline a problem familiar to those who compile dictionaries: The usage of words changes either because the originally accepted definitions become inappropriate to changed circumstances or because of careless usage (as, for example, the Americanism 'chaise lounge'). We clearly have such a situation today with the word 'biogenesis' which is being used to mean both the origin of life from life and the origin of life from non-living matter.

If a word is used to mean both a thing and its opposite, there is a certain potentiality for confusion. On the other hand, the word abiogenesis has only one meaning dating back at least to the time of T. H. Huxley, passages from whose book *Biogenesis and Abiogenesis* I quoted in order to show the seriousness of content of discussions on the origin of life at that time.

When we are faced with the choice between an ambiguous and an unambiguous definition, it would seem wise to choose the latter. Alternatively, there is the word 'biopoesis', introduced by N. W. Pirie, which has the disadvantage of unfamiliarity, the advantage of unambiguousness and the satisfying feature that its adjective, biopoetic, carries some unintentional hint of the nature of present studies on the origin of life. In any case, it would seem desirable for the International Society for the Study of the Origin of Life to regularize such language usage, and Dr Richard Young tells me that a committee to study the matter is being appointed.

References

- Kenyon, D.: 1975, *Origins of Life* 6, 447.
Sagan, C.: 1974, *Origins of Life* 5, 529.