in the world that all of our visions of the benefits to be derived from a large expansion of industrial research will come to naught if we fail to realise or neglect the fact that in the last analysis we are dependent absolutely upon the mental productivity of men, and men alone, and that we must, in consequence, provide adequately for a continuous supply of well-trained workers." It is, and must be, the function of the universities and higher educational institutions to pour out the steady stream of well-equipped and trained investigators that is the first and vital need of the industrial research movement.

Another essential condition for the successful development of industrial research is that there must be concurrently a corresponding growth and development in the domain of fundamental scientific research—what is, perhaps somewhat loosely, called "pure science"—for from the fountains of pure science come the waters that freshen and replenish the streams of applied research. It is worthy of note, and should be reassuring even to those who look with distrust on the more recent developments of industrial research, that in the various papers published by the National Research Council dealing with the application of science to industry there is abundant testimony from men whose main interests are industrial to the truth of this principle. Mr. J. J. Cartv, vice-president of the American Telephone and Telegraph Co., for example, in an address on "Science and the Industries," says: "The pure scientists are the advance guard of civilisation. By their discoveries they furnish to the engineer and industrial chemist and other applied scientists the raw material to be elaborated into manifold agencies for the amelioration of the condition of mankind. Unless the work of the pure scientist is continued and pushed forward with ever-increasing energy, the achievements of the industrial scientist will diminish and degenerate." It is, again, to the universities mainly, if not almost wholly, that we must look for this fundamental, purely scientific research. The publications under review perform not the least useful of their functions in

emphasising the basic importance of the universities in all schemes for the national development of industrial research.

The last point with which in our limited space we can deal is the fundamental question of the organisation of research. Dr. James Rowland Angell, in an address on "The Development of Research in the United States," says: "Scientific men have as yet only achieved the most elementary beginnings of the organisation of scientific interests. Indeed, it has been something of a fetish among scientists that we must rely upon individual inspiration and initiative, and that the individual worker must be safeguarded in every possible way from the corroding influence of administrative organisation." This complaint is not baseless. There are still people who regard the mere suggestion of organising research as a profanation of genius not less desecrating than a proposal to have poetry written by committees; and yet scientific principles and methods are no more out of place in the organisation of research than they are in research itself. It may be long before we reach common agreement as to the main plan, but the science of the organisation of research is as worthy a study as—shall we say?—the science of education or of economics. Dr. Angell, in the address referred to above, observes: "As a matter of fact, large areas of the most needed research lie in territory where properly trained men of talent, given proper conditions of work, may produce constantly and in increasing measure results of the utmost consequence. But one of the conditions of maximal efficiency is that they shall work inside the framework of a general programme in which there is intelligent co-operation in the allocation of the field and in the constant communication of results achieved. Such distribution of responsibility and effort is entirely consonant with the fullest actual initiative which any scientist can desire."

The publications of the National Research Council are a solid contribution to the elucidation of many problems in this new and promising field of national development.

Psychotherapy and War Experience.

INABILITY to see the wood for the trees is not uncommon in writers on most scientific subjects, but the characteristic of many medical exponents of psychotherapy seems rather that to them the wood is invisible because of their proximity to one very large and important tree. Dr. William A. Brend, who contributes a notable article entitled "Psychotherapy and War Experience" to the January issue of the *Edinburgh Review*, is emphatically not one of these. His essay attracts one, apart from the obvious interest and importance of its subject, on account of the balance, the perspective, the background, and the sympathetic appreciation of delicate nuances which the picture displays. It is a lucid and judicious account of the substance of eight publications—not all of them recent—by Freud, Ferenczi, Ernest Jones, Lay, and McCurdy; but it is much more than this, for it gives the general reader some idea of the changes which the psycho-analytic movement has brought about in the outlook of modern psychotherapy. Yet Dr. Brend obviously holds no brief for this school of thought alone. He describes, too, the parts which suggestion (including hypnotism), persuasion, re-education, and modified psycho-analysis have played in alleviating the mental sufferings caused by the war, the unwisdom of encouraging the patient merely to "distract his mind" whether by play or by work, the inadvisability of allowing important lost memories to remain lost, the uses of hypnosis in

recovering repressed experiences, the indispensability of thorough-going psycho-analysis in some cases and its undesirability in others.

"Some knowledge of the principles of the new psychology is desirable for everyone, but that is not to say that a person of normal mentality should, without good reason, allow all his natural repressions to be brought to the surface by anyone who claims to be an analyst."

It is hoped that many will read of the extensive provision of psychotherapy made by the Army since 1916, and at present by the Ministry of Pensions under Sir Lisle Webb, and that they will then inquire what is being done for the civilian. The answer is:

"As far as the ordinary civilian population is concerned, very few facilities for this treatment are available for those who are unable to pay the fees of consultants. One or two clinics have been started on a small scale, but it is now recognised that to cover the ground adequately very large provision of this nature will require to be made, and it is to be hoped that such clinics will eventually be established under the Ministry of Health."

Those of us who almost daily have sadly to tell sufferers that "very few facilities for this treatment are available for those who are unable to pay the fees of consultants" very earnestly share the hope of Dr. Brend.

T. H. PEAR.