

QUOTATIONS

THE BRITISH ASSOCIATION AT BRISTOL

MEMBERS of the British Association must be grateful for the warmth of the reception and for the excellence of the arrangements made by the local committee for the meeting at Bristol, which ended yesterday. Visitors from many provincial universities saw with an admiring envy the splendor of the new university buildings, due largely to the munificence of the leaders of a local industry which has not ended in smoke. The great assistance given by the members of the family of Wills to the transformation of what was recently an unimportant college into a fully-equipped university shows that some commercial magnates understand the point made by Dr. Bower in his presidential address as to the value to industry of pure research. It is significant that one of the most admired contributions to the scientific proceedings which received the congratulations of Sir Ernest Rutherford and Sir Oliver Lodge, was made by Dr. J. E. Lennard-Jones, a young professor of the University of Bristol, not yet, but doubtless soon to be, a Fellow of the Royal Society. The idle might ask to be told the value of Dr. Lennard-Jones's efforts to track the gyrations of electrons when some of these can be described only in a space of six dimensions, and when the electrons themselves are bodies, or ideas, so elusive that no single one can be identified or followed. Or what is to be said of the discovery announced by Sir Ernest Rutherford himself, that by a new method now in use at the Cavendish Laboratory the stream of alpha particles emitted by certain excited elements is a complex composed of subsidiary streams moving with different velocities? Or what value are we to assign to the large number of technical papers which occupied most of the time of the Sections, although even their titles conveyed nothing to the uninitiated? Let it be said in passing that one of the features of the Bristol meeting, impossible to reproduce in a general newspaper, was the scientific value of the detailed papers which were read. As is almost inevitable, there were contributions which, from their subject, or title, or from some extraneous attachment achieved a publicity beyond their intrinsic merits. But these were exceptions. The great part of the proceedings, except the presidential addresses, which in most cases were wisely adapted to less specialized listeners or readers, consisted of genuine contributions to knowledge, directed only to experts and with no plain bearing on practical affairs. What of them?

A clue may be found in the animated discussion held by the chemists on the past history, present position, and future prospects of the dyestuffs industry. There was what may be called the Woad epoch of dyes which lasted until little more than half a century ago. The colors used in textiles and many other industries were natural products coming from plants or animals or minerals. It is an old story with a modern lesson that the scientific curiosity of Perkins, an Englishman, led to the building up, from the waste products of the distillation of coal, of artificial dyes more brilliant than Tyrian purple, more lasting than saffron and indigo, and without limit in their shades and tones. The discovery of synthetic dyes, this by-product of pure research, led, although not in this country, to the founding of an industry invaluable to the world not only for its primary output but also from the circumstance that it has required, created, and supported an army of research chemists. The labors of these men enabled Germany not only to secure almost a monopoly of the production of dyestuffs, but also to take the lead in the discovery and marketing of synthetic drugs, and, in the hour of her need, to thwart the endeavours of the Allies to deprive her of munitions of war. This is not the place to read the fiscal lesson as to how far British apathy in the past has been redeemed by the partial protection of a basal industry, or to discuss the necessity, urged by a great majority of the experts in the Chemical Section, of a further extension of the Dyestuffs (Import Regulation) Act, 1920. But the scientific lesson is plain. In the modern world a nation can not expect to hold its own, unless it encourages in the fullest way fundamental, unoriented research into the arcana of Nature, and unless it is alert to take immediate advantage of every practical outcrop of such research. The activities of the British Association for the Advancement of Science are to be welcomed, therefore, in the first place because they bring specialists together in conspiracy for the progress of knowledge, even if their deliberations be in terms and on subjects beyond the comprehension of laymen; and next because they give an annual opportunity to science to explain the intrinsic interest of the exploration of Nature and the vast practical boons that have come in the past, and may come at any moment. As it appears that more funds are required to stabilize the organization of the Association, all will wish success to the Centenary Fund for which the Council is asking.—*The London Times*.