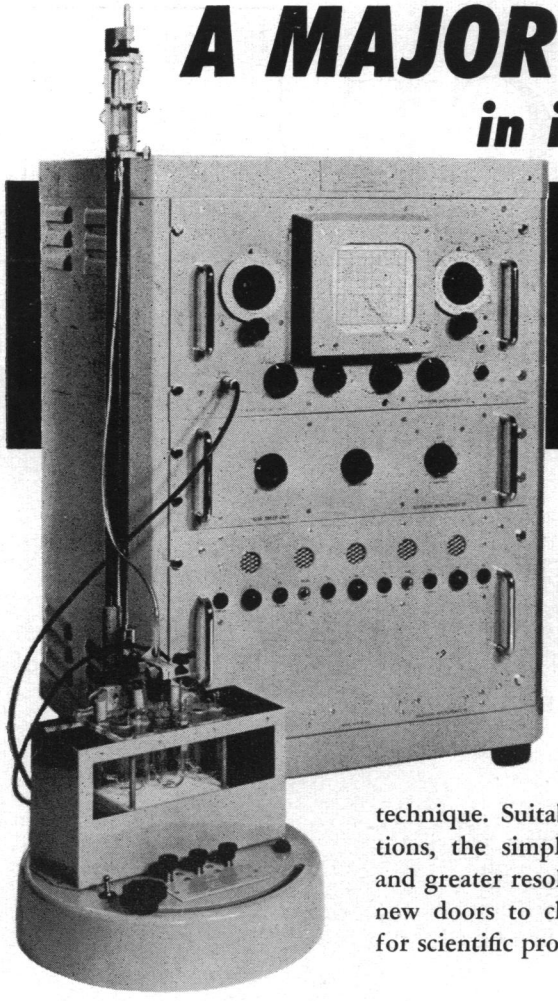
SCIENCE

21 March 1958

Volume 127, Number 3299

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

A MAJOR BREAKTHROUGH
in instrumental technique...



The Cathode Ray
POLAROTRACE
WITH ELECTRODE STAND

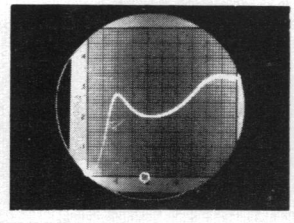
FOR DIRECT OR DERIVATIVE OPERATION

SPEEDY DETERMINATION OF CONCENTRATIONS UP TO 1000 TIMES *LOWER* THAN CONVENTIONAL TYPES OF POLAROGRAPHIC INSTRUMENTS!

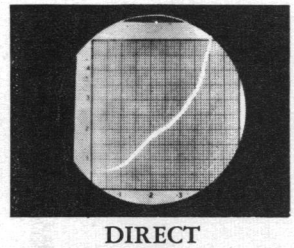
Here is an entirely new approach to the polarographic technique. Suitable for research or routine operations, the simplified control, superior sensitivity and greater resolution of the Polarotrace will open new doors to chemical analysis. Its potentialities for scientific progress are immeasurable!

UNRETOUCHED PHOTOGRAPHS of the POLAROTRACE Screen

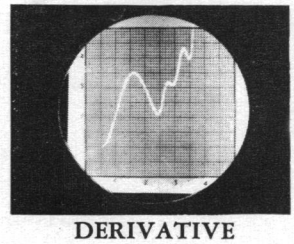
1×10^{-5} M $ZnCl_2$
plus
1×10^{-5} M $CoCl_2$
in
0.1 M KCl



Mixture of isomeric nitro-terephthalic acids



DIRECT



DERIVATIVE

RAPIDITY—The entire polarogram is reproduced on the screen once every 7 seconds, cutting analysis time to a fraction.

SENSITIVITY—Currents as low as 2.0×10^{-8} amperes full scale may be measured and the peaked nature of the waves enables accurate determinations at concentrations of fractions of a microgram per millilitre.

GREATER RESOLUTION due to formation of peaked polarograms.

DERIVATIVE OPERATION is a built-in feature of the Polarotrace.

DIRECT READING from scale eliminates geometrical construction.

EASE OF OPERATION—The wave is under virtually continuous operation due to the combined effects of the 7-second repetition, high reproducibility and tube after-glow.

RUGGED DESIGN—The electronic circuitry is housed in a single heavy-duty cabinet, 23" x 19" x 32", and the component parts are easily accessible for maintenance.

The Polarotrace is supplied complete with its Electrode Stand which includes a thermostatistically-controlled tank, provision for simultaneous degassing of the three cells and easy means of raising or lowering the electrode in the solutions under test.

Camera attachments are also available.

Reference:

B. J. MacNulty, G. F. Reynolds, E. A. Ferry. ANALYST (1954) 79, 190 and 938

Our application laboratory is at your disposal to run test specimens.
Detailed information available upon request.

