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BROADCASTING

By

HILDA MATHESON



LONDON

THORNTON BUTTERWORTH, LIMITED

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First Published 1933

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MADE AND PRINTED IN GREAT BRITAIN

PREFACE

THE limitations of this little book should be made clear at the outset. It is no handbook of broadcasting activities throughout the world; it contains only the briefest mention of the way in which wireless works; there is no list of existing stations, no mention of kilocycles, no discussion of the personalities responsible for broadcasting development. All these things are liable to change with the moon, and they are best studied in the many excellent radio year-books and periodicals. The chapters which follow represent an attempt to sketch an outline map of a new country. Broadcasting has grown up so quickly, its results have been in some ways so remarkable, the area covered is so vast, that a bird's-eye view of its territory as a whole, however superficial and incomplete, may help the student of social institutions to discover its distinguishing features more clearly than a detailed study of a single part.

There is another reason for the general form this book has taken. Broadcasting,

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whether as a commercial enterprise or as a public service, is ultimately governed by the ordinary listener, whose patronage directly or indirectly provides its revenues. The future of broadcasting rests collectively upon every citizen, upon his alert scrutiny, his intelligent co-operation. This sketch-map may perhaps enable readers to fill in for themselves the peaks, the deserts, the quagmires and the volcanos which they may find in their own particular landscapes. In other words, it may help them to judge the programmes to which they themselves listen and for which they are in a sense responsible, with that severely critical appreciation which all good broadcasters desire and which right development demands.

The experience upon which these chapters are based was gained in the course of six years' service with the British Broadcasting Corporation. For much of what is in them I am indebted to conversations and discussions throughout those years with colleagues too numerous to mention, to whom I would like to express my gratitude. I owe grateful thanks to Mr. Levering Tyson of the National Advisory Committee on Radio in Education, to Mr. César Saerchinger of the Columbia Broadcasting System, and to Mr. William Hard for valuable material concerning American broadcasting. And I am under a debt:

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which will be apparent throughout, to those who have helped, by their own contribution to programmes, to make broadcasting what it is to-day. Most of what I believe about broadcasting and its future has grown from possibilities of which they have themselves given me the proof.

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Well might we ask what Beauty ever could live or thrive
in our crowded democracy under governance
of such politic fancy as a farmer would show
who cultivated weeds in hope of good harvest :
and yet hath modern culture enrich'd a wasting soil ;
Science comforting man's animal poverty
and leisuring his toil, hath humanized manners
and social temper, and now above her globe-spread net
of speeded intercourse hath outrun all magic,
and disclosing the secrecy of the reticent air
hath woven a seamless web of invisible strands
spiriting the dumb inane with the quick matter of life ;
Now music's prison'd rapture and the drown'd voice
of truth,
mantled in light's velocity, over land and sea
are omnipresent, speaking aloud to every ear,
into every heart and home their unhinder'd message,
the body and soul of Universal Brotherhood.

ROBERT BRIDGES,
The Testament of Beauty,
Book I, ll. 717-733.

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CHAPTER I

THE BEGINNING OF BROADCASTING

THE history of mankind down to our own day might be shown, as Mr. H. G. Wells has suggested, in five different stages: (1) Before Speech, (2) Speech, (3) Writing, (4) Print, (5) Mechanical Transport and Electrical Communication. This little book is an attempt to describe and discuss one form of the last half of the fifth stage.

To some people, probably, this latest means of contact between man and man still seems deplorable, mechanical and unreal. It is all part, they feel, of a modernization and vulgarization upon which they would fain turn their backs.

“ For one sad century
Machines have triumphed, rolled us hither and thither,
Hardened the earth, shaking the lark’s nest till the
eggs have broken ;

• • • • •
Hard, hard on the earth the machines are rolling,
But through some hearts they will never roll.”

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So one may be tempted to feel, as the silence of river or garden is broken by the raucous sound of an intolerable loud-speaker. How can we escape from this new noise that is adding to the distractions of an already complex world? Is it to be yet another by-product of man's inventive mind which will get beyond his control before he has learnt its power?

If any reader is tempted to feel in this way about broadcasting, the facts put forward in these pages may contain some shreds for his comfort and reassurance. Broadcasting is not strictly speaking another machine; it makes use of apparatus (although the tendency is moving rapidly towards simplification); but fundamentally it is a harnessing of elemental forces, a capturing of sounds and voices all over the world to which hitherto we have been deaf. It is a means of enlarging the frontiers of human interest and consciousness, of widening personal experience, of shrinking the earth's surface. It is only possible to see it in its right perspective by seeing it in the scale already suggested—a milestone in the development of communications as momentous as its forerunners, and, like them, accompanying and assisting a new stage in civilization. Broadcasting as we know it, moreover, is in its infancy; it is comparable to the rudest

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scratchings on the cave-man's dark walls, to the guttural sounds which served the first *homo sapiens* for speech. It is not possible to pass final judgment upon its full significance; this is still wrapped in shadows. It is unreasonable, however, to regard it with distrust as a mechanical toy, as a new-fangled substitute for older and more familiar means of communication. For all we know, the first attempts to reproduce the sounds of speech and music by marks on stone or bark may have seemed as intolerably profane and mechanical as broadcasting seems to some to-day—robbing language of its beauty and confining it within the arbitrary limits of a few fixed symbols; and to reproduce those signs in quantities, by means of printing-presses, was, as we know, held at one time to be dangerous, if not impious. Broadcasting, and its allies, telegraphy and telephony, are only stages in the long process that began with man's existence some three hundred thousand years ago, and that may end in some form of thought transference of which we now have no conception.

It is of course possible that within the next few years we may see the end of an epoch; that, after a period of war, pestilence, and the breakdown of international commerce and finance, humanity will resume life as a small community living in primitive sur-

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roundings, with no machines, no wireless, and no broadcasting. Mr. Wells' Fifth Age of Electrical Communications may be succeeded by a Sixth Age of no communications at all. If that be so, this book will only have museum value. In the meantime, however, there is the past and the present.

Each successive means of wider communication seems to have evolved in answer to some need in the developing world. Speech must have become necessary when ideas grew beyond primitive needs, and required expression more varied than gesture could supply. Writing must have accompanied the growth of social groups, of priesthood, of leadership, and the dawn of literature and speculation. Printing was the medium through which the Renaissance knowledge and spirit were spread abroad, and heralded the birth of what we call the modern world. Broadcasting and other forms of electrical communications have sprung up to meet the urgent requirements of a world which must perish unless it can devise an organization capable of expressing its human and economic unity. The need for rapid interchange of news and views, for familiarizing each country with the ideas and habits of all other countries, and above all the need for an education which may fit men and women, literate and illiterate, for the complicated world of to-morrow—

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all these needs should find in broadcasting an instrument marvellously fitted to serve them.

This does not mean that it should be uncritically accepted. Broadcasting is a gift-horse which should be looked in the mouth. A reaction has set in against that religious acceptance of the marvels of applied science as inevitable signs of progress. We know now that they can play havoc in a world at war ; we even begin to ask where science is leading us ; we begin to wonder whether man was made for science or science for man. It is easy to write sentimentally and superficially about broadcasting—its elevating effects, its short cuts to culture, its universal message, its vast audience thrilled by one simultaneous emotion. It is not necessarily an advantage that the humble crofter in his lone shieling may hear sounds generated in Paris, Vienna or New York if those sounds are silly, or vulgar, or false. The ripples started by silly noises spread further and pollute more widely—that is all. Broadcasting may spread the worst features of our age as effectively as the best ; it is only stimulating, constructive and valuable in so far as it can stiffen individuality and inoculate those who listen with some capacity to think, feel and understand.

It must, of course, be admitted that broadcasting is a huge agency of standardization,

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the most powerful the world has ever seen. Standardization is inseparable, it would seem, from material progress ; it is the best and quickest way to secure mass improvement in comfort, convenience, possibly in health, for the people of the world. This applies with obvious truth to electric fittings, motor-cars, bicycles, food, and even clothes. It is when we are faced with standardization of opinion, of taste, of sentiment, of outlook, that we must of necessity become alert—must guard our frontiers like the most rigorous customs officers, and examine the new thing almost with hostility before we chalk our mark upon it and let it pass. This is equally true whether the controlling or centralizing power is synonymous with governments or with commercial interest.

It is worth examining in some detail the beginnings of broadcasting, in the light of these generalizations. The very speed with which it has established itself as a normal element in life is already tending to conceal its origins. The child born at the same time as broadcasting takes it so much for granted that he can scarcely think of a pre-broadcasting age ; he is apt to think of it as having always existed, as much "always" in his world as motor-cars, gramophones and aeroplanes. It is of course true that the founda-

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tions of broadcasting were laid during the nineteenth century, by successive discoveries of the nature of electricity and electromagnetic waves. The story of these discoveries falls outside the scope of this book;¹ but, from the beginning of the twentieth century, wireless developed within a few years into a network of wireless telegraphy and telephony, embracing ships at sea, aeroplanes in the air, and all the fighting services, to say nothing of ordinary commercial, diplomatic and personal intercourse. It was as "communications" in the narrow sense that wireless first became of world-wide significance. The impetus towards broadcasting, however, came from the man in the street, and it came from two directions.

In the first place, the scientific discoveries of the nineteenth and early twentieth centuries had created a widespread popular interest in mechanics and electricity. All over the world of western civilization there was a host of men and boys with a passionate interest in mechanical contrivances—making amateur telephones from tin cans, rigging up improvised magnetic and electrical apparatus, in sheds, basements and attics, wherever they could find undisturbed corners in which to use lathes, batteries and tools in peace.

¹ See *Wireless* by Dr. Eccles, in this series.

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Every range was represented among these amateurs, from the novice to the expert, and from their ranks came much of the persistence and enthusiasm which provided the first public for broadcasting. It has even been claimed for the amateur that he made possible, by his experiments in construction and in listening, a kind of large-scale research laboratory which has been invaluable in the growth of broadcasting, and that he has done a great deal to educate manufacturers of wireless sets in the requirements of listeners. It is important, therefore, to remember the place of the amateur in radio development alongside the scientific scholars.

