

Organized, Not Organic

Philosophy of Science

WILLIAM E. RITTER and EDNA W. BAILEY, in *The Organismal Conception: Its Place in Science and Its Bearing on Philosophy* (Univ. of California Press):

Some biologists are somewhat piqued by the serious proposal made by Whitehead to call all sorts of existences, atoms and molecules not excepted, *organisms*. Some scientists are quite willing to speak, in a half-metaphysical sense, of atoms and molecules as having life, especially psychic life; but they feel it is going too far to talk about them as organisms. We share this latter feeling somewhat, but not from any sense of sacrosanctity of the term organism. It is rather a question of whether the organization of an atom has enough attributes-in-common with the defining attributes of the simplest living being to warrant admitting the atom into a class of natural objects which has been so long and usefully recognized as has that of organic nature, in contrast to inorganic nature. We have reached a stage in our interpretation of nature wherein we ought to rid ourselves of the supposition that any part of nature is really unorganized, or inorganic; but this is very different from saying we are no longer justified in distinguishing between not-living, or inanimate nature and living, or animate nature. We need to recognize that all nature is organic, but that one vast subdivision of it is composed of inanimate organic beings while another vast subdivision is composed of animate organic beings.

The biological naturalist hesitates about accepting as alive systems organized on the plan of the solar system or the atomic system until there has been discovered something more tangible than has yet been reported connecting the central bodies (sun and proton) and encircling bodies (plants and electrons); and until something resembling metabolism, reproduction, and response to stimuli is made out for these systems.

Science News-Letter, December 29, 1928

No cases of tularemia have been found in New England or New York as yet.

An airplane route from Cairo to Jerusalem covers in less than three hours the journey which the Israelites made in forty years.

Zoological Meetings—Continued

her eggs into the water, and the male his sperm, and the myriads of their potential offspring achieve fertilization pretty much by chance as they float.

Yet in spite of this long-range wedding the presence of individuals of opposite sex produces a mutual reaction even in such lowly forms of life, Dr. Paul S. Galtsoff of the U. S. Bureau of Fisheries told the zoologists. A little quantity of the sperm will cause the female to lay eggs copiously. But after thus responding, the female will remain unresponsive to further stimulation of the same sort for several days.

Conversely, the male oyster can be induced to discharge sperm by means of adding eggs to the water flowing about him. Unlike the female, he will respond every time eggs are added.

Electrons Cause Mutations

The mutations, or sudden evolutionary changes, that can be caused by exposing living organisms to X-rays, radium and similar powerful radiations, are probably due to high-speed negatively charged electrons, or beta rays. Such rays are given off directly by radium, and arise as a result of X-ray bombardment of solid matter.

The researches on which this conclusion is based were described before the American Society of Zoologists by Dr. Frank Blair Hanson of Washington University, St. Louis.

Dr. Hanson exposed fruit flies to the action of radium, giving different sets of them varying degrees of protection behind thin lead screens. The number of mutations produced varied according to the degree of protection. Then he made measurements of the number of beta particles that got through the same set of screens, and found that these varied in exactly the same numerical proportion as the mutations. In brief, the more intense the beta-ray bombardment the more frequent the mutations.

Heart Beats Backward

The butterfly, immemorably the symbol of inconstancy, has a heart that often beats backward, Prof. John H. Gerould of Dartmouth College told the zoologists. He has dissected numbers of these insects, and has demonstrated this strange behavior many times.

The heart of an insect is in its back instead of its chest, and consists merely of an enlargement in a long blood vessel, much like the bulb in the middle of a rubber syringe tube. A beat will start at its rear end and travel forward, squeezing the blood on ahead of it. After repeating this several times, the heart will pause, and then a beat will start at the forward end, sending the blood in the opposite direction. Occasionally the beat will start in the middle, sending the blood both ways. It seems to make no difference to the butterfly.

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Philological Meetings—Continued

guistic Society of America, stated that more than 500 Arabic words have found their way into English, beginning in early times.

Camel and Saracen appear in Old English writings, he reported. In the twelfth and thirteenth centuries, English absorbed such words as admiral, assassin, rice, and saffron. In the fourteenth century came alchemy, cipher, hazard, lute, and syrup. The age of Elizabeth brought not only sheikh but gazelle, jar and tariff. And soon after came harem, jinn, lilac, and minaret.

Arabic words have usually entered English by way of the Spanish, French, or other European languages, Prof. Hitti pointed out.

Direction of Writing

Jews, Arabs and other Near Eastern peoples "write backward," according to Occidental notions, because ancient Egyptian art conventions demand emphasis of the right side-view

of the person in action. As picture-making led to picture-writing or hieroglyphics, and this was simplified into easier systems of writing in Egypt and among the nations that learned how to write from the Egyptians, the old art convention remained as a script convention.

This story of the origin of the right-to-left direction of Semitic writing systems was advanced by Prof. N. Reich of Dropsie College, Philadelphia. Only when the much more recent Indo-European alphabets were invented, Prof. Reich said, was this ancient convention abandoned in favor of the left-to-right arrangement now most widely used.

Science News-Letter, December 29, 1928

Tests at the Mellon Institute of Industrial Research indicate that wood flooring has about as much resistance to wear and denting as marble.