

AMERICAN ASSOCIATION  
FOR THE  
ADVANCEMENT OF SCIENCE

Board of Directors

THOMAS PARK, *Retiring President, Chairman*  
PAUL M. GROSS, *President*  
ALAN T. WATERMAN, *President Elect*  
HARRISON BROWN DON K. PRICE  
HENRY EYRING MINA REES  
H. BENTLEY GLASS ALFRED S. ROMER  
MARGARET MEAD WILLIAM W. RUBEY  
PAUL A. SCHERER, *Treasurer*  
DAEL WOLFE, *Executive Officer*

Editorial Board

KONRAD B. KRAUSKOPF H. BURR STEINBACH  
EDWIN M. LERNER WILLIAM L. STRAUS, JR.  
PHILIP M. MORSE EDWARD L. TATUM

Editorial Staff

DAEL WOLFE HANS NUSSBAUM  
*Publisher Business Manager*

GRAHAM DUSHANE

*Editor*

JOSEPH TURNER ROBERT V. ORMES  
*Associate Editor Managing Editor*

ELLEN E. MURPHY, *Assistant Editor*

NANCY TEIMOURIAN, *Assistant to the Editor*

*News:* HOWARD MARGOLIS, DANIEL S. GREENBERG, PATRICIA D. PADDOCK

*Book Reviews:* SARAH S. DEES

*Editorial Assistants:* GRAYCE A. FINGER, NANCY S. HAMILTON, OLIVER W. HEATWOLE, EDGAR C. RICH, JOHN E. RINGLE, CECIL F. SWEENEY, CONRAD YUNG-KWAI

*Staff Assistants:* LILLIAN HSU, MARION Y. KLINE, KAY E. KROZELY

Advertising Staff

EARL J. SCHERAGO, *Director*

HAZEL SANDS, *Production Manager*

*Sales:* RICHARD L. CHARLES (New York, N.Y., PE 6-1858); C. RICHARD CALLIS (Old Bridge, N.J., CL 4-3680); HERBERT BURKLUND (Chicago, Ill., DE 7-4973); Ed BIG (Monterey Park, Calif., CU 3-8600)

SCIENCE, now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

**Editorial correspondence** should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts. Opinions expressed by authors are their own and do not necessarily reflect the opinions of the AAAS or the institutions with which the authors are affiliated. For detailed suggestions on the preparation of manuscripts, see *Science* 125, 16 (4 Jan. 1957).

**Advertising correspondence** should be addressed to SCIENCE, Room 1740, 11 West 42 St., New York 36, N.Y.

**Change of address notification** should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. Furnish an address label from a recent issue. Give both old and new addresses, including zone numbers.

**Annual subscriptions:** \$8.50; foreign postage, \$1.50; Canadian postage, 75¢. Single copies, 35¢. School year subscriptions: 9 months, \$7.00; 10 months, \$7.50. Cable address: Advancesci, Washington.

Copyright © 1962 by the American Association for the Advancement of Science.

## Weights and Measures

Recently, after several decades of relative quiescence, the question of adopting the metric system in the United States is again being debated. Symposia on the question were held at the 1958 and 1959 meetings of the AAAS and at the Tenth National Conference on Standards in October 1959. A subcommittee of the House Committee on Science and Astronautics, in July 1961, unanimously recommended favorable action on a bill to authorize the Bureau of Standards to conduct a 3-year factual study of the pros and cons of the question and to submit annual reports to the Secretary of Commerce for transmission to Congress. This bill, H.R. 2049, was not voted upon at the last session of Congress. Representative Miller, chairman of the Committee on Science and Astronautics, will reintroduce the bill at this session.

The main arguments for and against adoption of the metric system are as follows.

*Pro:* The metric system is in universal use among scientists. *Con:* Scientists working with engineers who use the English system find little difficulty in converting from one system to the other, and in any case interconvertibility is no great problem since work is usually done in single units that are scaled up or down. The international inch, adopted in 1959, equals exactly 25.4 millimeters, thus simplifying conversion.

*Pro:* The metric system permits greater speed and accuracy in calculations and hence great economy in time and money. *Con:* The main advantage of the metric system is that it is decimalized. The increasing use of the decimal inch, mile, and gallon tends to offset the advantages that the metric system has hitherto enjoyed.

*Pro:* The metric system is becoming the dominant system: 74 countries now use this system; 40 of them have made the shift during this century. Consequently, for full participation in world trade, it is important to use the metric system. *Con:* English units are in fact still in use in many metric-system countries: oil pipes and fittings, automobile tires, bicycle chains and gears are predominantly on the inch system. What is important is not that the units of measurement be standard throughout but that there be a single standard throughout a particular industry.

*Pro:* The shift to the metric system is inevitable and in fact has already begun with the recent conversion of most of the American pharmaceutical manufacturers to this system, the partial conversion of the optical industry, the planned shift of the Army and Marine Corps to the metric system for all linear measures by 1 January 1966, and the Weather Bureau's use of both systems in its maps. *Con:* It may be advantageous for certain industries to make the shift, but the great bulk of industry is firmly committed to the English system and has an enormous investment in drawings, gears, dies, machine and hand tools, screw threads, and so on. The cost of a shift would be astronomical, and the problem of re-educating engineers and machinists to the metric system, formidable. To shift would be to court economic disaster.

*Rebuttal:* The shift could be accomplished over a 33-year period and introduced only in some industries, not in all. The economic arguments against shifting are exaggerated and fail to take account of obsolescence.

The validity of the arguments can scarcely be assessed without a considerable study of the facts. We need to know whether we can afford not to adopt the metric system. The study called for by Representative Miller's bill should make a reasoned answer possible.—G.DuS.