But the man in the street made himself felt in another way. Without his quick response, the electrical engineers and manufacturers would have made a very limited headway. He positively jumped at the new marvel, with the result that broadcasting established itself more quickly and more widely than any previous means of communication. It established itself, in fact, in such a hurry that the demand overwhelmed the supply. There was not enough plant, no adequate supply of receivers, complete inexperience in programme building and in the technique of broadcasting, no plans for co-operation with musical interests, with the press, with the entertainment industry, and no preparation

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for dealing with intricate legal and copyright questions, national and international. It is very much to the credit of broadcasting in general that consequent confusions and disputes have on the whole been satisfactorily settled.

The first large-scale response to broadcasting experiments came in America where progress was relatively unhampered by the Great War and its aftermath. Ordinary people were extraordinarily quick to see what broadcasting offered. What America picturesquely calls "the shut-ins"—the people living in a circumscribed way, the isolated farmers, and still more their wives, the invalids, the old, the blind—suddenly found a new interest and a new hobby. It has been said that in a country which was the home of mass production, with a large population engaged in monotonous, unintelligent factory work, broadcasting offered a special means of escape, a way of self-education. Be that as it may, the whole American people, radio-manufacturers, newspapers, advertisers, listeners, showed a characteristic quickness in welcoming the new arrival.

It is important to notice that America had one very strong reason for taking up wireless with enthusiasm, and for promoting it with all her resources. Before the war it had begun to be realized that wireless might

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supplement and perhaps even supplant cable communication. Great Britain, by reason of her scattered possessions and her pre-eminence in applied science, had been the pioneer in cable-laying, and London was the great centre of the cable network. As other countries awoke to the importance of rapid communication with their own overseas dominions, or spheres of influence (actual and potential), wireless suggested itself as an obvious alternative ready to hand. The pre-occupation of Europe with the Great War enabled the American authorities to make special progress in wireless services, and when their own armies were sent to a distant fighting area, their need became more insistent still. All this undoubtedly had some bearing on broadcasting. Owing to the demands of commercial companies and of the fighting services, American manufacturers of wireless plant and apparatus were strongly organized and had influential official backing. This found expression in the Radio Corporation of America, constructed soon after the war on the foundations of the Marconi Company of America.

It is clearly impossible to trace the beginnings of broadcasting in every country, in both hemispheres, in the Old World and the New. It is however interesting to follow

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the kind of response that grew up in those countries in which broadcasting services have become most important, and to observe the different methods taken to control or direct them. They illustrate the central problems common to all countries, and the various ways in which national habits and characteristics have contributed to their solution.

In the United States the new medium was from the first conceived as a vast publicity-carrier. This was natural in a country in which a publicity sense is more acutely developed than anywhere else, and in which the publicity industry is immensely important. Manufacturers, department stores, newspapers, institutions and even individuals hastened to put up some kind of transmitter and to purchase the necessary equipment, with a result that in a very short time the ether was uncomfortably overcrowded. Stations had been erected without any general plan, without any geographical distribution, all of them catering inevitably for the more densely populated districts, in which advertisers might hope for the largest returns. By 1924 1,105 stations were, or had been, in operation. The public were becoming restive, and advertisers were beginning to realize that chaos would not bring them cash. Something clearly had to be done.

This situation was a natural result of the

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national preference for free and uncontrolled development. The methods of dealing with it were equally characteristic. The American Telephone and Telegraph Company, which was closely affiliated with one of the principal producers of radio apparatus, approached the individuals and groups who were on the waiting list for a place in the air, and with engaging friendliness and optimism put the following questions to them :—¹

1. Do you really appreciate the cost of broadcasting ? Considerable though the initial cost may be, it is but the first item in a geometrically increasing series of expenditure.

2. Do you actually need a broadcasting transmitter ? Have you a real message to convey ? Analysed in the cold light of reason, your desires are perhaps intangible and unsound.

3. Do you realize the congestion which even now obtains ? Have you ever considered how much greater this would become if restriction were thrown to the winds ? Submerge your own plans, for the nonce, in a consideration of broadcasting as a whole.

I do not know how many timid applicants were frightened off by these proposals for self-elimination ; but presumably some may have counted the cost and gone sadly away. To balance and supplement this damping

¹ *The Radio Industry : Lectures to the Graduate School of Business Administration, Harvard University.* (A. W. Shaw Co., Chicago & New York. 1928.)

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process, the American Telephone and Telegraph Company proceeded with great wisdom to a definitely constructive measure—the creation of network broadcasting—the linking together, in other words, of chains of lesser stations by offering them central programmes. They did not themselves own more than one station, known as WEAJ, in New York ; but they rapidly built up a large organization under their network management. This whole concern was subsequently bought by the National Broadcasting Company, a body specially created in 1926 by the General Electric Company, the Westinghouse Electric and Manufacturing Company, and the Radio Corporation of America, to develop and control broadcasting.

A parallel “ chain ” system was developed by the Columbia Broadcasting System of America ; and although there remain many individual stations in the United States, owned by newspapers, businesses, universities, etc., the two largest bodies controlling American broadcasting by means of the network system are the N.B.C. (National Broadcasting Company) and Columbia.

A further stage was reached when a Federal Radio Commission was appointed by the United States Senate, with authority to license all new stations, to remove obnoxious ones, to settle questions of wave-lengths and

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of power, and to control to some extent the advertisement element. Although it has strictly defined and limited powers, with no suggestion of censorship, this body was not popular and its appointment was not agreed to without considerable hesitation and reluctance. So far as I am aware, the practical convenience of accepting some policing of the air has now made its existence tolerable to the American public.

The story of broadcasting in America therefore is one of popular and commercial enthusiasm, with a very free rein to its expression, controlled for the most part by great commercial corporations, and paid for by every sort of commercial interest which advertises through it. To the majority of Americans this seems the only free and democratic method. It is their belief that only in this way will the public get what it wants, since it is vitally important to advertisers to please their customers by what they provide. Public taste, as it improves, will, they feel, force the advertising firms to give the public better and better fare. Moreover, so great is the force of competition, that if a firm supplying regular broadcasts of first-class symphony concerts were to cease to do so, a dozen other firms would annex this feature and its goodwill in listeners' minds. The advertiser thus stands before the American public as the

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beneficent giver of a service for which, in Europe, the groaning populations must pay. Broadcasting is conceived as a huge national newspaper or magazine, in which the largest part of the revenue is derived from those who advertise in it ; but with this difference. Instead of the usual magazine arrangement of so many pages of pure advertisement and so many pages of contents, the two elements are for the most part merged ; a talk, play, concert or vaudeville show " sponsored " by a firm will have its advertisement in its announcement. The receipts from advertisers, however, permit the directors of the services to reserve considerable tracts of programme space (though usually at the least popular times) for what are called sustaining programmes, i.e. items paid for by the broadcasting company or provided free by political speakers, churches, departments of State, universities and educational associations.

These, to an American, are the chief points in the positive case for his method. There are however strong negative arguments which appeal to him as well. The alternative system which exists in most European countries—Government-owned, controlled or semi-controlled monopoly—seems to him a form of tyranny. Not only has the listener to pay for the privilege of listening, but he is allowed to hear only what a Government wishes him

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to hear, or what a collection of bureaucrats decide to give him in the way of entertainment. His programme appears to be at the mercy of the official mind ; it does not spring with constant freshness from the fertile minds of the countless publicity men in the chief American businesses. European broadcasting in general is for the most part regarded as savouring of that Old World tyranny whose shackles the United States discarded at their birth.

For a complete contrast we must turn to post-war Europe. Here the dominant notes of American development—freedom—or, if you like, licence—in the air, and the conception of broadcasting as being primarily a form of commercial publicity, have been (with one or two exceptions) almost wholly absent. The nearest approach to it has been in France ; yet even there the advertisement method does not hold the field alone. It is of course true that the early chaos of uncontrolled transmitters in America made Europe wary. It is possible that people were not unmindful of the evils of unrestricted film development. It is even more probable that the controlling instinct had become a habit with governments and governed during the years of war and hunger ; and that in Great Britain the long traditions of non-party admin-

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istration of public affairs and of an expert non-political Civil Service helped to determine the form which broadcasting took. For one reason or another, broadcasting in the Old World was watched, examined and planned for in a quite remarkable and unprecedented way.

To the ordinary people of Europe, as of America, broadcasting came as a marvel, a new hobby, a new interest for lonely people. But in Europe it was something more. For four years the whole man-power of Europe had been under arms, many of them in strange countries ; demobilization sent them back to homes and to domestic life from which they had long been strangers. To many ex-soldiers, however, demobilization brought before long disillusionment, boredom, or a sense of inadequate preparation for civil life under new conditions. To all these feelings broadcasting made an appeal. It was something that could be enjoyed at home and shared with the family. It is interesting, in this connexion, to notice that listening to the wireless has taken firmest hold in those countries which make much of home life. It is also worth observing that the two European countries which took up the new invention with most enthusiasm were those whose citizens had fought wholly on foreign soil—England and Germany. In

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France, and still more in Italy, broadcasting is an amusement, an occasional distraction, but it is used largely to enliven cafés, restaurants and public squares with familiar music. Something must be allowed for the outdoor life of southern peoples; yet the South German working-class and middle-class family listens more faithfully and regularly to broadcast programmes of a varied kind than its counterpart in Northern France.

