A memorandum similar in scope has been recently and independently prepared by Joseph Needham at Cambridge University and was sent to our National Research Council for consideration. It is entitled "Memorandum on an International Science Cooperation Service."

In the last published Report of the National Academy of Sciences for 1942–1943, the extent to which international matters have been considered, aside from those already referred to here, is the following: In a conference held on August 7, 1942, between one of the secretaries of the Royal Society of London and the chairman of the Division of Foreign Relations, it was agreed that "after the war opportune cooperative understandings with learned societies of previously hostile nations might be a better way of restoring mutual friendship and respect than an attempt now, on our part alone, to fix a definite policy for collaboration."

The purpose of Needham's memorandum and that prepared at Woods Hole go further in seizing the opportunity, presented by the immediate need of postwar restoration, to institute more intimate than hitherto long-range cooperation among workers in the basic sciences of all freedom-loving countries throughout the world.

The preparation of such a project should not wait for the termination of the war. At least two steps should be taken: (1) Contacts should be made to coordinate the activities of foreign and domestic relief committees which are engaged in plans for the rehabilitation of educational facilities in the war-stricken countries. Much of this effort is immediate, as emergency measures. In such efforts notable assistance is already being made by the Rockefeller Foundation to foreign scientists and to scientific institutions abroad. The Royal Society of London is also engaged in similar activities. (2) By means of Needham's and the Woods Hole memoranda or a combination or revision of both, there should be secured, at once, the collaboration of interested individuals and institutions both in the Americas and in other freedom-loving countries which have been least affected by the material damages of the war.

Ideas emanate from the least expected places. The broader the source and the wider the range of proposed ideas the more likely will be the chances of preparing a permanently working plan.

A comity of nations depends upon mutual respect for the differences which exist among them. There also exist threads of similarities, a chief one of which is the universal appreciation of science and the scientific method. This provides one of the surest approaches to international understanding and good will.

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THE CONFLICT BETWEEN SCIENCE AND BIOLOGICAL INDUSTRY

BEGINNING a little more than fifteen years ago a number of public contact committees were set up in scientific organizations interested in biological problems. One function of these committees was to influence the legislative and executive branches of government. Very recently several of them have been abandoned or have become inactive. There is now a strong movement toward the building up of a central council representing various societies which would deal mainly with national problems. While a union can do an inestimable service in gathering information in Washington and in making contacts with officials and legislators, there is danger of reducing many voices to a single one.

It is now generally understood in the national capital that a scientific society should not exert pressure on governmental agencies or legislative bodies. Some of the objection is pure conservatism, in part due to the lack of any need in many fields of science. There is also a fear that there will be misrepresentation of research results. It may perhaps be granted that scientific societies and their members are not well equipped to contact Congress or government agencies directly. Usually there are not enough members not in government employ while residing in or near Washington, to make proper contacts. Such men as are available are otherwise employed and have been overburdened with calls by scientific organizations. The public pressure of scientific societies is of necessity conservative. One national society with especial needs for preserving study and check areas with their natural biological content has attempted to influence Congress or the National Administration only ten times, another only three or four times, in twenty years. The need for action is limited and will not ordinarily burden a scientific agency. This is especially true if the legislative plans and agency programs are made available to the society by a central body with contacts in the national capital.

At the present time there is one reason for scientific society reclusion which overshadows all others. It is a veiled call to desist from pressing the application of scientific criteria and principles because of conflicts between them and practices of biological industry. Such conflicts have been concentrated in recent years, due to wide application of the results of research to submarginal lands, which resulted from the recent drought and depression and to problems arising from the present war. They have been in evidence at many points involving questions ranging from nutritive value of oleomargarine[1] to the value of a grassland

[1] "Wartime Farm and Food Policy," Pamphlet No. 5. "Putting Dairying on a Wartime Footing," first edition, March, 1943; second edition, 1944. Iowa State College Press, Ames, Iowa.

check area for comparison with lands under industrial use. Conflict is indicated by F. E. Molin's "When and if it Rains,"[2] which rejects results of grazing research, and by various resolutions of livestock and dairymen's associations. These incidents are of the same general nature as the request handed to more than one prosecuting attorney to desist in his efforts because the results are bad for business. The word does not come to scientists in the form of the legal phrase "cease and desist." The natural procedure of the politician, frequently of the administrator, is to convince his opponent by suggestions of ineffectiveness and impropriety.

