RADIO AND THE CORONATION

CORONATION Day, June 2, was marked by the application of the whole of the modern technique of sound and television broadcasting to enable a vast number of people throughout the world to be in constant touch with the proceedings in London during this eventful day. In the first case, the resources of the B.B.C.'s sound broadcasting service were utilized to the full in providing, for a continuous period of seven hours, a direct commentary on the Queen's Procession from Buckingham Palace to Westminster Abbey, the service and ceremony of crowning in the Abbey, and the subsequent State Procession through London. This programme was provided as an integration of the descriptions given by expert commentators at nine points along the route and inside the Abbey and its Annexe. Apart from the radio transmission, this programme was relayed through loudspeakers to the many thousands of people who lined the route, so that in addition to seeing the procession when it passed them, they could follow by verbal description the entire course of the proceedings.

For the home sound broadcasting service, thirty-seven transmitters were used, with an additional forty-eight stations for the B.B.C.'s external services, by reception from which several hundred local stations relayed the programme regionally in many parts of the world. This involved the use of forty-three languages by the B.B.C. during the day: and furthermore, in order to satisfy the needs for world coverage, the Corporation provided about a hundred positions, with suitable 'effects' microphones, in the Abbey and along the processional route, for the use of other commentators. In this way a continuous and very effective sound picture of the Coronation proceedings was made available to countless millions of people in all parts of the world, and the many congratulatory reports received show that it was greatly appreciated.

Television

But Coronation Day was also a historic event in the development of television in Great Britain. For the first time in history, not only the State Procession but also the whole of the actual ceremony of crowning inside the Abbey could be seen by millions of viewers all over the country through the television service of the B.B.C. With the aid of five cameras inside Westminster Abbey and several others at various points along the processional route, the television audience was enabled to follow the whole of the day's proceedings. All the television transmitters of the B.B.C. were in use, including the supplementary stations recently brought into service in the neighbourhoods of Belfast, Brighton and Newcastle. In addition to private viewing on domestic receivers, many arrangements were made for the benefit of larger audiences in halls, hospitals and other places. These included the Festival Hall in London, where the presentation of the entire seven-hour programme on a full-size cinema screen was described as excellent, and may be taken to record the arrival of television technique at the stage when it is available for the theatre-going public.

Television to the Continent

The television service was not, however, confined to viewers in Britain. Following the experience gained last July, when for a week the B.B.C. broadcast part of the daily television programme from Paris provided by Radiodiffusion et Télévision Françaises, this time the British programme was transmitted by a series of radio links to the continent of Europe. In Paris the 405-line signals from London were converted to 441 and 819 lines for re-transmission by the television stations at Paris and Lille; and at Breda, in Holland, arrangements had been made by the Philips organization to convert the British video signals into a 625-line signal. This was then taken by additional radio links to the Eindhoven and Hilversum television transmitters in Holland; and also fed into the permanent network recently set up by the Nordwestdeutsche Rundfunk to link up the five or six television stations of that administration in Western Germany, including Berlin. The accompanying sound programme was transmitted independently by cable to the Continental organizations, where either the English language could be used or this could be translated by local commentators. This enterprise for the international relaying of television programmes has met with unqualified success. Tens of thousands of French people saw the Coronation ceremonies on television screens either in private houses or in the many windows and booths in Paris where television receivers had been set up in shops and newspaper offices.

Service to North America

The technique of the subject has not yet advanced to the state where a direct television service can be established across the Atlantic to the vast potential numbers of viewers in North America on such an occasion as this. Careful examination had been made during the past year or more of proposals to relay the vision signals from high-flying aircraft or over a series of radio links, but even the vast resources of the United States broadcasting organizations could not render this a practical means of getting a direct 'live' view of the Coronation proceedings. An attempt was made in New York to receive the British television signals by direct transmission, but nothing suitable for introduction into the American television service was obtained. Failing this, the most rapid means of letting American viewers see the proceedings in London was by facsimile or photo-telegraphy transmission. Within twenty minutes of the crowning of Queen Elizabeth, pictures of the scene in Westminster Abbey were being sent direct from London into newspaper offices throughout the United States; and these pictures were transmitted over the television networks, so that millions of people throughout the United States could follow the ceremonies with the aid of the service of the B.B.C., which according to *The Times* correspondent "was received with unfailing power and clarity".

Furthermore, as the next best substitute to a 'live' television service, the two major American broadcasting networks (National Broadcasting Company and Columbia Broadcasting System) had Coronation films flown across the Atlantic in a Canberra bomber to Newfoundland, where other aircraft were waiting to take the films on to distribution points in the television networks of Canada and the United States. In this way viewers in North America were, owing to the difference in local times, enabled to have their

own view of the Coronation proceedings on the same afternoon as the events took place in London.