Broadcasting not only provided a family hobby; it afforded distraction when things were going from bad to worse; it provided cheap amusement without physical effort; it provided also a chance to learn, and, not least, to learn about former allies and enemies alike. There is little doubt that the curious impetus which the war gave at one and the same time to two opposing currents, nationalism and internationalism, emphasized also this double appeal of broadcasting—a more vivid presentation of one's own country, and a lively sense of the life and habits of foreigners. Not even impoverishment, not even misery and hunger, could stay the rush. I remember a working man and his wife in England, both unemployed for a long period. A letter came to the B.B.C. in London one day describing simply but vividly how on the previous evening husband and wife had faced

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the fact that, with no money in their pockets and nothing left to pawn, the ten shillings for a new wireless licence could not be found. Life as they were forced to live it was difficult enough ; without their wireless it would, they felt, be almost unbearable. By the next post had arrived a letter from the B.B.C. enclosing a postal order for ten shillings, due to the woman for some cookery receipts she had sent in response to an invitation to listeners, which had been selected for broadcasting. Their fervent relief was typical of the hold which European broadcasting obtained in the hearts of those who gained most from it.

In Great Britain early experiments were begun in February 1920 from the Chelmsford station of the Marconi Company—at that date the best equipped in any country—and continued in the form of two half-hour programmes a day. Two years later came a series of weekly experimental concerts from Writtle. Manufacturers, experimenters and a few general listeners urged upon the Postmaster-General the need for a national service, and a provisional scheme was worked out and approved by one hundred manufacturers. By November 1922 the London station of the B.B.C. had begun daily broadcasting, and in January 1923 the British

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Broadcasting Company was formally licensed to work a broadcasting system for two years. Six wireless firms between them put up most of the required capital; dividends were limited to $7\frac{1}{2}$ per cent.; and the Post Office undertook to issue 10s. licences, and to ordain that only sets of an approved type should be used. The B.B.C. were to get half the licence, and a royalty on sets, but no revenue was to come from advertising.

It was here that the man in the street made himself felt again. Thousands of people with small means and ingenious fingers found that they could buy component parts and make sets at home for a pound or two; the home-made crystal set, with its cat's whisker and head-phones, paid no royalty to anybody. The Post Office was puzzled, the manufacturers worried. There was nothing for it but to appoint a Committee.

The report of the Committee, under the chairmanship of Sir Frederick Sykes, makes interesting reading to-day. It examines the various ways in which the cost of a broadcasting service may be met; it discusses sympathetically the case of the poor but ingenious listener with the home-made set, and it surveys problems of control. Licences then numbered 170,000. The rash prophecy was made that this figure might increase to half a million, and saturation point was

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placed at a million, or two. The present figure of five million (1933) would have been thought fantastic. There is an early indication that the fighting services looked with disfavour on the suggestion that more wave-lengths might be given to broadcasting (they then covered the band 350-425 metres only). But the significance of this report is that it settled the main principles on which broadcasting in Great Britain was to be built. It decided against a revenue from advertisements, in favour of a system paid for by small annual contributions of listeners. One recommendation died at birth—the proposal that whatever was earned by broadcasting should go back into the service, to ensure proper development and to lower the licence. It is interesting to compare this with the findings of the Committee of Enquiry into Post Office administration (published in August 1932), which criticizes the system under which the Exchequer takes profits from Post Office services which should properly go back into the business. Under the present British system, $12\frac{1}{2}$ per cent. of the licences is retained by the Post Office, and further large deductions are made by the Exchequer for general purposes of State. A later committee, under the chairmanship of Lord Crawford, was appointed to consider the next stage, when the two-year licence of the original company

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came to an end. Acting on this report, broadcasting was in 1926 definitely entrusted to a public corporation, created by Royal Charter, responsible in general terms to the Postmaster-General, but charged with self-government under a small Board of Governors appointed by him. It is a peculiarly British expedient—a compromise between public and private ownership, between State control and that of a public utility company. It is supported by a peculiarly British argument—the undoubted fact that it works; its curiously undefined and elastic framework is wholly in keeping with the British constitution, and it is more and more common to find it quoted as a possible model for the management of other national services for which private control and direct State management are equally unsuitable.

From 1922 onwards broadcasting in Europe followed not dissimilar roads. The usual method was for the postal authorities to be responsible, in varying degrees, for the technical side—either for the supply of telephone lines at home and abroad for relays, or for the building and operating of transmitting stations as well—while programmes were entrusted to some specially constituted monopolistic authority, in which wireless manufacturers, wireless traders, the press, and the government shared in varying combinations.

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In some countries the degree of government control preponderated ; in others, particularly in France, commercial interests were allowed freedom to operate certain stations, while the government maintained also its own service. In Germany the federal character of the Reich necessitated the creation of nine separate programme organizations covering the main national divisions. A central control has been exercised over them, and many programmes interchanged, or shared by all. Recent reorganization has increased centralization and tightened general governmental supervision ; but the psychology, the local speech and dialect, the tastes and interests of the constituent parts of the German Empire have hitherto been served by administrations in which these differences were reflected. This attention to natural and local peculiarities is as marked a characteristic of the best broadcasting as its standardizing influence. Sweden, Denmark, Norway, developed flourishing services on similar lines and with similar response. The isolated farmers and fishermen of the Scandinavian fjords and remote valleys, the educated and intelligent agriculturists of Denmark, alike found broadcasting to their taste. It spread through the Balkan provinces, through the unhappy states of Central and Eastern Europe with their new boundaries and their racial

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minorities. It spread to the British Dominions, it sprang up in South America, it took hold in Mexico. This country found time, in the midst of its successive revolutions, to accept broadcasting with enthusiasm, even going so far as to propose that part of the military instruction should be given by this means, and that school teachers might be trained without the necessity for training colleges.

✓ Europe, as has been seen, cast her vote quite definitely for order in the ether by means of limited concessions, usually monopolies, and for the exclusion or limitation of advertisement. In order to secure these two objects, she had to accord to governments the power to license broadcasters, and to levy a small subscription from listeners to make the service self-supporting. It is doubtful whether the American system could have worked successfully in a continent in which friends and ex-enemies jostled each other in the same as well as in neighbouring countries, and in which international friction had at all costs to be avoided. I do not think that this decision was based solely, or even mainly, on fear or timidity, or on a desire to control or regiment the public. It was certainly due in part to a belief that the great cultural, artistic and educational possibilities of broadcasting would be likely to find their fullest expression

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under some form of public service, rather than in the hands of those who would look primarily for quick returns in popularity, in the interests of some proprietary article. It was felt also that such a service would be more likely to attract men of education, knowledge and taste to the art and science of programme building. These beliefs have probably been justified. The most difficult task for publicly controlled broadcasting, however, is the handling of minority or unorthodox opinions, of political and moral controversy, of free speech and its limitations. ✓

There is one country which has not yet been mentioned. In the midst of her revolutions, Russia welcomed broadcasting, and licensed it in 1924. Here, as might be expected, the Soviet Government were quick to realize the propagandist value of broadcasting, both for external and internal purposes. Those who tune in to the Moscow Trade Union station may hear talks on Soviet ideals and policy in all the principal European languages. Broadcasting is, of course, wholly official and takes its place alongside the press, the educational services, the theatre, the cinema, as an agency in changing the mental and economic outlook of a continent. The methods and activities of Russian broadcasting and their influence on public opinion

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are too important and too significant to be dealt with in this bird's-eye sketch; we will consider them more closely in a later chapter.

CHAPTER II

THE BACKGROUND OF BROADCASTING

WE have traced the growth of broadcasting in ten years, from nothing at all to a huge network of communications between peoples. The obvious questions before us now are : How does it work ? What does it do ? What are the results ?

Broadcasting may be described, briefly, as the process of starting a set of vibrations in what is conveniently termed the ether, and of amplifying them, and if need be re-amplifying them, along their journey. The listener's receiving set catches them again, and reverses the treatment given at the transmitting end ; it reduces them, as it were, to their original proportions, and conveys them to the ear as nearly as possible in the form in which they started life. Good broadcasting (in the technical sense) consists in the accurate transmission of sounds of music and speech, without distortion and without interruption ; good reception consists in the accuracy with which they are re-

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ceived and converted in the listener's wireless set.

Transmitting masts may be so constructed as to send out their messages in all directions, north, south, east and west ; or they may be directional, sending their messages in a beam towards a particular objective, and screening it from the rest of the world. It is possible for a specially constructed receiver to pick up and re-broadcast messages and programmes broadcast elsewhere ; indeed it is along these lines that the future of world-wide interchange of programmes will probably develop. But, in addition, an immense use is at present made of telephone lines, which now connect up the principal cities of Europe to each other, and the principal theatres, concert halls and public buildings in cities to their nearest broadcasting stations. Broadcasting authorities are thus able to tap almost unlimited sources for music, plays, events and speakers.

If every broadcasting station were to send out its programmes on any wave it liked, it would find itself in conflict with other programmes using the same wave. It was realized from the beginning that the available wave-lengths must be distributed according to some agreed plan. This raised important questions of control. If wave-lengths too close to each other are used by stations in the

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same part of the world, a good deal of interference is liable to result. In addition, there is the question of power or strength ; the force with which a station shouts is a matter of great concern to all its neighbours.

The intricacies of the situation become more serious when it is remembered that broadcasting is by no means the only form of wireless ; it has to rub shoulders with a number of other competing services. It is strange evidence of the speed of development to-day that although the nature and uses of wireless waves are, for practical purposes, a discovery of the last thirty years, there is already no elbow-room in the ether for all who wish to use them. Wireless telegraphy and telephony were, as we have seen, already well established by the end of the war, very much under the wing and protection of governments. Wireless was already familiar on ships at sea. The SOS signal had been established for many years as a call for help in distress, and an increasing proportion of the world's shipping was fitted with apparatus for sending and receiving messages in Morse. The Great War, however, gave an impetus to wireless communications, as to other forms of practical science, destructive as well as constructive. Directions could be sent by code, or *en clair*, to troops on land, to ships in distant oceans, to submarines, and

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to aeroplanes deploying over enemy territory. Since the war, military, naval and aerial requirements have continued to make large demands on available wave-lengths ; but in addition trade and commerce have staked out new claims. It is clearly only a matter of a few years before we shall be able to talk on our own telephones to most places in the world. Post offices, foreseeing these developments, have felt bound to stand guard over a wide band of radio waves for ordinary telephonic and telegraphic communications. Shipping companies and traders, moreover, have learned that in these days of elusive markets and falling exchanges, cargoes may be diverted at short notice in mid-ocean from an unprofitable to a profitable port. Ships' passengers are coming to expect that the monotony of a voyage should be broken by conversation with friends on shore. All these growing demands mean space.

