International Scientific Communication*

By ERICK I. HOEGBERG
Research and Development, American Viscose Corporation, Marcus Hook, Pennsylvania
and
KARL F. HEUMANN
National Academy of Sciences, National Research Council, Washington 25, D. C.
Received June 13, 1962

The papers published here were presented at the March 21, 1962, ACS Meeting and constitute the symposium on "International Scientific Communication."

Historically, international communication among scientists had its beginnings in personal visits, discussions and correspondence between individual gentleman scientists, often pursuing science as a hobby, with their counterparts in other countries.

As science began to evolve into a full-time pursuit and as the number of scientific workers grew, the scientists began to band together into national societies, holding formal meetings. Printed transactions of these meeting were eventually published and found their way to other countries, through exchange agreements between societies, and through acquisition by individuals and libraries. Thus, international communication among scientists gradually became more formalized and more dependent upon the printed literature, although individual contacts were still maintained.

As the tempo of scientific research began to pick up, scientists became more specialized and individual disciplines such as chemistry and physics emerged. This, in turn, led to the formation of national (and, later, international) societies of chemists, physicists and other specialized disciplines and to the establishment of journals devoted to these specialties. The journals soon became the overwhelming predominant means whereby new scientific information was transmitted across national boundaries.

In recent decades the number of scientists and the amount of scientific literature have progressed geometrically. The journals have grown in size and have proliferated. New journals spring up almost daily, many of them in strange, new languages. Now, just a few days' outpouring of scientific literature is more than any man could read in a lifetime, even if he had the necessary language skills. Backlogs of manuscripts waiting to be published sometimes mean delays of many months before articles are published. In fact, the time lag between actual experimental work and publication may amount to several years.

In order to cope with these problems, we have seen in the last few years a partial return to personal communication as a means of by-passing the publication time lag and of becoming aware quickly of important new developments in science. This personal type of communication takes many forms, some of which are becoming quite systematized. We have attempted in the present symposium, to focus attention on a few of these means whereby the communication of scientific information between countries is being expedited.

Beginning with a discussion of some of the broad problems involved in international scientific communication in industry, we shall then proceed to examine the function of the industrial technical representative stationed abroad and of the industrially sponsored overseas research institute. Following this, we shall learn how the International Union of Pure and Applied Chemistry helps to promote the international exchange of scientific information. The emergence of SCANDOC, a unique new coöperative communication venture which serves the scientists of the Scandinavian countries will then be described. Finally, we shall learn about the vital role of the U. S. State Department's science officers stationed in many foreign countries.

* Presented before the Division of Chemical Literature, ACS National Meeting, Washington, D.C., March 21, 1962.