part in the advancement of building science and of research in structural engineering?

Some of Prof. Collins' questions were purely rhetorical, and indicated no doubt as to the answer he might have given: others would be difficult indeed to answer at the present time; but all referred to problems which demand solution, and were aimed at stimulating thought and decision in those who must either take a lead in directing the future or perforce follow the direction of others less reticent.

Reading between the lines of Prof. Collins' questions, it is not difficult to trace the hope he had expressed with less reserve in the conclusion to his presidential address to the Institution of Structural Engineers a few weeks previously, that the "young members will in the future live to see the sun rise over the unshackled initiative of structural engineers; engineers who carry no fetters of Government regulation, no manacles of Local Authority restriction; but who have the free and unchecked initiative to plan and design that belongs by right to members of a profession that bears such heavy responsibility to society and to mankind".

STANLEY B. HAMILTON

ANTIBIOTICS

THE number of publications which record work on antibiotics has become so large that frequent evaluations of the progress of our knowledge of these substances have become essential. A conference devoted to these substances was held by the New York Academy of Sciences in January 1946, and the papers have now been published (*Ann. N.Y. Acad. Sci.*, 48, Art. 2, 31; 1946). It is impossible to summarize these papers here, but a note on them will indicate their scope. They are arranged in two sections, one microbiological, the other pharmacological.

Dr. S. A. Waksman introduces the former with a paper on the contributions made by the microbiologist. M. J. Johnson describes the metabolism of penicillin-producing moulds, and K. B. Raper discusses the development of improved forms of them. W. J. Robbins, F. Kavanagh and Annette Hervey discuss the production of antibiotic substances by Basidiomycetes, S. A. Waksman, A. Schutz and D. M. Reynolds write on the production of antibiotic substances by Actinomycetes, and J. W. Foster and H. B. Woodruff deal with antibiotic substances produced by bacteria.

The pharmacological section is, with the exception of an article on the pharmacology of penicillin by G. Rake and A. P. Richardson and one on its use in the United States Navy by W. W. Duemling, devoted to the pharmacology of streptomycin and streptothricin. The first article on this subject is by H. Molitor. In another article H. J. Robinson discusses the absorption, excretion and chemotherapy of these two substances. The action of streptomycin on various micro-organisms and its use for the treatment of some non-tuberculous infections are discussed by E. Pulaski, A. Kleinman and G. G. Duncan. Its action on the bacillus of tuberculosis has given rise to the hope that it will be useful for the treatment of this disease; but the article here printed by H. C. Hinshaw and W. H. Feldman on the use of streptomycin for the treatment of clinical and experimental tuberculosis emphasizes the opinion

expressed in an "Annotation" in the *British Medical Journal* (906, Dec. 14, 1946), that "it is at present quite uncertain whether streptomycin will prove, in the long run, to have great therapeutic value in tuberculosis". The same "Annotation" announces that committees appointed by the Medical Research Council will, when enough streptomycin becomes available, conduct trials of streptomycin for the treatment of types of tuberculosis likely to give clear evidence of its uses and limitations, and also trials of its action on certain non-tuberculous infections. The same cautious opinion of its possible efficacy for the treatment of tuberculosis is expressed by Dr. P. D'Arcy Hart in his Mitchell Lecture delivered to the Royal College of Physicians (*Brit. Med. J.*, 805, Nov. 30, and 849, Dec. 7, 1946) on the "Chemotherapy of Tuberculosis", a remarkable lecture with a full bibliography, which is discussed in an editorial article in the *British Medical Journal* (862, Dec. 7), together with the Harben Lectures on the same subject delivered by Dr. W. H. Feldman, of the Mayo Clinic. An interesting recent paper by D. G. Madigan, P. N. Swift and G. Brownlee (*Lancet*, 9, Jan. 4, 1947) indicates that what these authors call "the potential and actual toxicity of streptomycin" needs to be watched and investigated further.

Brief reference may also be made to the address given to the American Chemical Society in October of last year by Dr. L. C. Craig, of the Rockefeller Institute for Medical Research. Dr. Craig described a new method of isolating various forms of penicillin which frees the chemist from dependence upon boiling and melting points. This method, which is called 'counter-current distribution', uses the partition coefficient, which is a ratio indicating the diffusibility of a substance into cell protoplasm. The method employs a system of multiple transfers of the substance being studied through a series of separating funnels, so that the mathematics of the binomial theorem may be applied to interpret the results. Dr. Craig claimed that the method has disclosed at least seven types of penicillin and has indicated that there are many more. The method has also been applied to synthetic antimalarial substances.

G. LAPAGE

CANADIAN RESEARCH IN GEODESY AND GEOPHYSICS

THE National Research Council of Canada has re-organised its Associate Committee on Geodesy and Geophysics (formed in 1945) and has given it authority to gather information on, and to direct and co-ordinate research in the field of, "geodesy and geophysics, including meteorology, hydrology, oceanography, seismology, vulcanology, magnetism, terrestrial electricity, tectonophysics, gravity, and any other subjects necessary to an integrated study of earth physics and geophysical prospecting". The chairman of the Committee is Prof. J. T. Wilson, professor of geophysics, University of Toronto.

The Committee is being provided with funds for the award of grants in aid of specific research projects to persons competent to direct work in this field and who have the required laboratory facilities at their disposal. Much of the work that interests the Committee is carried out as part of their normal duties by several Government departments and is paid for by those departments.