Of all claims probably the life-saving claim presents the most serious demand. Boards of Trade, Shipping Boards, Air Boards, to say nothing of public opinion, unite in urging that nothing should interfere with the fullest communications which may avert accident or save life. No aeroplane making a forced landing in an African jungle or in a frozen sea ; no ship stranded on a hidden reef or iceberg, or blazing with an unsuspected fire,

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should, it is felt, be restricted by other services from making its danger known over a wide area. National defence, the saving of life, the requirements of commerce, and of rapid communications to match the pace of modern life, constitute a four-square claim on radio facilities beside which broadcasting is sometimes made to look like an impertinent and irreverent upstart.

The difficult relationships of all these competing interests were first systematically discussed at a world radio conference held in Washington in 1927. The full importance of broadcasting was not at that time realized ; least of all was it appreciated by the official representatives of armies, navies, air forces and post offices. The amount of room set aside for all broadcasting work was therefore strictly limited ; as it grew in popularity, and station after station sprang up, interference between them became a serious matter. Even the formation of the International Broadcasting Union, to promote amicable agreement among broadcasting authorities, could not alone contend with the problems of congestion. In the autumn of 1932 a second world conference was held in Madrid, with which the International Telegraph Union was also associated, as a result of which a joint " Tele-communications " Convention was agreed, covering the whole wide field and

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legislating for the years immediately ahead. The outcome, for broadcasting, was not very great. In the American continent, it is true, additional waves were secured, mainly for operating in Mexico and other places outside the United States. In Europe the medium waves were left as before, with no extension ; but a valuable concession was made by an additional stretch of the long waves. As, after the Washington Conference, broadcasters and post office authorities met to make the best they could of their allotted waves, so, after Madrid, similar conferences met to decide on the exact way in which the wave-lengths should be distributed. The actual responsibility for preparing a plan for Europe rests upon the International Broadcasting Union, which was appointed by the European postal administrations, in 1929, to serve as their expert advisory body on international broadcasting problems of a technical kind. The difficulty of finding room for more stations on these restricted wave-lengths is already driving scientists into experiments with very short waves (which are at present uncontrolled) and into research which aims at discovering ways of making a fuller and more accurate use of wave-lengths already in use. It has also been suggested that interference between countries might be remedied by screening stations from all but their own nationals.

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This, however, would be so contrary to the whole spirit of broadcasting that it is unlikely to be very widely applied.

These, then, are the channels, available for those who successfully lay claim to them. How are they controlled, directed and used ?

We have already noticed the external machinery which grew up to govern broadcasting, whether owned by commercial interests or by states. Here we must look a little more closely in our bird's-eye view, and see how broadcasters direct themselves. How do programmes come into being ? Who makes them, and how ?

Whether broadcasting is an art, or a servant of the arts, its development has created a new profession. Perhaps it would be truer to say that it has created a number of new professions. First and foremost must be placed the radio engineers, who provide and control the power by which a broadcasting service lives. It is required of them that they shall create machinery, design transmitting plant, prepare for inter-Imperial and international communications, in such a way that these shall not be already out of date by the time they are completed. They must understand what the programme planners want, must translate these schemes into technical terms, and learn, often only by trial

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and error, what is practicable and what is not. They must provide the most perfect transmission possible for all programmes, day by day, testing every tiny link in their vast network, and at the same time think far ahead in both theory and practice, prepared to accept new facts which may sometimes mean the scrapping of new plant and cherished plans. The small percentage of breakdowns on all the major systems is a testimony to the general efficiency of radio engineering. It may be that closer working might be secured between technicians and programme-makers, to the benefit of both. Watertight compartments are difficult to avoid in all highly specialized work; but at least there should be no room for friction or mutual suspicion, and more frequent and more direct co-operation might avoid delays and encourage experiment. There is one side of the engineers' work which illustrates their profound influence on one of the remoter aspects of broadcasting—the structure and decoration of broadcasting buildings. The new Broadcasting House, for instance, opened by the B.B.C. in London in 1932, like the headquarters of German broadcasting in Berlin and Radio City in New York, is a definitely functional building. Not only were the proportions of all studios laid down by the acoustic engineers, but also the very materials

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of which they were constructed, down to the wall coverings, hangings, fittings and furniture. Working within these strict limitations, the decorators discovered interesting and often unexpected results through the very limitations of their work.

But, apart from the engineers, there is now an army of broadcasting workers of every sort and kind, who are helping to create the technique of the new medium. They vary from the versatile jack-of-all-trades in a small station, who has to secure players, choose gramophone records, find speakers, announce programmes as best he can, to the highly complex organizations in which there are specialists severally concerned with the balance of orchestral music, sound effects, news, military bands, education, and so on. In such organizations, however, there is nearly always one official, or group of officials, responsible for programme-building as a whole, whose business it is to ensure a balanced composition, possibly alternative programmes, with some due proportion of the familiar and the novel, of the old and the new, of the easy and the difficult, of the popular and the serious, of the urban and the rural. This kind of work discovers many unsuspected problems—the right balance of regular and unexpected items, the appropriate hours for different types of programmes,

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the varying tastes and habits of different parts of the country and of every social and occupational group, the necessity of new contacts, and of exploiting every technical advance. This responsibility is sometimes vested (in the artistic, as distinct from the managerial or financial sense) in a Programme Director, who himself creates and initiates. This on the whole is typical of the German method. In Great Britain the central programme staff, though responsible for decision in questions of dispute, is above all responsible for mapping out advance programmes so as to take into account all available outside material, important visiting artists, foreign relays, or public functions, as well as for maintaining adequate contrasts between the alternative programmes offered. The task is one of co-ordination rather than of direct creation, but it involves a close study of general showmanship. "Presentation", a word constantly on the lips of programme officials, is a subtle art. It may seem relatively unimportant whether an announcer uses one form of words or another in introducing a special programme; whether the interval in an orchestral concert is filled by a talk on the music just played, or on what is to come; whether it is given to a reading in a quiet mood, or is simply left silent. Yet upon fine points like these depends much

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of the success or failure of a day's programmes. This becomes especially true as soon as the general public learns to listen with a discriminating ear, and to take an interest in presentation subtleties; yet even for the less acute listener, skill of this kind unconsciously influences his enjoyment.

In all highly developed public service organizations the chief responsibility for creative and experimental work devolves upon the various departments of the programme staff—music (orchestral, chamber music, choral music, light music, dance music, etc.), drama (covering adaptations of stage plays, vaudeville, radio drama, etc.), outside broadcasts (i.e. broadcasts from public functions, sporting events, theatres, restaurants, churches, etc.), talks (including readings of prose and poetry, news, educational series, topical talks, discussions, etc.). It is usual in Great Britain, and has become increasingly common elsewhere, to allocate fixed or partially fixed periods to certain types of programmes, leaving room for special or last minute items. Argument is always circling round this question of fixed points. Too many of them are apt to keep programmes and listeners in a rut; they may make it difficult to fit in unusual programmes of unusual length which do not fit the spaces left free. On the other hand, it is irritating for listeners if the kind

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of programme they never like to miss comes at a different hour every day and requires constant reference to time-tables. Moreover, those with small means and busy lives—who form the large majority of the public—have little margin of leisure. Farmers can only conveniently listen to market prices or expert advice after dark and before they go to bed—or else very early indeed in the morning. Housewives can seldom listen to special programmes on cooking, health, clothes, except in a few slack moments when they are not actually cooking, washing up or serving meals to their families. Concert-goers expect their concerts to fill the period after the evening meal, school children must have their lessons sometime during or immediately after school hours. The vast public which listens to news and sporting results becomes restive if news bulletins are constantly moved from day to day and prefers a time that is regular. To combine convenient regularity with stimulating irregularity is one of the major problems of programme-building. This problem will become still more complicated when twenty-four-hour-a-day programmes, designed for different parts of the world, have become more common.

Broadcasting, of all kinds, demands certain definite qualities from those who pre-

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pare its programmes. They must, of course, know their own particular subjects as well as they can be known. The day for second-rate specialists, good enough for broadcasting, is gone, or should go. They must be sympathetic to new ideas, new personalities, new methods; they must indeed have a quite peculiar open-mindedness and a gift for personal contacts. They must be intelligent enough to see everything, new and old, in terms of a new medium and consequently of a new technique. And above all they must have an interest in human nature in its most varied shapes. Broadcasters can never rest; they are never off duty; whether they travel abroad, or go to and fro to their work in bus or train; whether they dine with friends or strangers, read new books and papers, take their families to the seaside in summer or go off for a walking tour in the mountains, they cannot escape the persistent question-marks which face them everywhere—Is there a new idea for me here? Have I overlooked this sort of man, woman or child in my programme-building? What do these people think of broadcasting? Where does it fail them? What impresses them most? How could broadcasting handle this problem, reproduce that impression, convey those sounds? Would this sound be exciting? Would that be amusing? There is no end

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to this questioning; it covers the whole range of human activities from the most homely and childish, to the most intricate and serious.

It is interesting to consider the kind of people who man broadcasting services. As might be expected, they are, on the whole, young rather than old, and include a high proportion of those who served in the war, but who, often on account of some awkward versatility, or of some form of fastidiousness, idealism or general restlessness, never settled down to any humdrum profession after war was over. Broadcasting staffs attract many with a mixed experience—literature, journalism, music, teaching, the stage, politics, and so on.

