English Spoken Here

One by-product of vigorous U.S. scientific activity in the scientific world is the use of English at international meetings. For example, at the International Clay Minerals Conference recently held in Israel, although French, German, and Russian were also official languages, the predominant communication was in English, an enormous benefit and time-saver for the Americans. We can preserve this position only if we are willing to spend the funds that are necessary to support fundamental research and attract the best talent available as Abelson declares in his editorial, "Penny Wise, Pound Foolish" (3 June, p. 1333).

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The New Soviet Genetics

The apparent conflict which existed for many years in the Soviet Union between dialectical materialism and the science of genetics posed an insurmountable barrier between Soviet and Western biology. Consequently, recent resolution of the major aspects of this conflict constitutes an important development for both Soviet and Western biologists. Publication of the new Soviet journal *Genetika* and a Mendel Memorial issue of the Proceedings of the Moscow Natural History Society give concrete evidence of important developments for genetics in the Soviet Union. At the recent USSR Exhibition of Economic Achievement, a special exposition on genetics was prepared by Lenin Prize winner Nikolai P. Dubinin, director of the Genetics Institute of the Soviet Academy of Sciences.

A series of press releases describing developments in genetics in the Soviet Union have been submitted to *Eugenics Quarterly* by Novosti Press Agency (APN), Moscow, and are being published as received. The first, "A New Soviet Hypothesis Concerning Heredity" appeared in the March 1966 issue. Three releases will appear in the September issue: "Materialistic Dialectics and Biology Today" by I. Frolov, and two brief press notes: "New Achievements of Soviet Genetics" and "Professor Menkulov's Experiments." A June 17th release, "Key to the Secrets of Heredity" by K. Tolkachev will appear in the December issue. These unedited statements from the official Novosti Press Agency should be highly informative for all interested in Soviet science, as well as for biologists and geneticists.

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Reactions to Nuclear Reactors

Abelson repeats the often heard comment that electric power will be increasingly produced in this country by nuclear reactors (Editorial, 6 May, p. 703). Not everyone is as pleased at this prospect as Abelson seems to be.

He comments that "atomic energy has proved relatively safe;" the modifier "relatively" is welcome. It is quite true that we have not yet had a major reactor accident in a commercial reactor, and that we can expect such accidents to be infrequent. Just how infrequent is a thorny problem. In more conventional engineering designs we can accept a finite risk of accident. As for nuclear reactors, we must be sure when we construct them that we can, as Abelson says later, "guarantee reactor safety." Whether this transition from relative to guaranteed safety can be made, in fact, is still an open question. A guarantee is important since it is quite clear that not even one major accident may be allowed to occur in the hundreds of nuclear installations that are apparently planned. The only publicly available Atomic Energy Commission estimate of possible reactor accident damage was published in 1957; for a maximum credible accident in a 500 megawatt (thermal) reactor located 30 miles from a large city, the AEC estimated billions of dollars of property damage, 3400 people killed, and 43,000 injured. Reactors presently being constructed are four times this size.

As the reactors are multiplied in number and size, so also will the danger of accidents multiply. These changes will increase air and water contamination to a degree perhaps more serious than anything we have even encountered in the past. We are exchanging a known and preventable source of pollution from fossil fuels for the comparatively unknown problem of radioactive contaminants, which, should it prove serious, will be a great deal more difficult to deal with. Even in extremely low concentrations these materials are hazardous and produce irreversible damage.

In view of the many unfavorable aspects of nuclear energy, the scarcity of U^{235}, the enormous expense of reactor development, and the inherent pollution and explosion hazards, it is puzzling that the efforts of scientists and the resources of the United States have not been directed toward developing a less hazardous energy source. Still less comprehensible is the pressure to proceed with construction of reactors in a full-scale commercial program before the dangers involved are better understood. After all, we have a century or so to find a replacement for fossil fuels.

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On Biomedical Discoveries

Calder and Flanagan have recently lamented the silence of the biological community concerning the social and political consequences of its research. (News and Comment, 15 July, p. 283). Their concern is appropriate. The pace and breadth of biomedical discoveries make it essential to take inventory. In February, a several-year research project into the social implications of biology and medicine was initiated under the auspices of Harvard University's Program on Technology and Society. The project is drawing upon the knowledge of individuals in the biological and medical sciences, the history of science, public administration, law, philosophy, religion, and sociology. Among our concerns are the use of techniques to increase longevity, alterations of the biosphere, implications of the manipulation of heredity and behavior, public policy issues and ethical problems engendered by biomedical research and technology. Through our research efforts we hope to anticipate and suggest guidelines to cope with the social impact certain to attend the advances in, and widespread use of, biomedical techniques.

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