RE-DEDICATION OF SCIENCE IN GERMANY

THE first victims of Nazi anti-Semitism in Germany were Jews or persons of Jewish descent in official positions, for example at the universities; with a small class of exceptions, they were dismissed by a decree issued within six weeks of Hitler's final accession to power. The great chemist Fritz Haber, director of the Kaiser Wilhelm Institut für Physikalische Chemie in Berlin-Dahlem, though by birth a Jew, did not himself fall under the decree, but a number of junior members of his staff did. Haber decided to resign in protest against this decree, and a few months later (in the summer of 1933) he left Germany. In his absence false accusations were levelled against him which rendered a return dangerous. He became an exile and died in exile on January 29, 1934 (see *Nature*, **133**, 349; 1934).

Haber had been virtually the founder in 1912 of the Kaiser Wilhelm Institut für Physikalische Chemie, which he directed for twenty-one years. He also acted during this time as chief adviser to the president of the Kaiser Wilhelm Gesellschaft in the choice of candidates for senior appointments throughout the research institutes of the Society. Moreover, locally in Dahlem, the Institute under his direction was for a number of years the main centre of scientific discussions among the group of research institutes situated there. Haber's position was unsurpassed in Germany as an organiser of scientific life and thought.

Paying tribute to Haber's services, the Kaiser Wilhelm Gesellschaft and Haber's friends and pupils had planted in 1928 on Haber's sixtieth birthday a lime tree in front of the main entrance of his Institute, which was named the 'Haber Linde'. On the encircling stone parapet an inscription was engraved dedicating the tree to Fritz Haber. When a Nazi director took over the Institute, however, this visible tribute to Haber's activities was not allowed to survive. Though the lime tree was left standing, the inscription marking its origin was carefully chiselled away.

On Germany's defeat, Dahlem was incorporated in the American Sector of Berlin. Soon after the arrival there of the American occupational forces, news came through that the Haber Institute was still standing, but entirely empty. The Nazi occupants had been eliminated, but all equipment had vanished too. A little later it became known that the physicist Prof. Hartmut Kallmann, a former pupil and close collaborator of Haber for many years, had taken possession of the empty shell. Kallmann, who had himself narrowly escaped racial liquidation by the Nazis, had returned after eleven years of interruption of his scientific work, with the intention of re-starting once more, if possible, the great centre of physical chemistry in Dahlem.

Haber's memory was restored to honour. On February 2 of this year the 'Haber Linde' was solemnly re-dedicated and its inscription renewed. The chief speaker on the occasion was Prof. Kallmann; other addresses included those by the Ober-Burgermeister of Berlin, the Burgermeister of Dahlem and the director of the People's University of Berlin. Of Haber's closer colleagues there were present Prof. K. F. Bonhöffer and Prof. Otto Warburg.

In his speech Dr. Kallmann recalled that eleven years earlier Haber's memory had been honoured on the anniversary of his death by a gathering of his friends who had remained in Germany under the Nazis. Members of university staffs (who in Germany are State officials) were forbidden attendance by express order of the Government; yet the hall was packed—"all had come", said Kallmann. This certainly was a noteworthy manifestation of independence in German scientific circles.

Dr. Kallmann revealed that in 1935 he (with many others) had still thought of the Nazi regime as a passing phenomenon; the subsequent "unspeakable horrors beyond all human imagination" had not been expected. Outside observers may regard this error as throwing a serious responsibility on German academic circles. Of this Dr. Kallmann appears well aware. Urging the resumption of every effort to advance scientific knowledge and to cultivate the arts of peace, he adds that this "may perhaps be a modest contribution to the necessary reparation of the measureless disaster which has been brought upon the world from this country". "Perhaps," he continued, "this could also form a contribution to the reconciliation of peoples. Perhaps the people beyond the frontiers of this country would then cease to think only of its evils, but remember also that from this country work has been done which belongs to the noblest creations of the human mind."

In a letter recently received from Dr. Kallmann, I find the same burning enthusiasm for science which pervaded his speech. Work, work, honest work, he says, is the only possible way to the moral salvation of Germany; and then—to my surprise—I find him expressing the confident hope to be soon granted a "licence for research" (*Forschungserlaubnis*). So apparently he has not yet been allowed to start research investigations.

It would seem to me that the values of science and humanity, restored to Germany by Allied victory, are damaged if people like Dr. Kallmann are still left to-day waiting for permission to resume their work. There may be, among those German men of science who resisted Nazism at great risk to themselves, some who occasionally lacked political acumen; but we must respect their integrity and should not delay any longer upholding with them freely and openly the fellowship of science. M. POLANYI

EXHIBITION OF BRITISH SCIENTIFIC INSTRUMENTS AT STOCKHOLM

THE first exhibition of British manufactured goods to be held abroad since the War was held in Stockholm during May 24–June 4. It was promoted by the British Scientific Instrument Manufacturers' Association in co-operation with the Royal Swedish Academy of Engineering Sciences, the Swedish Association of Technical Physicists and the British Council. The exhibition was housed in the Technical Museum, Stockholm, by courtesy of the director, Mr. Althin.