Besides technical and programme staffs, there are, of necessity, administrative staffs, concerned not only with the ordinary management, financial and personnel work common to all large concerns, but handling also the intricate timing and synchronizing details of programmes. A complete day's programme or set of programmes, showing all component parts and places of origin, is not unlike a railway time-table and no less complicated. The connecting lines are not steel tracks, but telephone lines connecting concert halls, cinemas and theatres, public offices, news agencies, churches, foreign towns, or pos-

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sibly some remote village which is providing a programme of local colour. The least inaccuracy or confusion in this traffic may cause a collision or a hiatus in programmes as serious as in a railway service, and although this part of the background of broadcasting is behind the scenes, it is none the less vital.

The broadcasting official, however, who is most familiar to the public is the announcer ; he, and she, have become the curiously intimate companions of millions of people who have never seen them and who know them only by their voices. They have added a strange new element to the medley of sounds assailing the ears of democracy. The subject of the announcer is one upon which psychologists will soon turn their dissecting eyes—if they have not already done so. So far and yet so near, a stranger and a friend, personal yet impersonal—all these curious contradictions enter into the feelings about a personality through whom the programmes are daily received. The development and functions of announcing have followed different lines in different countries. In some, the announcer's personality has been exploited to the full ; he not only announces programme items, but also describes sporting or other " actuality " events. His name and his photograph may be made familiar to listeners and everything done to forge the strongest links through his

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personality. In other countries, notably in Great Britain, the tendency has been away from the personal familiarity of the early pioneering days, when half-a-dozen people ran the programmes informally and announced them. "Microphonitis" was felt to be a disease which might afflict any ordinary human being who became too much of a public idol; and there was evidence that someone whose personality and manner were so pronounced as to fill half the audience with rapture might fill the other half with rage. A policy was strictly followed therefore of complete anonymity for all regular staff announcers; their names are unknown, their faces unknown; and while this does not extinguish a large "fan" mail, it no doubt reduces it enormously in quantity. There is always a good deal of argument on this matter of impersonality. Some listeners find it cold and formal, lacking in humanity. Taken as a whole, however, it seems that the British listener prefers that the personalities of those who read his news and his weather reports and announce the items in his programmes should be not unduly conspicuous. A compromise may be said to be aimed at, since the announcer is encouraged to speak in friendly and conversational tones, to use his discretion in making occasional departures from custom, and to bid listeners good

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night at the end of the programme, as announcers all the world over seem to do. As regards personnel, they are selected on a number of grounds, which rule out highly coloured qualities, oddities, mannerisms, vulgarisms, but which leave room for a reasonable diversity of type, and admit of a certain degree of specialization. Dozens of unfamiliar words or place-names may have to be read, with a cartload of bricks ready from those to whom those particular words are not unfamiliar. A reasonably good pronunciation of French, German and Italian names and terms is necessary for musical programmes. Any number of major or minor crises, technical or otherwise, may require quick and sound judgment; every type of artist and speaker may need the right handling before, during and after broadcasting. As broadcasting becomes a more normal part of everyone's experience, broadcasters may suffer less from strain and nervousness (although a sensitive and alert broadcaster never seems to lose altogether a sense of tension); but stars, prima-donnas and Cabinet ministers have been known to require moral or physical support from announcers as the ordeal approached. All these claims demand a kind of education and a diversity of experience calculated to breed good sense, confidence and equanimity.

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Women announcers seem to be on the whole unwelcome in Anglo-Saxon countries, though favoured in Latin countries and in Central Europe. It is true that most women's voices do not yet transmit as well as men's with their lower register ; but it is possible that the immense importance attached by the British to sport makes them feel that no woman could read football and cricket results with the peculiar conviction which a male voice alone would convey to them. I have in fact heard this seriously put forward as an objection to women announcers, in spite of the fact that many male announcers themselves neither play nor are interested in these manly games.

The staffing of broadcasting in all public service systems presents quite peculiar problems. In the United States the work of programme-building and presentation which falls upon the staff of radio companies is shared with the publicity experts of all the firms which advertise through wireless programmes ; while the question of balance and contrast scarcely arises. But in Europe the whole responsibility for a complete programme every day rests upon the staff and upon those whom they consult. The work requires, as we have seen, something different from the routine of a Civil Service, and equally different (on the programme side) from the

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methods of a business organization. The work is interesting, but hard and continuous ; the man who has worked all day in the office may be in the studio all the evening directing a programme for which he is responsible. There is a constant pull between the claims of administration and creation. Under what conditions shall the creative worker serve ? Ideally he needs quiet, freedom from routine, time in which to lie fallow after a big piece of work, time to go to and fro seeking inspiration. Such behaviour may seem another name for idling to the rigid administrator. One of the tasks before the broadcasting profession is to find the right relation between these different types, to assess their relative values and to pay them accordingly. There are those who think that two parallel staffs must develop—one administrative, one creative. In practice this may easily mean that the creative man finds himself asked to work to requirements fixed by an unsympathetic administrator, and that programmes may suffer. It is apt to mean also that the important posts, which have administrative labels, are filled by the administrative staff, leaving those who supply the actual stuff of programmes and deal with artists and speakers to languish as a permanent band of nondescript geniuses. On the whole compromise seems inevitable, at least for the senior posts.

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There is consequently a need for first-class administrators who have the ability themselves to originate programmes, and to understand and direct a creative staff under them.

Another problem awaits solution. Are programme-makers to grow grey in the service of broadcasting? Is it conceivable that a man or woman can remain sufficiently fresh, elastic and enthusiastic to keep up a supply of new ideas, to plan concerts, or produce plays for thirty or forty years? How far, in short, is broadcasting a career in itself? The work of a broadcasting service, at least on the programme side, scarcely lends itself to any rigid form of organization. Ordinary wastage may settle the difficulty to some extent, the deliberate slackening of the present pace may ease it in another direction. A short working week, a shorter working day, longer holidays, sabbatical years, and some periodic interchange of staff with other countries may be found profitable, or even essential.

CHAPTER III

LIVING SPEECH

THE most pervasive and the most powerful effects of broadcasting are seen, not in music, but in speech. This is true socially, psychologically, educationally, politically, but the fact took some time to emerge. Music, humour, entertainment generally, would reach, it was felt, so many more people than any other type of programme that it was in those directions that the chief importance of broadcasting lay. It has only slowly dawned upon us that the new emphasis and importance given to spoken, as distinct from written, language is likely to have results that were never dreamed of.

“The habits of reading and writing brought a welcome accession of silence into an unreasonably noisy world. There seems to be an unhappy likelihood that this boon will be ever-increasingly diminished through the numerous mechanical devices for multiplying articulate speech.”¹ This

¹ *Speech and Language* : Alan H. Gardiner.

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is, of course, one result that we must face. But this sudden burst of speech is bringing other results beside mere noise. It is making everybody — throughout the world — more conscious of the sound of language, of pronunciation, cadence, intonation, of larger vocabularies and of larger forms of expression. It is also changing, before our eyes, the relation between speech and writing. Just as English spelling and English speech parted company two or three hundred years ago or more, so have our written and our spoken language tended to part company in daily life, in academies of learning, and in our own minds. "Gradually, however, writers on the theory of language have come to realize that actual speech is the source from which healthy views on the subject can alone be obtained. Speaker and listener have thus . . . recovered much of the importance due to them."¹ Broadcasting, in fact, is helping the living growth of a living language.

Speech is, for most people, an almost unconscious and automatic function. We scarcely remember when we could not speak ; we are scarcely conscious of how we speak. Confront any man or woman with an audible record of his speech, and his feelings will vary from rage and incredulity to

¹ *Speech and Language* : Alan H. Gardiner.

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shame and embarrassment. They may, indeed, be aware of certain pronunciations, whether, for example, they say grāās or gräss, sawft or söft ; but the rhythm and intonation of their voices will often be unrecognizable to them, while the mere fact of having an individual cadence or voice pattern will be a surprise. The social intercourse of the great majority of people is carried on with those who speak very much as they do themselves. This is due partly to geography, partly to social status and occupation. As a result, pronunciation, vocabulary, intonation which departs widely from that to which they are accustomed strikes them as queer, affected or even unintelligible. Broadcasting has had one quite definite effect here : it has made several million people conscious, if not of their own speech, at least of the speech of others. By enabling a whole country or continent to listen to a disembodied voice, wireless concentrates attention on it—flood-lights it, as it were—bringing out every little trick and peculiarity. The violence of emotion produced in quite mild people by unfamiliar pronunciation, vowels, accent, is an astonishing proof of this heightened consciousness. From becoming increasingly aware of the way in which other people speak, it is only a step to becoming more conscious of how one speaks oneself.

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It seems to be true that in every broadcasting country this education of the ear, this development of sensitiveness towards sounds, words and sentences, is actually taking place. Talks on speech and pronunciation have been among the most popular in Great Britain, both to children and to the general public. The same is true in Japan, and in varying degrees everywhere. The most extraordinary interest is aroused by the published recommendations, for announcers, of the B.B.C. Advisory Committee on Spoken English. Correspondence is provoked from all over the world, and listeners of all classes are always ready to contribute evidence of local pronunciation of words and place-names. Much of the response comes from those who admit that they have never given much thought to the subject before. What is likely to be the result of this new self-consciousness? Is it good or bad?

Let us first consider what is happening to speech in the modern world; and, since this is a book written in English for English-speaking readers, let us limit our enquiry to the English language.

The spread of compulsory education has almost revolutionized the old standards, the old frontiers of educated speech. There are many uneducated people speaking educated

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English, and many educated people speaking uneducated English. Almost every sort of accent is to be found within the ranks of the teaching profession. Nobody has taken very much trouble about it ; phonetics has scarcely been taught anywhere. The half-conscious tendency to learn to speak " good English ", as a social hall-mark, has been assumed to be enough ; although in some quarters, in which a class antagonism exists towards all " good English " because of its supposed association with reactionary opinions, this tendency may work the other way. We are thus faced by the possibility that universal education may mean a universal hybrid speech, a hotch-potch of Cockney vowels, Midland burr, American slang and intonation, and the whole often overlaid with a veneer of what can only be called " refinement."