Agencies representing special fields of knowledge, some of it technical, can not make presentations through another less scientific agency. To minimize misconstructions and misrepresentations, public application of scientific principles and the needs of future research should be urged by the specialists themselves. Human society, which supports research, will hold scientific men and the societies which they constitute responsible for failure to urge the application of their knowledge directly and simply whenever it is in the interest of society to do so. No scientific society devoted to research should fail in fulfilling this obligation.

V. E. SHELFORD

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BIOLOGICAL FIELD WORK IN BOLIVIA

MOST botanists and zoologists are eager to find a place to make headquarters in a country which suffers from lack of accommodation. It may be useful, therefore, to point out the advantages offered by a Jewish refugee agricultural colony known as Socobo (Sociedad colonizadora de Bolivia). Their office is in La Paz, and the post office box is Casilla Correo 975, La Paz, Bolivia.

The plantation consists of approximately 2,000 acres of rather steep land ranging in elevation from 3,400 feet to 5,500 feet on the Amazonian slopes of the Andes not far from the town of Coroico. The latter town is well known to plant explorers and provides only the most primitive accommodation. At Socobo one finds well-constructed concrete, screened houses with electric light and safe drinking water, none of which are possible in most of Bolivia. It is approximately seven hours by car from La Paz over rather dangerous roads, but perfectly passable during the dry season from May to December.

They have available houses which can be hired for a reasonable sum, and within a few hours by mule-back one can get from permanent glaciers to tropical jungle. Arrangements can also be made for the hiring of animals and men if necessary. The place is ideal to use as headquarters for ecological or taxonomic work in a part of the Andes providing excellent opportunities in both fields. Inquiries should be made directly to Socobo at La Paz, or they may be sent to Dr. Adalberto Lindenstadt, who may be addressed at Socobo, Coroico, Bolivia.

NORMAN TAYLOR

IMPROBABILITY AND IMPOSSIBILITY

LECOMTE DU NOÜY[1] has presented the problem of the determination of the color of an unexposed photographic plate as one practically and theoretically impossible of solution. Although we can not learn the absolute answer to this question, I believe that we could reach a highly probable conclusion.

As a practical approach to the problem we could make a series of measurements of the wave-lengths of light reflected from the photographic emulsion at either decreasing intensities or decreasing exposure times of the incident light. This might possibly be accomplished with existing spectrophotometric equipment or perhaps more sensitive instruments would be required. The data obtained could be used for graphical extrapolation to the wave-lengths at zero light exposure. To bring the results into the realm of vision we could make up a synthetic pigment which would give a reflection curve corresponding to the extrapolated wave-length curve.

This method might give results just as close to the truth as are many widely held scientific beliefs. I believe that any problem depending on the laws of nature is subject to a highly probable solution, with refinements in the technics available.

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SCIENTIFIC BOOKS

LOCOMOTION

Speed in Animals. By PROFESSOR A. BRAZIER HOWELL. 270 pages. The University of Chicago Press. $4.00. 1944.

PROFESSOR HOWELL'S book "Speed in Animals" results from his long-standing interest in comparative anatomy and behavior. The degree and extent of the author's interest has determined accordingly the scope, emphasis and organization of the subject-matter.

"Speed in Animals" makes the following contributions to existing literature and information: (a) View-

[2] American National Livestock Association, 515 Cooper Bldg., Denver, Colo., 1938.

[1] SCIENCE, 100: 334, 1944.