

GENERAL SCIENCE

Social Sciences Debated On By Physicist and Economist

Transmission of Scientific News to Public Discussed By Notables at Conference Sponsored by Science Service

ARE the social sciences really sciences? Can economics and the other studies that bear immediately and intimately on human affairs be handled with the same detached objectivity that is possible to a physicist sifting cosmic rays as they dart in from the depths of space, or to a biologist as he pries into the life of a germ or an insect?

This question became the subject of a brief friendly debate between a noted physicist and an equally noted economist at the dinner following a conference called by Science Service to discuss possible improvements in the transmission to the public of scientific news and information.

The question was first raised during the afternoon conference by Robert P. Scripps, editorial director of the Scripps-Howard newspapers, whose father, the late E. W. Scripps, was the founder of Science Service. The ruling idea in his father's mind when he launched the enterprise, Mr. Scripps said, was to benefit humanity by the wider dissemination of scientific knowledge and method; and he suggested, as in line with this tradition, the possible advisability of adding the so-called social sciences to the scope of Science Service's work.

Expressed Doubts

In his evening address, Prof. Robert A. Millikan, director of the Norman Bridge Laboratory of the California Institute of Technology, expressed frank doubts as to whether the social sciences are really scientific. The thing that really characterizes a science, he said, is the existence of a large body of facts, a universally accepted doctrine. A science such as physics, he pointed out, is based on such a body of facts, and though this basis may be added to, the later additions work no essential change in the earlier known truths. There is, of course, always a margin of disagreement, usually over new developments, but as compared with the main body of the science this is very narrow.

In economics and the other social sciences, Dr. Millikan held, an exactly

opposite condition obtains. The body of agreed-on doctrine is vanishingly small, and the field in which experts disagree comprises almost the whole of the science. Furthermore, the disagreement extends beyond questions of fact into the lightning-charged field of the emotions and human passions, so that the conflicts arising therein are much more intense than they are in the more academic realm of the physical sciences. For this reason, the speaker concluded, it would seem inadvisable, perhaps dangerous, for an organization like Science Service to undertake an extension of its activities into the social science field at the present time.

Dr. H. G. Moulton, president of the Brookings Institution, Washington, D. C., spoke as an active champion of the social sciences, as having an intimate and potentially useful bearing on human life and as being susceptible to a really scientific approach. Economics was once as definite a science as physics, he said, at least so far as having a definite basis of agreed-on doctrine is concerned. It has only been during the past one or two generations that this apparently solid basis has been dissolved by the revolutionary changes brought about by recent world events. The facts of economics and the other social sciences are still there, he insisted, and still capable of the impartial and objective treatment demanded by true scientific method. He felt that they constitute a challenge to an institution for the popular dissemination of knowledge, like Science Service, and that work in this field would be a quite proper undertaking.

The remaining discussion during the evening session was given an entirely different turn by Dr. John H. Finley, associate editor of the *New York Times*. He spoke of the problem from an editor's angle, stressing the constant necessity of working with speed yet with accuracy, of maintaining a balance of material selected, of watchfulness against propaganda from any source, and of the editor's need to "know a little about everything, and to know where to turn

to find out everything about anything."

Dr. William H. Welch of the Johns Hopkins University, "the Dean of American Medicine," presided at the evening meeting.

During the afternoon session, a succession of five-minute talks by various eminent scientists and representatives of the press set forth a symposium of views on the more immediate problems involved in getting correct information on scientific advances and scientific methods before the general public. The conference was held in the building of the National Academy of Sciences, immediately after the close of the spring meeting of the academy, and a majority of the scientists present were members of that organization, often called "the Senate of American Science."

Tribute to Founders

In opening the discussion, Dr. J. McKeen Cattell, editor of *Science* and president of Science Service, paid a tribute to the late E. W. Scripps and to Dr. William E. Ritter of the University of California, as co-founders of Science Service. "If Scripps was the Charlemagne who could do all this with a high hand, Ritter was the Alcuin who advised him," he said.

Then, in rapid succession, the scientists and newspaper men voiced their opinions and suggestions.

Dr. Simon Flexner, director of the Rockefeller Institute for Medical Research, New York City, spoke of the need for more than ordinary precaution in handling medical news, and suggested the advisability of submitting all items to an advisor well qualified in medical science.

Dr. Karl T. Compton, president of the Massachusetts Institute of Technology, expressed the wish that scientific institutions and organizations might "feed in" important and desirable news items, so that they may receive prompt and adequate notice.

Dr. Frank B. Jewett, president of the Bell Telephone Laboratories, spoke on the necessity of informing people not only on new scientific discoveries but on scientific method and outlook as well. The rulers of the world are uninformed of the natural forces that control the world, he said, and much of the present crop of disastrous legislation is such simply because it runs counter to natural laws. If it is to be avoided, and wise laws passed, the lawmakers must be given information.

A. H. Kirchhofer, managing editor of the *Buffalo Evening News*, spoke as

a representative of the press. He asked for more mutual tolerance and patience between scientists and newspapermen, and expressed the belief that news stories on scientific subjects would be more satisfactory both to editors and to scientists if the latter would give intelligent reporters their cooperation.

