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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 reeducating 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.