The Chemistry of Life

Chemistry

ALBERT P. MATHEWS, in *General Cytology* (Univ. of Chicago Press):

The biochemist, indeed, has been transformed into an electrical engineer, but an electrical engineer in embryo, in process of becoming; for he is not yet able to understand completely the battery which is put in his charge. He cannot yet construct even the simplest of these; he cannot set one battery and the motor attached to it running or even stop one already running in such a manner that he can set it going again, although he may slow it almost to stopping and increase the speed once more; indeed, he can do no more as yet than see that water and proper chemicals are put in the battery and that the bearings of the motor are oiled and that it is kept reasonably clean. He is rather a cleaner and oiler than the engineer. He is still in the apprentice period of his career. But guided by the great Engineer, Chemical, Electrical, and Mechanical in one, who planned the machine, he hopes some day to make repairs necessary to keep it going for a longer period, and ultimately to make similar machines of a simple kind himself.

But even when we have a reasonably clear picture of these physical things, we cannot make a complete explanation of the chemistry of the cell until we know another and equally important factor which is at present wholly neglected by the chemist and physicist, namely, the psychic element which is the most characteristic, indeed, one might say *the* characteristic thing in living organisms. For living organisms are the largest, as they are the only, psychic units yet recognized. Living things show an attribute which we may call mentality or psychism, and this psychism is as yet unrecognized elsewhere than in living things. No one speaks of the psychology of this great rock upon the illuminated surface of which we crawl, our mother-earth; no one, that is, but the poets, those inspired seers of truth, who catch a glimpse through the fog of the great mountain peaks ahead of us. But who can deny to the inorganic earth that which is in the same inorganic elements when in the organized, the organic form? The biochemist of the future then must be more than an electrical engineer, for he must be poet and psychologist as well.

The psychologist of the future will discuss the psychology of hydrogen, of oxygen, indeed that of the electrons, positive and negative, themselves. For who can doubt that those properties of the atoms which show themselves in the psychical phenomena of living things are also present in the same atoms in the inorganic form? For the atoms are the same in living and lifeless, and every moment they are turning from the one to the other. As Du Bois Reymond put it, the atoms of iron in the great driving wheel of the locomotive and in the brain of the poet are the same.

Science News-Letter, May 5, 1928

The Timeless Hills

Geology

LEONORA SPEYER, in *Fiddler's Farewell* (Knopf):

What are a million years?

These spread peaks
Are Eternity's stone fingers
On which she reckons the rhythm
Of centuries.

And they say the jungle crawled, lush and savage
In this ascetic place.
Once I saw a glacier-rock
Lying numbered on a museum-shelf,
And as if carved upon it,
The drooping slender outline of a palm-leaf
Fallen from a too hot sky.

Count on, stone fingers!
Fingers of ice, recount these careless wonders!

The sea was here.
Hidden beneath the ripples of oncoming hills,
Cattle are grazing on its grassy floor;
The sound of bells drifts by
Like sea-weed on the surface of the air.

What are a million years?

Science News-Letter, May 5, 1928

Science and Literature

General Science

SIR RICHARD GREGORY in an address before the British Science Masters' Association; quoted in *Nature:*

We are not likely ourselves to forget that science and the humanities are the warp and woof of the fabric of modern life any more than we overlook the human factor in industry; but while these relationships are frequently presented to scientific assemblies, we miss the same friendly gestures to science from our literary colleagues. Men of letters tell us that men of science are the only people who have something to say and are unable to say it and we accept the rebuke, even though we know the difficulty of making the intricate processes of Nature intelligible in the vocabulary of the ordinary life. Our retort, however, may very well be that men of letters should be expected in these days to know a little of Nature and science and to be able, therefore, to exercise their literary art in displaying the wonder and value of the rare treasures which the argosies of scientific explorers are continually bringing into our havens from uncharted seas. Science does not want a divorce from literature but closer union with it and a common understanding of the distinctive qualities by which each can contribute to the fullness of life. It would be easier to mention leaders of science who have enriched literature by their writings than to select men of letters who have exercised their imagination and art upon scientific knowledge and achievement; and we ask those who have the gift of radiant expression to remain no longer outside our temples but to enter and be moved to testify to the revelation which will then be given them.

Science News-Letter, May 5, 1928

A federal game warden reported the estimate that five million robins flew over his head in thirty minutes in Randolph County, N. C.

After eight years of civil aviation in England, the British service covers 2,500 miles of air routes in Europe and the Near East.

Old historians said that an Egyption pharaoh of about 600 B. C. sent out a fleet of ships manned by Phoenician sailors to sail around Africa.