

That the German university however, was not, and is not, lacking in one valuable qualification is shown by the fact that Oxford by a nearly unanimous vote in Congregation a few weeks ago decided to establish the Ph.D. degree on practically the basis on which it is given in German universities, an innovation which three years ago would have been regarded as impossible because of the strongly entrenched conservatism of that university.

I must also make it plain that in crusading for scientific research the object aimed at is not only to develop the industries of the Empire, although in view of the superhuman task that Great Britain, the Dominions and the Commonwealth must undertake, the attainment of that object is vitally urgent.

The international competition in trade, which will follow this war, as already pointed out, will be a pitiless one, and it may be that the future of the Empire, though unaffected by the war, may be jeopardized in the trade struggle. Industrial research is, therefore, of imperative urgency, but it can only be furthered by research in pure science. The two are, indeed, inseparable, for the practical is only the application of the knowledge which has been acquired in the vast majority of cases without any practical result in view. It would be very rash for any one to-day to predict that any discovery in pure science would not in some way be of service in practical life. Hundreds of instances of the futility of so predicting could be cited from the history of pure science.

But while research in pure science should be supported because of its utility, proved and possible, the most powerful plea for its advancement comes from the purely intellectual side. The world of nature and the physical world teem with problems of profound interest, some of them involving mysteries that will stimulate the human intellect till life on earth ceases after countless millions of years. There are, physiologists claim, certain portions of the frontal "association areas" of the human brain in which the full development of function has not yet been attained, "association areas" in which also the highest intellectual activities of which man is now capable have their location. In these "fallow fields" of the brain cortex are possibilities which can only be realized by the exercise, in all the ages to come, of the intellectual powers in earnestly facing these problems in the quest for ultimate truth. The solution of some may never be attained. The phenomena we designate under the terms *life* and *energy* are the profoundest of these. What life itself is has engaged and will long engage the interest of the scientific philosopher, and it is maintained by some thinkers that it involves an ultimate mystery. Of vastly profounder mystery is the element