Comments and Communications

Language in Science

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Until a very recent stage of man's history the search for knowledge was in the hands of a priesthood who guarded most carefully their privileged position. Often the power of this priesthood lay in the ignorance and superstition of those without the order. By the use of language unknown to most people they prevented knowledge from passing to the outsider.

After the Renaissance, English came to be used as the language of science and religion in this country, and knowledge was put within the reach of many more people. But today the growing complexities of science are causing a change in the reverse direction. In medicine, for example, each branch is building up a special and ever increasing vocabulary, and this is producing a new series of priesthoods—the hematologists, the venereologists, the stereochemists, the biophysicists, the cytologists, the pure and applied mathematicians, the epidemiologists. The subdivisions of knowledge will lose much of their value unless the results of applying their special techniques are intelligible to others besides the various high priests.

Of late years books have been written to try to pass on the secrets of the new priesthoods, and these "popular" books show one way in which the problem has been tackled. Another possible solution appeared in the services during the late war. This was a slang which covered both everyday and technical subjects; it was a live method which filled a gap. These examples illustrate two principles which could be used to prevent even greater chaos than at present: either language can be simplified or a new language can be evolved.

Ogden with Basic English has shown how speech can be simplified, and Hogben has suggested an international language of science with his *Interglossa*. Yet another, Bodmer, in *The Loom of Language* (p. 48) has emphasised the keynote: "The invention of the alphabet made it possible to democratize reading as the invention of the number 0 made it possible to democratize the art of calculation." An alphabet or a Basic English for science and medicine is a pressing need.

The realisation of this aim is not easy, but every editor of a journal can help by insisting on papers being written in the simplest possible language, and frowning upon new words which could easily be rendered in simple terms; every author can help by writing in simple language. It is asking too much to expect that specialised techniques can be so described that their features are at once understood by a worker in an unrelated field, but it is not asking too much to insist that the main lines of argument in a paper should be presented with consideration for the difficulty of a worker in another field.

Unless steps such as these are taken now by editors and edited, scientific and medical workers will soon be struggling in a bog of words. This is a system of planning which requires no committee, and the benefit to knowledge would be incalculable. The pedant has always been a butt for the wit. Now is the time to banish him firmly from the various branches of knowledge.

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Anthropologists vs. the Atom Bomb

In his recently published *The Science of Culture* (p. xii), Prof. Leslie A. White refers to certain comments by E. U. Condon published in these columns (*Science*, 1946, **103**, 415) and also to a letter of mine in this journal (*Science*, 1946, **103**, 570) in which I told of a resolution proposed by myself and seconded by Margaret Mead, and adopted by the American Anthropological Association in December 1945, pledging anthropologists to work with other scientists to make "appropriate social inventions" to "guard against the dangers . . . inherent in atomic use." Prof. White comments on this, "No report on progress toward such inventions has appeared yet."

This is not quite correct. Early in 1946 I commenced to make use of several social inventions directed toward achieving the end set out in the resolution. By October 1946 this resulted in an animated sound film which has been distributed under the title "One World Or None." I understand that this film has been seen by hundreds of thousands of persons and in every state of the union. It has been described by a well-known bureau of propaganda analysis as "the most effective documentary ever made," and the film may be obtained from the National Committee on Atomic Information, Washington, D. C.

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Correction

We wish to correct an obvious error in our paper, "The Crystalline Form of Sodium Ascorbate" (Science 1948, **108**, 713).

On page 713 the sentence at the top of the second column should read:

> Forty grams (1 mole) of ascorbic acid was dissolved in 600 cc of hot absolute methyl alcohol. While still hot, it was treated under stirring with 250 cc of a warm solution of methyl alcohol containing 12.3 g (1 mole) of sodium methylate.

The structure of sodium ascorbate as given by the U.S.P. (XIII, p. 898) was shown in our paper with the sodium substituting the acidic hydrogen of the carboxyl