Cat. No. S-83725—POLAROTRACE, with Electrode Stand and set of glassware **$3750.00**

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LABORATORY APPARATUS
REAGENTS AND CHEMICALS

Letters

Role of Scientific Societies

I was interested in the editorial in the 10 January issue of *Science* [**127**, 57 (1958)]. We are particularly sensitive to the point which you mentioned of the difficulty of knowing just what one can say for science as a whole. It seems to me, however, that there are certain things which can be said upon which all scientists agree—things that should be said.

I have in mind, for example, the importance of a rigorous basic education in science, which a large portion of our informed citizenry should have. Further, all scientists will probably agree on the need for greater emphasis on basic research and a better understanding on the part of the public of the importance of basic research. Unless the scientist, or an organization representing scientists, speaks out for such things, scientific progress is very likely to suffer. In other words, it seems to me that scientists, with the special training and talents that they have, should combat, in some form or other, the great anti-intellectual forces which seem to develop almost automatically in a free society.

ELMER HUTCHISSON
American Institute of Physics, New York, New York

Double Standard?

The recent editorial in *Science* entitled "The Horse's Mouth" [**127**, 57 (1958)], which distinguishes, by inference at least, between the validity of scientific data and the theories logically derived from them and the validity of opinions of scientists concerning the social and other nonscientific implications of their observations, is most timely indeed. Unfortunately, preeminence in science may lend unwarranted weight to the publicized opinions of scientists on completely nonscientific matters regardless of the subject or the qualifications of the individuals who are expressing their views.

Despite the propensity of some members of other professional groups to make ill-considered and inaccurate statements to the public press concerning matters in which they have no special competence, we might reasonably expect scientists, who are supposedly trained in the discipline of objectivity, to restrain themselves in this respect. Unfortunately, this is not the case, as is witnessed, for instance, by the recent address given at the meeting of a national scientific society to the effect that now that man has launched a world satellite, man can dis-

card the idea of God. Similarly, a Nobel Prize winner in microbiology is currently reported in the public press to have stated that, inasmuch as immortality cannot be demonstrated by science, it cannot be held to be true. That, insofar as the pertinence of scientific data is concerned, these conclusions are *non sequitur,* that the scientific method is not designed to consider these matters, and that the authors of these opinions have no formal knowledge of metaphysics or theology, is little realized by the general public nor, I suspect, adequately appreciated by the authors themselves. However, being human, scientists will very probably continue to release through the public press their private views on any and every subject if given the opportunity, and it is their democratic privilege to do so. Whether they are justified in representing such opinions as "scientific" is quite another matter.

This brings me to the main point of this letter; that is, that in the scientific press, at least, articles expressing personal opinions on nonscientific matters should be so labeled and should be clearly dissociated from objective technical reports and reviews. *Science* and *The Scientific Monthly* [now combined with *Science,* the joint journal continuing in the *Science* format] have been particularly remiss in this respect, due, perhaps, to the broad nature of their coverage. During the last year, for instance, in the journals cited above, there have been published a number of feature articles dealing detrimentally with our traditional systems of politics, morals, and religion. That the intellectual precepts of these aspects of our culture should be critically scrutinized, I grant without reservation. I maintain, however, that we may rightly demand that, even though those who undertake to write on such subjects in scientific journals be eminent scientists, they should still be required to have some competent technical knowledge of their subjects and should treat the latter with the same logic and objectivity that they are required to use in their scientific publications. No journal of ethics or moral philosophy, for instance, would accept some of the articles you have published simply because the authors were renowned biologists or physicists. And of particular importance, incidental private judgments on such matters should not be allowed to appear in articles which profess to be technical in nature. One of your recent features, supposedly a discussion of theoretical biology, contained a diatribe of dogmatic and unsubstantiated statements to the effect that scientists who believe in the reality of supernatural phenomena are schizophrenic in their reasoning, and that such irrational beliefs preclude the scientific study of biological phenomena! This sort of thing has no rightful place in a tecnhical article, whether or not the editors disclaim responsibility for the opinions of the author. Since *Science* and similar journals reject scientific articles and reviews unless evidence is presented substantiating the data presented and the reasonableness of the conclusions drawn therefrom, I urge a tightening of editorial policy to raise the standards of articles on nonscientific matters as well.

WILLIAM B. ATKINSON
College of Medicine,
University of Cincinnati,
Cincinnati, Ohio

Meetings

Montana Academy of Sciences

The Montana Academy of Sciences, founded in 1940, is an organization made up of individuals interested in the biological, physical, and social sciences and the teaching of science. The membership of the academy (a recent affiliate of the AAAS) consists of teachers and students in the colleges and high schools

of the state and professional people in government agencies and industry, as well as of nonprofessional people interested in sciences.