But if there is chaos in the home of English, there is no less abroad. The divergence between American English and British English must have begun imperceptibly ; but throughout the nineteenth century, during the great period of European emigration, it has gathered speed. The Americanization of Central European immigrants has implied some degree of Central-Europeanizing of American speech. German, Italian, Polish, Yiddish words, to say nothing of stress, intonation and structure, have all played their

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part in moulding the English of North America.

The English language has travelled further afield than this. The cadence and pronunciation of each Dominion of the British Commonwealth contributes some new element ; sometimes, as in the case of South Africa, derived from another race with which British settlers have intermingled. But, apart from the speech of men and women of British stock, there are generations growing up in India, in Africa, in the Far East, who are being taught English not by British but by native teachers. Babu English at two or three removes, Uganda English, Chinese English, may produce variants of our tongue that we should scarcely recognize.

Broadcasting thus arrives on the scene at a moment when a new Tower of Babel might quite conceivably arise in the English-speaking world itself. It supplies a standardizing agency at a time when some degree of standardization may be essential to the using of the language. But, we may well ask, what degree, and what standard ? It is obvious that uniformity of speech among all who speak English is neither possible nor desirable. The strength of the language lies in its variety and its flexibility. Differences of idiom, of slang, which arise out of a manner of life and occupation, will always remain

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to distinguish different parts of the world, different climates, different societies and generations. The most that can, or indeed should, be hoped is some general standard of intelligibility—and a general recognition of certain canons of good English. It is important that the rich vocabulary of English literature should be preserved to all English-speaking people ; that the main streams of local speech and idiom should be kept alive and made widely familiar ; and that slovenliness, temporary mannerisms and affectations, distorted vowels and blurred consonants, should meet with general discouragement. This is a task which print cannot perform ; it is one which broadcasting—in common, of course, with the cinema—is peculiarly suited to undertake ; in fact, it cannot escape it.

But if the question of degree be possible to find, there still remains the problem of standard. Is there in fact a standard English, and if so, what is it ? This is too large a question to discuss here, but all broadcasters who use the English language are forced to find some answer to it. They are forced to do so by the very sensitiveness which they themselves have helped to create in the ears of listeners. The general conclusion which for the most part governs their policy is that there is no single pattern of standard English which can be defined

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with complete phonetic exactitude. The nearest approach to a definition which would be at all widely accepted is that standard English—in the academic sense—is roughly the educated speech of southern England. Merely to state this, however, is to raise a crop of denials, puzzles and controversies. There are those who claim, with some truth, that the purest English is spoken in Inverness. There are many, particularly in northern England, who regard southern English as a backboneless, affected and mincing form of speech. There are others who associate it with a snobbish superiority, the so-called "Oxford" manner, public-school English, and a host of other tags which denote dislike. In practice, standard English is largely a matter of exclusion rather than of inclusion. It is relatively easy to secure agreement on exclusions, and in this connexion the evidence accumulated by broadcasters is often illuminating. The selection, testing and training of announcers offers an interesting study. In their case the degree of standardization achieved is almost wholly the result of the method of exclusion. Exaggerated local dialect might be popular in a small corner, but unpopular for a national service. Exaggerated pronunciations, pedantic or affected pronunciations are always resented; while Cockney vowels, clerical cadences, slo-

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only speech arouse violent criticism from different quarters. Certain kinds of local accent in broadcast speakers seem more tolerated than others ; some are definitely liked. In Great Britain the Scottish "r" seems to arouse no resentment, nor the vowels of Yorkshire and Lancashire. But "wah" for wire, "tah" for tower arouse a widespread irritation. The B.B.C. has been accused of popularizing an effete, affected form of speech. "'Announcers' English" is in some quarters a term of disparagement. In others it seems to be regarded with affection and approval. It is an encouraging fact that there is a type of good plain unaffected English of the "standard" variety which seems to pass muster everywhere. Moreover, in actual fact any standardizing tendency in the speech of announcers is offset by the fact that English of almost every intelligible kind, to say nothing of Scots and a fair share of dialect, is to be heard from B.B.C. stations, and the same is no doubt true of all English-speaking broadcast services.

It is not enough, however, to think of speech only from an academic standpoint. It has, especially in England, a very definite social aspect. In the United States, and in most of the British Dominions, social status is less closely associated with a particular

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kind of speech. But in Great Britain one way of speaking will to some people suggest a superior person, a high-brow, a snob; another way of speaking will to other people suggest vulgarity, commonness, lack of breeding. In any of the cases the irritation produced may entirely distract attention from what is said to how it is said. It is difficult to avoid giving some weight to such considerations in broadcasting. In practice, extremes can be avoided and suitability taken into account. One would not, for instance, choose a reader with Cockney vowels or a Northumbrian burr to read English lyrics. A voice of this kind might, however, be uncriticized if, wedded to a well-known industrialist, it gave a talk on new careers in engineering, or on fifty years of memories in shipbuilding. This may be inconsistent, but it points to an undeniable fact—that standard English (or its equivalent spoken by educated Scots, Welshmen and Irishmen) is associated with education and good breeding, while to be without it is a definite handicap to any ambitious boy or girl. In spite of a good deal of snobbery and prejudice, which sometimes obscure the issue, this fact has to be accepted. This not only places a certain responsibility on broadcasting authorities to maintain a reasonably high standard themselves for announcers and other

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regular speakers, and for advising them on debatable pronunciation ; it also raises the question of speech training by wireless. A number of interesting experiments in direct speech training and phonetic teaching have been made in many countries. In England an experiment was conducted in school broadcasting by Mr. A. Lloyd James, Reader in Phonetics in the University of London and Secretary of the B.B.C. Advisory Committee on Spoken English. A class of ninety boys in a London secondary school was divided into two halves. One half listened to a course of about thirty lessons throughout one year, each lesson lasting for twenty minutes. Gramophone records were then carefully made of test words and sentences spoken by children from this section, and also by children who had not listened to the lessons. Judges to whom these records were submitted without any indication were able to pick out the taught from the untaught without any difficulty. This was the more remarkable because the teachers were of opinion that the trained children had influenced the speech of the children as a whole. These lessons showed that phonetic lessons could be made interesting and effective by wireless, that they could make language a living and not a dead thing, that it was possible to make the children feel, quite

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naturally, that to speak well was as important as to play games well, and that to be slovenly in either was equally mistaken. Critics have not been lacking who say: "Why disturb the good old dialects? Why 'improve' the speech of Devonshire, of Lincolnshire, of Yorkshire, of Somerset?" The only reply that can be given is that modern life is fast sweeping away unconscious dialect among the younger generation. The real danger is the substitution for the many traditional dialects of a single type of degraded pseudo-cultivated English which is full of hybrid sounds and ugly shams. A deliberate policy of speech training on a national scale, by wireless and by other means, is alone likely to secure something better in its place.

There are not only social labels in speech, but also subject associations, and professional associations, of which broadcasting has to take account and to which it has given greater prominence. There is, for example, the voice commonly associated with religion and with the clerical profession—the voice in which it is usual to read the lessons in church. The origin for this "holy" voice is probably two-fold; it is believed to carry best in large echoing churches, and, to many, a special voice for religious purposes seems more devout than the ordinary voice of everyday life. It is doubtful how strong

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this feeling is to-day ; in any event, there seems no reason except habit why a clergyman who uses this voice in church should use it also in ordinary life. For broadcasting purposes, this clerical intonation sounds peculiarly unsuited in a broadcast talk, and even in a broadcast service or address. A number of useful experiments were made by the B.B.C. for the purpose of establishing some standard in Bible-reading for the passages which were read anonymously every Sunday. Experimental records were submitted to the B.B.C. Religious Advisory Committee, which contains representatives of every denomination. A passage was heard first in a completely ordinary voice, as if it had been an extract from a newspaper, next in a " holy " voice, and finally in something between the two, as a piece of good literature. The third method commended itself to everybody, and a number of Bible readings in this manner were subsequently prepared on gramophone records to supply a demand for this kind of model.

The " poetry " voice presents another problem. Whatever its use may be on stage or platform, the " elocution " voice has no place at the microphone. The choice of poetry readers remains one of the most difficult tasks in broadcasting. The added intimacy which a microphone gives to this

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most intimate of all the arts seems to demand a quality of voice, an ability to convey meaning, rhythm and feeling, far above the ordinary. There are those who ask why there should be a "poetry" voice at all, why poetry should not be read like a news bulletin. This type of criticism probably comes from listeners with no ear for poetry. There are many more who dislike any exaggerated mannerism, such as the intoning of poetry, or an undue emphasis upon structure. Here again in practice there seems to be a happy mean which is hard to find, but unmistakable when found.

So much for speech as it concerns accent, pronunciation and cadence. The discussion of these aspects has brought us to an even more fundamental problem—the construction and consequent rhythm of speech. It is perhaps in this sphere that broadcasting is producing its most unexpected effects.

Progressively during the last four hundred years print has become the chief medium through which ideas are spread. Cheap books, cheap newspapers, free or cheap libraries have brought us to a point at which the eye has become the principal route to the mind. Education depends for at least 50 per cent. of its effect on reading. Poets and story tellers no longer tell their epics or

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their tales, they write them in books. All this has come about largely because print has immense advantages, and it has, until recently, been the only way in which writers and thinkers could communicate with a large number of people. In the process, however, two almost different languages have grown up side by side, the written and the spoken. The one is literary, formal and more or less elaborate in construction; the other is colloquial, informal and more or less simple in construction. The one is preponderatingly Latin in vocabulary; the other uses preponderatingly Anglo-Saxon words. This difference goes very deep and affects educated and uneducated alike. The person who ends his letter: "Hoping this finds you well as it leaves me at present," would never use that form of words in speech. Few people, if any, write as they speak, or speak as they write, yet the average man or woman is unaware of using two languages. Something automatically happens when they put pen to paper, or finger to typewriter, which produces written English, with the common exception of personal letters, and of deliberate dialogues in books. Some of this divergence is proper and inevitable. Speaking and writing are two different functions. But most people would probably agree that the divorce between ear and eye had gone too

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far ; the ability to translate from one to the other has become for many people an impossibility. When they read, they do not hear what they read. Literature, both prose and poetry, is thus largely robbed of its beauty and significance. Mr. Lloyd James has coined the phrase " the tyranny of print " to describe the disproportionate prestige which attaches to the written as distinct from the vernacular speech. Most of the study of English is an antiquarian study of the origin of the written speech or the teaching of how to write, seldom of how to speak English. The literary language is even used for speech on superior occasions—for addressing God, or public meetings ; the vernacular is used for purposes of everyday speech and intercourse. The emphasis on written language has also given a narrow twist to the term illiterate ; it has become a synonym for uneducated. Yet it is possible to find people whose mental processes, powers of observation and deduction, understanding of nature and of life, and range of expression are well above the average and who cannot read a word.

