

SCIENCE UPDATE: COLLOIDS, PROTOPLASM, AND MOLECULAR BIOLOGY

By Jeffrey A. Mordkowitz

Korzybski's 1933 writings on colloids and protoplasm (1) were fully supported by the theories and data produced by the leading scientists of his day (2). In 1985, despite some specific statements he made overestimating the unique importance of "colloidal behavior" as a basis for life, Korzybski's generalizations on the importance of structure (physical, chemical, biological, etc.) for understanding 'life' and human behavior have as much validity today as they did then. The new molecular, biological disciplines of neuroendocrinology and neuropsychopharmacology, for example, now supply the data for understanding the submicroscopic mechanisms of our semantic reactions (s.r.) whereas in 1933, Korzybski's explanation of s.r. focused on their relation to "colloidal levels" (3). (Colloidal chemistry, by the way, is considered the forerunner of today's protein chemistry and molecular biology (4).)

Sir Peter Medwar, a Nobel prize winning biologist and epistemologist sums up quite nicely the relationships between the old and the new and of the continuing importance of structure and order: "For many years the mystique of protoplasm lingered on in the belief that life might be a manifestation of the behaviour of some complex, exquisitely well-balanced colloidal system.... Today, however, it is no longer believed that colloidal chemistry is a special sort of chemistry -- that colloids have properties other than those to be expected of solutions of very large molecules that often bear electric charges. Indeed, the 'basis of life' -- if such a phrase has meaning -- is structural in an almost crudely anatomical sense: molecular transformations occur in a certain sequence and in a certain place because the agencies through which they are mediated (mainly enzymes) enjoy a certain orderly structural arrangement.

Electron microscopic examination of cells reveals solid structures which have definite shapes.... As theories of the protoplasmic genre have quietly disappeared from view, it is to the expert in high resolution electron microscopy...that we now look for an understanding of the way things are ordered in biological systems." (5)

(1) Korzybski, A. (1933) Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics. The International Non-Aristotelian Library Publishing Company, 4th ed. 1958.

(2) Alexander, J. (1928), editor, Colloid Chemistry: Theoretical and Applied. Volume II: Biology and Medicine. The Chemical Catalog Company, New York.

(3) Korzybski, A. Science and Sanity, op. cit., p. 116.

(4) Hirsch, J. (1973) Introduction to the Dover edition of Loeb, J. Forced Movements, Tropisms and Animal Conduct. Reprinted by Dover Publications, New York, p. v.

(5) Medwar, P.B. and Medwar, J.S. (1977) The Life Science: Current Ideas of Biology. Harper and Row, New York, pp. 10-11.

ERRATA:

SUSAN PRESBY REVISITED

In the last newsletter several errors were made in Introducing Susan Presby. We reported her being a work-study person at the Institute of Rational Mode Therapy. Dr. Presby is, in fact, a supervising psychologist at the INSTITUTE FOR RATIONAL-EMOTIVE THERAPY. We regret the errors.

CHARLOTTE READ

In Speaking of Moving, an extra word, sweaty, which Mrs. Read eschews, was included. We regret its inclusion.

Article originally appeared in *IGS Newsletter*, April 1985, published by the Institute of General Semantics.

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