Dr. John C. Merriam, president of the Carnegie Institution of Washington, after warning newspapermen against trying to make "good copy" and big headlines out of researches still in the discussion stage, concluded with the suggestion that the knowledge of interest by the public in such unfinished problems may stimulate scientists to express their findings more clearly and understandably when they finally reach them.

Dr. A. A. Noyes, director of the Gates Chemical Laboratory of the California Institute of Technology, made two suggestions: first, the desirability of making clear the evidential status of any announcement put forth as a news item; second, the possibility of using younger scientists in the various laboratories and universities as local correspondents.

Concept of Accuracy

Prof. E. B. Wilson of Harvard University School of Public Health called attention to the differing aspects of the concept of accuracy, depending on the audience to whom a given scientific discovery or fact is to be presented. Details that are absolutely essential before a group of scientists may only befog the picture if they are used before a lay audience, and thus destroy instead of making accurate the image that gets into the minds destined to receive it.

Dr. Charles G. Abbot, secretary of the Smithsonian Institution, registered strong approval of a new Science Service enterprise, the distribution of low-priced phonograph records giving brief talks by leading scientists, and expressed the hope that further issues of this sort would be made.

Dr. W. F. G. Swann, director of the Bartol Research Foundation of the Franklin Institute, Philadelphia, voiced his faith in the ability of "the man in the street" to understand science if it is properly presented. He said, "I would much rather talk about relativity to an intelligent lawyer or an intelligent clergyman than to a bad physicist."

Dr. Francis G. Benedict, director of the Nutrition Laboratory of the Carnegie Institution of Washington, in Boston, stressed the desirability of care and accuracy in reporting medical discoveries, because of the great immediate im-

portance of these to human life, and the possible lamentable consequences of even apparently minor error.

Dr. Paul R. Heyl of the U. S. Bureau of Standards suggested that general summaries or reviews of progress in science might be well received, and would be useful to scientists as well as to the lay public.

Dr. A. E. Kennelly of Harvard University called attention to possible errors of impression that readers might receive if undue emphasis is placed on the wrong point in reporting a scientific discovery or event. He also made a plea for the expression of quantitative results in the metric system, "the international language of science."

Prof. Charles R. Stockard of Cornell University Medical College reinforced previously expressed pleas for a high degree of accuracy in reporting medical news. He further suggested the desirability of explaining properly how animal experimentation is used in working out medical advances, as a counter to antivivisection propaganda.

Prof. Joel H. Hildebrand of the University of California expressed his desire that science articles intended for the general public give not merely the news of discoveries but that they also stress the importance of the scientific method in thinking and working.

Dr. T. Wayland Vaughan, director of the Scripps Institution of Oceanography, La Jolla, Calif., declared that his relations with the press had always been satisfactory, because he was willing to meet intelligent newspapermen half way. He recommended cooperation to his fellow-scientists.

Prof. Richard M. Field, Princeton University geologist, called attention to the natural interest of the public in the economic aspects of science, and in economic questions generally.

Dr. F. P. Keppel, president of the Carnegie Corporation of New York, commended Science Service for having "stuck to its last," and said he hoped it would continue to do so.

Dr. F. G. Cottrell, chemist and inventor of the precipitation process, laid fresh emphasis on the necessity of presenting science as news to newspapers.

Capt. J. F. Hellweg, superintendent of the U. S. Naval Observatory, spoke briefly on "what should not be printed."

Prof. Knight Dunlap of the Johns Hopkins University contrasted conditions in science news reporting since Science Service entered the field with what they were before that time, and expressed the hope that this organiza-

tion would continue its work independently, not only for the work it is doing itself but for its stimulating effect on the science reporting of the other newspaper syndicates.

Dr. W. H. Howell, chairman of the division of medical sciences of the National Research Council and chairman of the executive committee of Science Service, closed the discussion with an expression of thanks to his fellow-scientists for their cooperation in the work of Science Service.

Science News Letter, May 7, 1932

PSYCHOLOGY

Leaders, Criminal or Not, Have Traits in Common

PSYCHOLOGICAL tests indicate that the leader of gangland may owe his supremacy to the very same traits that make another man an officer in the army or a leader in student activities at a university. The tests were given by Dr. W. H. Cowley, of Ohio State University to 20 criminal leaders from the Illinois State Penitentiary at Joliet, Ill.; to 20 criminal followers at the same institution; 20 non-commissioned officers and 20 privates from Fort Sheridan, Ill.; and 16 student leaders and 16 student followers from the University of Chicago.

Certain traits, as revealed by the tests, were found to be held by all three groups of leaders and not by their followers. These are self-confidence, finality of judgment, "drive" or lack of inhibition, and speed of decision.

Science News Letter, May 7, 1932



The Science Service radio address next week will be on the subject of

MAKING BACTERIA INVISIBLE AND ITS SIGNIFICANCE

Dr. James P. Simonds

professor of pathology, Northwestern University Medical School, will be the speaker.

FRIDAY, MAY 13

at 2:45 P. M., Eastern Standard Time



Over Stations of
The Columbia Broadcasting System