What is the bearing of all this on broadcasting ? Broadcasting is clearly rediscovering the spoken language, the impermanent but living tongue, as distinct from the permanent but silent print. It is reminding us

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that speech is the basis of language ; that writing and printing are only convenient symbols and as such invaluable accessories. It is making us conscious of the fact that writing and printing are incomplete symbols ; they indicate words, but not accent, cadence or rhythm, which speech alone can show. Broadcasting is enabling complicated, difficult and novel ideas and experiences to be conveyed to people whose lack of literary education would ordinarily prevent or hinder them from getting in touch with those ideas and experiences direct from printed books. It is, moreover, providing a bridge, a connecting link between ear and eye impressions of words and sentences. Readings of prose and poetry, and plays, are giving them new life to many people who had missed the sound and significance of them in print. (It is, of course, true that reading aloud means rendering in a spoken form what was designed as written language. This raises yet another problem, which is not easily solved.) But, in addition, broadcasting is redressing the balance in favour of the vernacular. Early experiments with broadcast talks showed that it was useless to address the microphone as if it were a public meeting, or even to read it essays or leading articles. The person sitting at the other end expected the speaker to address him personally, simply, almost familiarly, as man

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to man. This led to further experiment. Should broadcasters speak impromptu? How else could this personal spoken speech be maintained? And yet, without a carefully prepared and timed talk, how could a speaker be sure of getting all he needed to say, in its right proportion, into his fixed space of time? These questions have been answered in different ways in different countries and on different occasions. Experience almost everywhere has shown that, though a few practised broadcasters, particularly if their speech is an informal accompaniment of music or reading, can speak impromptu with success, most speakers and certainly most novices need a prepared manuscript if they are to avoid tiresome hesitation or equally tiresome verbosity. A technique had therefore to be found for the writing, rehearsing and delivery of talks, which would avoid the pitfalls of impromptu speech and yet retain its atmosphere. Speakers, however eminent, welcome rather than resent preliminary discussion of the way in which to approach and present material; they submit with a good grace to voice tests to discover points of intonation, rhythm, articulation which may need correction; and they accept with thanks, if tactfully offered, criticisms of a manuscript which retains the form and flavour of an essay or a treatise

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instead of a talk. Many manuscripts submitted require something not unlike translation before they can hope to sound as if they were spoken to a person and not delivered to an assembly. Many speakers find it difficult, even with a manuscript in vernacular English, to retain a vernacular intonation, pace and emphasis. Conversational speech works upon a wholly different pattern, in all these respects, from platform speech, or from reading aloud. It is in attention to details of this kind that the success or failure of much broadcast talking lies.

These methods become more difficult in their application to a discussion or debate. Some speakers are at their best in a free argument, others at their worst. Sometimes an impromptu discussion consists largely of awkward hesitations alternating with simultaneous outbursts ; sometimes a really close-knit debate is secured. Clear-cut simple issues seem to lend themselves more to the impromptu, dog-fight method ; the abstract, reflective interchange of views or interplay of ideas between two or more people almost inevitably requires careful preparation and rehearsal. The speakers in such cases are almost required to turn themselves for the occasion into something very like playwrights and actors.

These considerations lead to the most

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absorbing and elusive puzzle of broadcast speech—the relation of voice and personality. What is their relation? Does it exist at all? Does a voice necessarily fit the personality it belongs to? Does a voice suggest the same kind of personality to everybody? How far is the success or failure of a broadcast talk due to the voice as distinct from the content? Is there any particular kind of voice which expresses personality more clearly than another? Can this kind of voice be taught? How far is the voice of the author of the talk an essential part of the broadcast, and how far can it be replaced by a substitute without loss and even with gain? These, and countless other questions, press urgently for solution upon the broadcaster; and even though solution may evade him, he must work out some kind of provisional answer on which to base his practice.

One might begin the enquiry with the voice alone, its timbre and quality and inflexion, quite apart from the words used—the voice of someone speaking a language of which we understand no single word. Is it possible to characterize a voice, and visualize its unseen owner, with only a meaningless sound to judge from? This raises questions too large to discuss here; but, since certain languages always sound as if their speakers were in a rage, and others

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as if they were in a state of utter misery, it seems unlikely that we should get very far in that direction. It is more to the immediate point to try to discover, if we can, how far voice is a reliable clue to personality when it is speaking words we understand. This at once makes the problem more difficult, since it means discovering also how far it is possible to dissociate the voice which speaks from what it says.

The whole subject is a new one, forced upon us mainly by broadcasting. A vague body of experience is gradually accumulating among broadcasters, but little or none of it is tabulated or co-ordinated. Valuable evidence lies concealed in the thousands of letters received over a period of years by regular broadcasters, a large proportion of which make specific reference to voice. Experiments and enquiries were conducted in England in 1927 by Professor T. H. Pear, Professor of Psychology in Manchester University, which were later embodied in a book (*Voice and Personality*. London, 1931). Similar experiments of the same type have been conducted in Denmark and probably elsewhere. These aimed at discovering how far voices suggested the same kind of personality to everybody, and how far they could be accurately identified. In Professor Pear's experiment nine speakers—a policeman, a

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secretary, a clergyman, a business woman, an army officer, the professor's small daughter, a judge, an electrical engineer and an actor-manager—each read a passage from *Pickwick Papers* which was broadcast all over the country. Listeners were invited to enter, on a simple questionnaire-form, the sex, age, occupation, power of leadership, place of birth and place affecting speech of each speaker. Nearly 5,000 reports were received; the results were interesting, but on the whole indeterminate. There were considerable errors in judging age and in judging speech, fewer in judging occupation, and about the same degree in judging leadership. A series of systematic experiments based on this and other methods, and still dissociated from content, might yield more definite results. In the meantime, it is only possible to draw certain tentative conclusions from general experience and from such evidence as the detailed study of experiments can show. It is probable that a peculiarly lovely and melodious voice suggests for nearly everyone an attractive personality. To most people, probably to everyone, every voice suggests some kind of social or occupational background, or its deviation from the social background to which it appears to belong. The effect of this recognition will be pleasant or unpleasant according to

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the point of view or the prejudice of each listener. Most voices, like most smells, start an immediate memory or association, which may consciously or unconsciously determine whether they are liked or not. A great deal of what is put down to voice will really be due to the vocabulary and the style of the speaker. Yet, when we have made this rough analysis, are we much nearer the inner truth? The share of impression which must be attributed to what the speaker actually says remains an unknown and variable quantity. What is it that makes some people, talking on the most unpromising subjects with no cheap tricks, welcomed as friends week after week, year after year, in every sort of household, rich and poor, educated and uneducated? Why is it that some people, with voices like corncrakes or like sparrows, can hold the breathless attention of a vast audience? Why should countless listeners write to a particular broadcaster to describe the help and comfort of her "kind" voice? When all is said and done, we know at present little more than this—that a disembodied voice can act as a true reflector of a personality; that by luck and by diligence one may find speakers with personalities which can faithfully and acceptably reveal themselves in the same terms to an immensely large audience; that these successful

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voice and personality projectors seem to possess a particular range of personal qualities—they are human, sincere, unaffected and vital; that actual beauty of voice—though always welcome—is more important for reading than for talking, provided the voice conveys an acceptable personality; and that something vital, some indefinable virtue, goes out of the talk if it is read, however intelligently, by someone other than its creator. It is obvious from this that much of the personality is revealed in characteristic expressions, cadences, hesitations, stresses, change of pace, and general vocal gesture. It is important therefore that the training and rehearsing of speakers should never attempt to impose a uniform standard, and that, within the limits of intelligibility, speakers' idiosyncrasies of voice should be left to speak for themselves.

Broadcasting, then, is bringing a new consciousness of speech. By so doing it is influencing pronunciation and intonation, but it is also affecting the structure and composition of the language. It is not improbable that it may help to re-unite spelling and speech, and it is conceivable that it may encourage a critical scrutiny of the very words we use. A generation accustomed to relate much of its thought to spoken

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English may question whether even our words need remodelling as well as our spelling, if they are to be adequate for new purposes and ideas.

CHAPTER IV

PUBLIC OPINION

THERE is no lack of problems thrust upon the peoples of the post-war world. Some are due to a shortage of things, others to an excess ; and among the second group one is inclined to place the scientific inventions which are revolutionizing manners, customs and thought. Man seizes upon these conventions so avidly that he is sometimes in danger of being dragged at their heels. Will the adaptability which has enabled him to survive ice ages, pestilences and gunpowder, enable him also to adjust himself to the much more rapid changes of the last thirty years ?

One of the chief difficulties seems to be a question of scale. We learned to manage trade, currency and even quarrels reasonably well so long as they remained on a national basis. In moments of crisis we have even learned to manage public opinion in our respective countries, either by liberal or by repressive methods. There are, however, fewer frontiers in thought to-day. " World-

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opinion " may still be more of a stock phrase than of a reality, but the growth of communications has brought it very much nearer realization—socially, politically, professionally, economically. At a national convention of the plumbing industry in the United States, a resolution was passed expressing the thanks of the trade to the cinema industry for spreading, by its representation of bathroom fittings, a world-wide demand for American plumbing. If fashions in bathrooms can circle the globe by means of the motion picture, there is every reason to believe that fashions in speech and in thought are being transmitted through broadcasting.

