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## Translation of Scientific Literature

The use of English as the world's scientific language has been fostered in several ways. The number of high-quality scientific contributions of the English-speaking peoples makes it expedient for scientists generally to know the language. Scientists in other countries, wishing maximum attention for their research publications, also have written in English.

The importance of English is further enhanced by the availability of translations of scientific material appearing originally in other languages. The situation and the needs can be estimated from the broad sample of the world's scientific literature provided by *Chemical Abstracts*. In 1964 this service found percentages for the original language of articles abstracted by it were English, 44; Russian, 20; German, 9; Japanese, 8; French, 5; and Italian, 2. Analysis of *Physics Abstracts* provides another measure and a different distribution. In 1961 the percentages for the original language of articles abstracted by that service were English, 68; Russian, 15; French, 7; German, 6.

Since Russian is now the second language of science, it is important that contributions in that language be made available in English. Opinion among U.S. scientists is divided concerning the value of the Russian literature. Our physicists are among those who regard it most highly.

The translation program of the American Institute of Physics is thus of particular significance. Started on a modest scale in 1955, it was subsidized by the National Science Foundation. The program is now self-sustaining, and ten principal Russian physics journals are translated cover-to-cover. The publication delay is quite short—from 3 to 6 months. The most popular of the Russian translations is the *Journal of Experimental and Theoretical Physics*, with about 1300 subscribers, half of them abroad. An analysis of papers abstracted by *Physical Abstracts* indicates that 84 percent of the important Russian physics literature is being translated.

The largest effort in Russian translation of journals is being made not by a scientific society but by a profit-making organization—Consultants Bureau Enterprises Inc. This company translates 48 scientific journals on a cover-to-cover basis. Distribution of these translations to subscribers abroad constitutes 45 percent of the business. In addition to the English-speaking nations, Japan, France, and Germany are important customers.

In some areas of science, translations of Russian journals are not in great demand. As few as 250 subscribers receive translations of some geophysical material. Accordingly, a subsidy amounting to a few tens of thousands of dollars a year for each journal is required.

The Federation of American Societies for Experimental Biology is conducting an experiment in selective translation that makes sense. Some 5000 articles are scanned each year. About 600 are translated, and about 300 are printed in a translation supplement which is sent to about 13,000 subscribers.

One of the greatest single factors in the trend toward the use of English as a universal scientific language is *Chemical Abstracts*. This service abstracts much scientific literature, written in essentially all languages, and does so with unusual efficiency.

This coverage of all the literature of many fields provides an example and challenge to other aspects of the translation program. We should not be satisfied until all the important scientific literature of the world is readily available in English.—PHILIP H. ABELSON