The members have set as the objectives of their academy the encouragement of scientific work and the dissemination of scientific knowledge. To carry out these objectives the academy holds meetings each year at which the members report on their scientific work and during each of which a lecture, of interest to the members and the general public, is given by an outstanding scientist. A periodical, *The Proceedings of the Montana Academy of Sciences,* which consists of the papers presented at the annual meeting and others considered worthy of publication, is published each year. Three hundred and seventy-two copies of the *Proceedings* are purchased by the libraries of the units of the greater University of Montana and exchanged by them for similar publications. The publications so obtained are a valuable addition to the libraries of the institutions because the scientific work reported in them is made available to scientific workers in Montana.

The academy has recently started a Junior Academy of Sciences, to be made up of junior and senior high-school students interested in science. By this means it hopes to better carry out its objectives, since it considers that this group is the critical one as far as creating interest in science is concerned. The academy hopes to stimulate interest in science among these students by providing them with speakers from the various fields of science; by holding meetings, at which they can report on their own work, in conjunction with the annual meetings of the academy and with the district and state Science Fairs; and by publishing a Junior Academy newsletter. It will continue to award honorary memberships to winners in the Science Talent Search and the State Science Fair as a means of recognizing outstanding work in science by high-school students.

L. H. HARVEY

Montana State University, Missoula

Society Elections

■ International Association of Milk and Food Sanitarians, Inc.: pres., Harold B. Robinson, Washington, D.C.; pres.-elect, Franklin W. Barber, Oakdale, N.Y.; sec.-treas., Vincent T. Foley, City Health Department, Kansas City, Mo. The vice presidents are William V. Hickey, New York, N.Y., and John J. Sheuring, Athens, Ga. The representative to the AAAS Council is Samuel H. Hopper, Indiana University Medical Center.

■ American Public Health Association: pres., Roy J. Morton, Oak Ridge, Tenn.; pres.-elect, Leona Baumgartner, New York, N.Y.; treas., Charles Glen King, New York, N.Y.; exec. sec., Berwyn F. Mattison, New York, N.Y. The vice presidents are Arnoldo Gabaldon, Maracay, Venezuela; Morley S. Lougheed, Winnipeg, Canada; and Thomas F. Sellers, Atlanta, Ga.

■ Astronomical Society of the Pacific: pres., Nicholas U. Mayall, Lick Observatory; sec.-treas., Sturla Einarsson, Leuschner Observatory, Berkeley, Calif.; assistant sec.-treas., Vera Graves. The vice presidents are Clifton H. Kroll, George W. Hall, and C. Nelson Hackett.

Forthcoming Events

April

10–12. American Assoc. of Physical Anthropologists, 27th annual, Cambridge, Mass. (J. N. Spuhler, Dept. of Human Genetics, Univ. of Michigan, Ann Arbor.)

11–12. Eastern Psychological Assoc., annual, Philadelphia, Pa. (G. Lane, Dept. of Psychology, University of Delaware, Newark.)

12. Society for the Scientific Study of

Religion, New York. (L. Whitman, 297 Fourth Ave., New York, N.Y.)

13–14. American Soc. for Artificial Internal Organs, Philadelphia, Pa. (G. Schreiner, Georgetown Univ. Hospital, Washington 7.)

13–18. American Chemical Soc., 133rd, San Francisco, Calif. (R. M. Warren, ACS, 1155 16 St., NW, Washington 6.)

13–19. Federation of American Societies for Experimental Biology, annual, Philadelphia, Pa. (M. O. Lee, FASEB, 9650 Wisconsin Ave., Bethesda 14, Md.)

14–16. Automatic Techniques Conf. Detroit, Mich. (J. E. Eiselein, RCA, Bldg. 10–7, Camden 2, N.J.)

14–18. American Assoc. of Clinical Chemists, annual, Philadelphia, Pa. (M. M. Friedman, Lebanon Hospital, New York 57.)

14–18. American Assoc. of Immunologists, annual, Philadelphia, Pa. (F. S. Cheever, Graduate School of Public Health, Univ. of Pittsburgh, Pittsburgh.

14–18. American Soc. for Experimental Biology, annual, Philadelphia, Pa. (J. F. A. McManus, Univ. of Alabama Medical Center, Birmingham.)

14–18. American Soc. of Biological Chemists, annual, Philadelphia, Pa. (P. Handler, Dept. of Biochemistry, Duke University School of Medicine, Durham, N.C.)

15–17. Gas Measurement, 34th annual conf., Norman, Okla. (M. L. Powers, Extension Div., Univ. of Oklahoma, Norman.)

16–25. Instruments, Electronics and Automation Conf., London, England. (Industrial Exhibitions Ltd., 9 Argyll St., London, W.1.)

17–18. Environmental Engineers, 2nd