General Appreciation

In one respect only does television technique on a public service basis lag behind the possibilities of the cinematograph film. The pictures are still presented in black-and-white, whereas anyone who witnessed the actual State procession will agree that the pomp and splendour of this could only be given an adequate appraisal by a presentation in full colour. In spite of this limitation, however, the radio correspondents of the daily Press have had nothing but praise and glowing terms of appreciation for the magnificent service given by the B.B.C. and all those connected with this organization, for an outstanding achievement in the history of broadcasting and television.

On the technical side, some thirteen hundred additional sound circuits and more than a hundred vision circuits in and around the London area were provided by the Post Office Engineering Department, working in co-operation with the B.B.C. engineers. It is probable that only those closely connected with the technical and programme sides of broadcasting can appreciate the immense complexity of the circuit and other arrangements necessary to collect together such magnificent programme material and disseminate it to the entire satisfaction of the recipients, public and private, all over the world.

Whatever may be the future of British broadcasting, there is no doubt that, on this occasion, the B.B.C. lived up to the reputation, acclaimed by many, of presenting the best public broadcasting and television service in the world.

NEWS and VIEWS

Physical Chemistry at Manchester : Prof. Geoffrey Gee, F.R.S.

Prof. Geoffrey Gee, who has recently been appointed to the chair of physical chemistry in the University of Manchester in succession to the late Prof. M. G. Evans, was born at Disley, Cheshire, and received his early education at New Mills Grammar School under the headmastership of Mr. W. A. Whitton. In 1928 he entered the Honours School of Chemistry in the University of Manchester under Prof. Arthur Lapworth ; here he obtained the B.Sc. and M.Sc. degrees and did two years work on electrocapillarity in the Thomas Graham Colloid Research Laboratory. In 1933 he joined the staff of the Dyestuffs Group of Imperial Chemical Industries, Ltd., and for five years he worked in the Department of Colloid Science at Cambridge in association with Sir Eric Rideal and later with Prof. H. W. Melville. During this period, alone or in collaboration, he published more than a dozen papers of a pioneering type on two main topics—oxidation and polymerization reactions in monolayers, and the kinetics of polymerization in the liquid phase. In 1938 he joined the British Rubber Producers' Research Association, and in 1947 he was appointed director of research in the Association. His publications in this period deal with olefin oxidation and, more especially, with the thermodynamics of polymer systems, in which subject, again, he did pioneer work which has led the way to a closer relation of thermodynamic properties to macro-molecular structure. Prof. Gee was elected a Fellow of the Royal Society in 1951 and in 1952 was awarded the Colwyn Medal by the Institution of the Rubber Industry. His return to his old University is warmly welcomed, especially by those who remember him there in his student days.

Mathematics at Dundee

Prof. A. M. Macbeath has been installed in the chair of mathematics at University College, Dundee (University of St. Andrews). Prof. Macbeath, who is twenty-nine, was educated at the Royal Academical Institution, Belfast, the Queen's University of Belfast and Clare College, Cambridge. Graduating with first-class honours in mathematics at Queen's in 1943, he served from then until the end of the War as a junior administrative officer in the Foreign Office. At Cambridge he was a Wrangler in Part 2 of the Mathematical Tripos in 1946 and gained a mark of distinction in Part 3 in the following year. After a year's research at Cambridge on the geometry of numbers, he was awarded a Commonwealth Fund Fellowship in 1948. With this fellowship he continued his researches in number theory for two years at Princeton University, obtaining the degree of Ph.D. in 1950. On his return to Cambridge he was elected to a fellowship at Clare, where he worked until October 1951 ; he was then appointed to a lectureship in mathematics at the University College of North Staffordshire. In the following year he was promoted senior lecturer and played a major part in framing the courses in pure mathematics in the new College. Prof. Macbeath's contributions to pure mathematics are already substantial, and there is no doubt that he will add to them during his tenure of the chair at Dundee.

Everest

One of the great challenges to the spirit of human endeavour in the field of exploration and determination to beat natural obstacles was overcome on May 29, when E. P. Hillary, of New Zealand, and Sherpa Tensing Bhutia, of Nepal, had successfully reached the summit of Mount Everest. This fine achievement by the members of Colonel H. C. J. Hunt's expedition is a noteworthy climax to a long series of attempts dating from the reconnaissance of 1921, and, with the news coming on the eve of the Coronation, the British people can take more than especial pride that their country has engineered this success. However, mountaineering, like science, is not a purely national affair, for it is practised by many peoples and, like science again, builds on the successive experience and knowledge gained by previous generations. First of all, tribute must be paid to the Sherpa porters, without whose courage and endurance this year's expedition—and all the previous ones—could never have started at all ; to them, too, falls the honour that one of their number made the final assault. The route followed this year is the comparatively new one from the south, first reconnoitred by Mr. Eric Shipton's party in 1951. The pre-war attempts were all on the northern side by way of Tibet, but that country is now closed to foreigners whereas, paradoxically enough, Nepal, which previously had been a forbidden country, now permits the passage of expeditions. The favourable reports of Mr. Shipton encouraged a Swiss team to make a