

GENERAL SCIENCE

Nature's Editor Urges Science in Social Problems

Scientific Studies in Realm of Social Biology Declared More Important Than Physical Science Work

WHEN an entomologist looks at an ant-hill and writes learnedly and interestingly about what happens in that insect community, that, admittedly, is science. But when social workings of a nation or the world are viewed with a critical, scientific mind, the cry is likely to arise:

"That's not science."

Physicists, chemists and biologists have been reluctant to admit economics, political theory and practice, history and sociology into the category of "science." But an increasing volume of scientific voices has warned that those who give new command of natural forces have an obligation to see that research is put to socially safe uses.

An eminent British man of science, Sir Richard Gregory, Bart., editor of *Nature*, is the latest to urge (*Nature*, June 13) that "it is the duty of men of science to assist in promoting more worthy uses of the new powers they are continually placing in the hands of the community." Otherwise the world seems likely to be reduced to "a place of dust and ashes."

"The impacts of science with society are now so numerous that scientific studies in the realm of social biology are even more necessary for civilized life than researches in the physical sciences," Sir Richard contends.

Ironical Comment

"It is an ironical comment upon modern civilization that the social reaction to the gifts of plenty made possible by the progress of scientific knowledge is not a corresponding increase of human welfare but distress and unemployment and the prostitution of scientific effort to purposes of destruction.

"In so far as science has brought about increased control over the forces of Nature, it accepts responsibility for these conditions. It insists, however, that such deplorable consequences are not essential, but are due to the neglect of the application of scientific methods to the solution of social problems.

"Our distributive and economic system remains on the basis of a pre-

scientific age, wholly unadjusted to the needs of a changing world, and unable to bear the burdens placed upon it by the problem of new and almost incredible abundance.

"Science can provide the world with everything required for the maintenance of a growing population in a rising standard of comfort; but there are no accepted principles for the right use of the new powers, and international agreements are mainly adjustments of national interests conceived in confined political atmospheres and determined by expediency. While this spirit prevails, the prospect of finding a formula which will unite civilized peoples for the general well-being of humanity seems almost hopeless.

"A regenerative influence is required to save civilization from disaster, and the mission of science in the changing world of today should be to introduce

it into the field of social biology, and thus enable us still to believe in the highest destiny of man."

Science News Letter, July 18, 1936

PHYSICS

Model Indicates Cosmic Ray Path About the Earth

See Front Cover

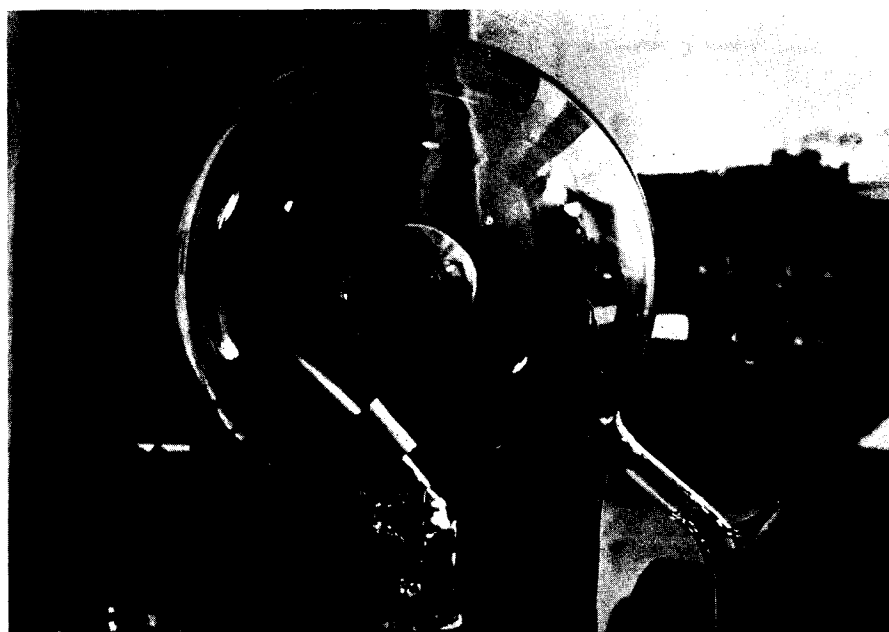
TO EXPLAIN the magnificent spectacle of the aurora borealis it was long ago suggested that our planet continually receives a bombardment of high speed electrically charged particles. At that time, however, no other evidence for such electrical showers existed.

When that subtle influence called cosmic radiation was discovered, and found to consist, in part anyway, of fast-flying electrical particles, this explanation of the aurora was verified.

For some of these charged particles (those of lower energy) are concentrated by the earth's magnetism around the magnetic poles. Breaking up atoms as they stream through the polar atmosphere, the luminescence known as the Northern Lights is produced.

Possibly originating in stars, this cosmic rain of electricity gives us a new contact with the material universe and may hold many secrets pertaining to stellar constitution.

The effect of the earth's magnetic



PATH OF COSMIC RAYS

Here is a daylight view of the model shown on the cover. They demonstrate strikingly the bending of cosmic rays by the magnetic field of the earth. The inner glass sphere represents the earth. The outer sphere is a vacuum bulb. The "cosmic rays" are streams of 100-volt electrons which can be deflected by the small magnet in the center.