Sir Winston Churchill

K.G., O.M., C.H., F.R.S.

SIR WINSTON CHURCHILL, whose death we mourn, was the first British Prime Minister to appreciate the importance of science and technology to our country. His interest and appreciation were of enormous importance in the conduct and outcome of the Second World War. It was fostered by his friendship with Prof. F. A. Lindemann, which started in 1921 on one of Lindemann's social visits, and led to discussions on the scientific interests of 'The Prof.', who was also able to advise on the hydraulic problems of the new water gardens being built at Chartwell—Churchill hoping that "the problems were not beyond Oxford mathematics".

In the 1930's, as a result of this friendship, Churchill began to take a close interest in the problems of air defence and particularly in the applications of radar, and this led, in turn, to the appointment of Lindemann to Sir Henry Tizard's "Scientific Committee on Air Warfare", an appointment which led to the difficulties on the Committee which have already been sufficiently described. In June 1939 he was conducted by Tizard "in a rather disreputable aeroplane" on a tour of the radar establishments on the East Coast. He told the Air Minister that he found his visits to Martlesham and Bawdsey profoundly interesting, and urged the importance of radar to the Navy—"I cannot conceive", he said, "why the Admiralty are not now hot upon this trail".

He became First Lord of the Admiralty in 1939 and was then in a position to press his views, and, in particular, the need for improving radar installations. This led, no doubt, to Admiral Sir James Somerville's urgent demand in September 1939 for the immediate installation around Scapa Flow of radar sets to detect low-flying aircraft. As a result, a team of physicists from the universities, helped by industry and Government establishments, completed the installation of the "C.D.U." radar stations at Sumbrough Head in early December 1939 and on Fair Isle by February 1940. Without the drive from the top, this rapid work would have been impossible.

Sir Winston also founded a Statistical Office with Prof. Lindemann in charge, and a team of six economists was very speedily installed under the leadership of G. D. A. MacDougall. This later became the Prime Minister's statistical section, which provided him with speedy and direct information through charts and an endless stream of minutes from 'The Prof.' on quantitative aspects of the conduct of the War.

As the bombing attack on Britain developed in 1940, the Prime Minister took a still more intense interest in the application of radar. His minute of October 25, 1940, directed that "The very highest priority in personnel and materials should be assigned to what might be called the radio sphere. We must impart a far higher accuracy to the A.A. guns and a far better protection to our warships and harbours".

Eight months earlier the high-power centimetre cavity magnetron had been born in the Physics Laboratories of the University of Birmingham, and by May 1940 centimetre radar was operating in a primitive way on the Downs above Worth Matravers and, with unparalleled rapidity, centimetre radar sets were installed in ships and aeroplanes. It was not unusual for scientists directing the experimental teams to be summoned to the presence of the Prime Minister, dressed in his boiler suit, to be

interviewed about the progress of their work and commanded to bring the latest devices into operation "by the next moon phase".

The Prime Minister was responsible for authorizing the Tizard Mission to proceed to the United States in September 1940 to disclose all our scientific war secrets to the United States authorities. Fortified by his blanket instructions, the Mission got together the famous "black box" collection of samples, reports, drawings, including a working centimetre magnetron. The Mission was successful in establishing complete scientific collaboration and led to the foundation of the successful Radiation Laboratory at the Massachusetts Institute of Technology, which developed centimetric radar for the U.S. forces and provided a great deal of equipment for Britain at critical times.

The Mission also established collaboration with the United States on atomic energy developments, and reports on the work being carried out in Britain under the auspices of the MAUD Committee were rapidly transmitted. This Committee's final report of July 1940 led to a great intensification of work on the atomic bomb by the United States. Personal intervention by Sir Winston led to the Quebec Agreement which enabled British scientists to make an important contribution to the joint war effort, and also enabled them to develop, through the Canadian-U.K. Chalk River project, an almost complete knowledge of nuclear reactor technology.

In the later stages of the War, the Prime Minister took a personal interest in the threat of the flying bomb and the V.2 rocket. There were at times differences of opinion between Lord Cherwell and other scientists advising the Prime Minister, and it was not unusual for him to convene a meeting of the protagonists and responsible Ministers and to insist on the scientists being allowed to give their direct views.

After Sir Winston's retirement from office in 1955, he decided to devote a large part of his remaining energy to awakening Britain to the importance of improving her scientific and technological education. Out of this interest emerged the concept of the foundation of Churchill College with the objective of increasing the supply of highly trained scientists and technologists. It was to have a student body of 540—one-third of them to be postgraduates and 70 per cent working in science and technology. Sir Winston became chairman of the Trustees, who collected the funds for the greater part of the building and endowment of the College. The College reflects Sir Winston's world-wide interest by having more than 60 overseas graduate students and up to 10 Fellows from overseas in an academic year.

In a statement, after the death of Sir Winston, the Right Hon. Harold Wilson said that "Details will be announced shortly by Field Marshal Lord Alexander of plans for an appeal which is being organized on an international basis by close friends and colleagues of Sir Winston Churchill. Sir Winston Churchill himself regarded Churchill College as his national memorial, and the new appeal will enable the public in this country and abroad to show their respect for his memory by contributing further to that foundation and to other similar causes which the organizers will announce in due course."

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