Forty-one firms of scientific instrument manufacturers participated, and a comprehensive display of recently developed apparatus was shown that should considerably enhance the prestige of British-made goods in the Scandinavian countries. The fact that the invitation to arrange an exhibition emanated from Swedish sources is a measure of the interest of Swedish men of science and industrialists in British manufactured goods, and the demand that exists in that country for precision apparatus.

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The Technical Museum is situated in beautiful surroundings, along the edge of Lake Djurgärdsbrunnsviken, about two miles from the centre of the city. The whole of the ground floor, consisting of three large halls, a lecture theatre, and reception hall, was made available. An entrance charge of 20 ore (about 3*d*.) was made, this being the normal charge for admission to the Museum.

The opening ceremony was performed by H.M. Minister, Mr. C. B. Jerram, before a gathering of some three hundred scientific workers and industrialists, headed by Prof. Nauckoff, president of the Swedish Royal Academy. In the course of his remarks the Minister referred to the progress made in scientific achievement during the past six years of war, and averred that some good could not fail to come out of the combating of evil. The perfection of many of the instruments shown was directly due to the struggle of humanity against the forces of evil. In the mass of destruction there have germinated such devices which would become invaluable aids to the happiness, prosperity and security of the human race.

An inaugural address was given by Sir Charles Darwin, director of the National Physical Laboratory, on "Scientific Instruments in Britain", in which he stressed the interdependence of scientific men and instrument manufacturers. The man of science is usually first in the development of new ideas and methods; but the instrument-makers put the ideas into concrete form, and thus provide the instruments and apparatus which enable the scientific workers to develop new ideas. He spoke of the work of both during the War, and gave a brief résumé of the development and work of the National Physical Laboratory in Great Britain with particular reference to the Division of Metrology, which played a great part in the standardization and accurate gauging of fabricated parts. In referring to the mobilization of scientific workers in Britain during the War, he remarked that many were required to do work outside their own specialized field; on the whole, they have probably gained by a widening of outlook that could scarcely have been obtained in any other way.

The exhibition was open to the public from 12 o'clock to 4 o'clock, and on four evenings from 7 o'clock until 9 o'clock. Admission was also permitted in the mornings, by tickets issued by the exhibitors, enabling demonstrations to be given to those specially interested.

A series of fifteen lectures by specialists were given during the exhibition, each occupying one hour. The lectures, which covered a wide range of subjects of a scientific nature, mostly directly associated with the instrument industry, were one of the outstanding successes of the meeting. Three sessions were devoted to British industrial films, presented by the British Council.

The average attendance during each session was about 800, and the fact that a Conference of some three thousand engineers from the Scandinavian countries was being held in Stockholm during the same period ensured that the technical level of the visitors was high. A visit was paid, during one of the public sessions, by the Crown Prince and Princess of Sweden.

The general organisation of the exhibition was in the hands of a Swedish committee, under the chairmanship of Prof. G. Borelius. The layout was such that no exhibit could be overlooked, the stands, which were all of the open type, being so arranged that they formed part of a circuit. The décor and arrangement were uniform throughout, and though subdued the effect was very tasteful. Stands were ready for exhibitors when the apparatus arrived, and, what is most rare, the whole exhibition was complete in time for a press visit on the afternoon prior to the opening. The press publicity was well handled, liberal space was devoted in both daily and weekly journals, and a fully illustrated catalogue was available. Swedish scientific journals have arranged for the publication of many of the lectures.

Prior to the opening, the director of the Museum and members of the organising committee made a critical survey of the whole exhibition, requiring the removal of redundant exhibits. In no case would they permit any exhibit or individual idea of display to disturb the general layout or appearance of the exhibition as a whole. The lighting was uniform and adequate, and ample space available in the centres of the halls to prevent congestion. It is the due of the Swedish committee that this comment be made, since by their labour and keen insight they succeeded in providing almost ideal conditions for a highly successful exhibition, which cannot fail to add considerable prestige to British scientific instruments among the Scandinavian countries, and will provide a marked stimulus to export trade in a field that, prior to the War, was largely in German hands.

It is understood that invitations have already been received by the Scientific Instrument Manufacturers' Association to arrange similar exhibitions in other European countries.

RHUBARB LEAVES AS A FEEDING-STUFF FOR RABBITS

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SINCE the introduction of rhubarb into Britain from the U.S.S.R. in the sixteenth century it has become widely cultivated as a culinary plant. The leaves, comprising 18–25 per cent of the crop, are wasted as they are considered to be unfit for animal food.

During periods of food shortage, for example, the First World War, rhubarb leaves have, however, been used for human consumption to supplement shortages of fresh green vegetables, with the result that many people became ill from oxalic acid poisoning and a number of them died[1-11]. The toxic effects were so widespread that rhubarb leaves have since been regarded as a dangerous foodstuff for man and beast.

The literature on rabbit-keeping has, since then, contained numerous warnings to livestock breeders against feeding rhubarb or rhubarb leaves. These warnings have been given by well-known writers, breeders, a veterinarian and the Domestic Poultry Keepers Council[12-19]; but a search of the literature has failed to provide evidence of its toxic effect on the rabbit[20,21]. Since the green tops of this plant have been fed intermittently, during temporary shortages of fresh fodder, it was considered desirable to investigate the effect of giving rhubarb as the sole source of green-food in the diet over a continuous period with the view of observing possible seasonal effects.

The chemical composition of the leaves has been given in various countries, and shows calorie values

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