This becomes significant when we admit, as we must, that public opinion is the governing factor to-day in international relations. In the debt discussions between Europe and the United States in 1932, it was to the man in the street that each country addressed its important notes; and the care with which every word was weighed was no less than if the notes had been formal diplomatic documents. In the Sino-Japanese troubles of the same year, the public opinion of the created state of Manchukuo, elusive though it might be, was sought and quoted in argument by both sides in the dispute. How far is public opinion, even in Europe and the United States, equipped to judge the questions sub-

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mitted to it? The majority of the so-called educated citizens of to-day left school, after an elementary education, about the age of fourteen, since when those over thirty-five have campaigned in France or some other theatre of war, read the popular newspapers, and discussed the evils of the times with their friends at work or in leisure. Such judgment as they possess has been acquired mainly in the process of living, and in contact with their fellows; it may be shrewd, it may be level-headed, but it is not as a rule particularly well-informed, even with regard to their own country. For knowledge of other countries, it is dependent upon occasional headlines in times of crisis.

Faced with this situation, the student of politics or of psychology may come to one of two conclusions. He may regard the situation with despair and look towards some form of autocracy, based on the dictatorship of a party, or of a class, on the rule of scientists, engineers, or of any confident and strongly organized group; or he may decide that, although the task is stupendous, the only thing to be done is to raise as rapidly as may be the general level of education, and in particular the general independence of thought and judgment of the man in the street. It is difficult to conceive any instrument more potentially effective for this pur-

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pose than broadcasting. Indeed, it is difficult to see how either school of thought can dispense with it, since those who look forward to a dictatorship of left, or right, or neither, are faced with the imperative need of securing at least an acquiescent public. Unless biologists be given a free hand to breed Epsilons (to use Mr. Aldous Huxley's term) who will perform the lowest forms of work and be "conditioned" to ask no better, no nation with an inheritance of Western education will for long submit to a government which does not win its general consent—unless, indeed, "anything for a quiet life" becomes a universal doctrine, and those who question, who seek, who react violently against uniformity and safety, become as extinct as the dodo. This seems, humanly, so remote that, for practical purposes, the necessity for spreading knowledge, and for basing government on an informed public opinion, may be accepted for as long ahead as we need look.

But even if we can agree that the world would be better managed if the sum of general knowledge and understanding were greater, we shall at once diverge on means and methods. On the one hand, will be those who believe that, in a democracy or an autocracy, people should be given a carefully controlled and selected fare; and on the

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other, will be those who view the results of mass-produced, standardized opinion with profound distrust and foreboding ; and who believe that a sound habit of thought and judgment, as well as stability of thought and feeling, can only be acquired through the educational process of hearing all sides of all questions. This cleavage lies at the root of any discussion of broadcasting and public opinion.

First of all, however, there is the simple fact that broadcasting can spread news and information more effectively and more rapidly over a larger area of the world than has ever before been possible. It is, of course, a case of shouting from the house-tops ; there can be no privacy, no closed doors, no exclusion of unwanted listeners. Broadcast speech can be overheard by everybody ; the printed word is often overlooked. This universality has its most obvious use in relation to what we call news—the announcement of events ; it is probably true that more people over the globe listen to news than to any other single programme. For this a universal inquisitiveness about the weather, and a huge public interest in sport, may be partly responsible ; but the fact remains that news of what is happening at home and abroad is heard daily in a brief version by an audience many times larger than the public which buys a daily newspaper.

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It includes people who are geographically beyond the reach of newspapers, and others who cannot afford the luxury. But when we have said "news", we have at once roused the fundamental controversy. What news is broadcast ?

Outside those countries in which there is little or no freedom of the press, news bulletins and summaries are on the whole tolerably objective. Their selection and presentation inevitably give immense opportunities for subtle bias, or direct propaganda ; but public opinion, national and international, exercises a certain influence against extreme inaccuracy and unfairness. In most countries an important impetus to broadcast news has been given by the demand for election results—a form of news to which it is difficult to apply a colour which it does not naturally possess. It is true that " a note of triumph " has been alleged in the tones of announcers reading the results of a particular election in Great Britain, but as in such cases criticisms are usually received from members of all parties, the accusation of bias is difficult to sustain.

In the United States news is on the whole treated with respect. Stations operated by newspapers naturally supply listeners with news selected or presented on the lines of their own papers ; but any hint of obvious manipulation would be quickly resented. In

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the great majority of European countries the news is supplied either by some specially created representative agency, which in some countries may have a close association with the State, or by the ordinary news agencies. Complaints are frequent from minority sections that such news is definitely coloured, though this may be as much by omission as by commission. In Great Britain, the B.B.C. came to an early agreement with Reuters, the Press Association and the other principal news agencies for a supply of news to be broadcast twice, or more often, daily. Little by little the various limitations on material have been dropped, and the B.B.C. news editors now have an almost unlimited choice, though much of what is used comes to them from Reuter's in a form specially intended for broadcasting. Reuter's is not a State-subsidized agency ; it is independent of financial or other control by the Government ; but it does not go out of its way to offend the Government of the day, and the news supplied by it and the other agencies is selected with the majority standpoint in mind. The news broadcast is, however, deprived of the more obvious partisan or personal colour ; it is apt, as a result, to be deprived of a considerable amount of interest. For instance, in reporting Parliamentary debates, an equal

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amount of space is given to the principal speakers of all parties, although their relative importance or significance on any given occasion may not be at all equal. It may, however, be said that the bare factual summaries of news broadcast twice a day for twenty minutes, without the attraction of any sensational detail, have provided a contrast with certain types of popular journalism which has not been lost on the public. Any deviation from this austere form is apt to cause a certain flutter, and it seems as if, in general principle, it had come to stay, however much it may be found possible to improve the actual form and presentation. Fewer items of what may be called sensational news are probably included in European news as a whole than in American news. Broadcasting reporters were for instance stationed at microphones round Colonel Lindbergh's house, after the kidnapping and murder of his child, to report any personal details which a constant watch might provide. During a disastrous fire in a large American prison, in the course of which prisoners were burnt alive in their cells, an enterprising broadcasting service secured one of the convicts himself to describe the scenes as they occurred, through a microphone hurriedly installed on the spot. Both of these instances would be regarded by most Americans as unobjectionable because the horror

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was inherent in the tragedies themselves ; in Europe they would probably excite considerable criticism.

These two examples illustrate, not only national idiosyncrasies, but also the extremely important way in which news may be made vivid and real through broadcasting. Events of local, national or international interest may be overheard, or may be heard or seen through the eyes of an onlooker. This is something which broadcasting alone can do ; it can communicate something which even the most vivid descriptive writer cannot convey in print. The signing of the Briand-Kellogg Pact in Paris ; the reception of Germany into the League of Nations ; the proceedings of the Naval Disarmament conference in London—even these formal and ceremonial occasions may be invested with a human interest—to say nothing of Presidential elections, and a thousand and one public and sporting events.

The other main direction in which broadcasting amplifies news is by comment, explanation and discussion. This is in many ways the most important service which wireless gives to the ordinary citizen ; moreover, for the most part, it represents something new. Newspaper comment on news is, by its nature, governed by the policy of proprietors or editors. Broadcast comment, which must be

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acceptable to people of widely different views, has had to learn to be objective. The possibility of such a thing was at first regarded with scepticism ; either it would in fact be highly tendencious, or it would be intolerably dull. Experience, particularly perhaps in Great Britain and in the United States, has shown that it need be neither. By developing the personal link which broadcasting so constantly forges between speakers and listeners, and by centralizing the main business of explaining news in the hands of a few individuals possessing the rare combination of first-class knowledge, the right voice and the right personality, criticism has been avoided and a degree of popularity secured for this kind of service which was previously undreamed of. Regular speakers on foreign affairs, like Mr. William Hard and Dr. J. G. Macdonald in America and Mr. Vernon Bartlett and Commander Stephen King-Hall in England, though tendencious in the sense that they themselves have an international as well as a national outlook, have become household names and household institutions. They have indeed secured something of the sort of affectionate response previously associated with a dance-band conductor or a vaudeville favourite, although they have studiously avoided any attempt to play to the gallery or to cheapen their appeal. Simplicity, sin-

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cerity, humanity, and the absence of an aggressive note have combined to produce this unlooked-for result ; but the fact that it has happened at all says much for the readiness of the man in the street to learn what is going on in the world. Regular comment of this type is increasingly supplemented by special topical talks, often from the scene of action, and by debate and discussion.

This brings us close to the field of actual politics. But before exploring it, there is one aspect of public affairs which broadcasting has almost automatically helped to raise from a position of rather dismal obscurity to one of surprising interest. In all countries, no doubt, but particularly in those with a long tradition of non-party Civil Service administration, an immense amount of the work of actual government which closely affects the daily life of the individual gets very little notice unless some trouble arises in connection with it. Departmental committees issue reports which may revolutionize some section of agriculture, or of education, or of industry ; yet the average citizen—even though he may be partly affected by it—may never understand clearly what it signifies, nor its relation to some wider whole, nor yet its full application to himself. It is beginning to be realized that public opinion must be studied by the authors of such reports if the full benefit is to be

secured ; blue books now tend to be written and printed with an eye to the general reader. Yet the machinery for "projecting" such material and other government business is still in a rudimentary stage. Broadcasting offers a unique way of mass yet individual approach. The British Treasury conversion operations of 1932 were explained simultaneously in the House of Commons and at the microphone ; leaders of the three political parties discussed the objects of conversion in simple language in the studios ; the chairman of the special committee entrusted with its administration instructed the public by microphone how to comply with the requirements. It is easier to secure accurate census returns since it has become possible for the Registrar-General to explain the forms point by point to the whole general public. Effective government, in the sense of the best organization and administration of existing services, new services, permissive services, can be brought measurably nearer by the right use of the microphone.

There is no country in the world in which this art has been more closely studied than in Russia. In the peculiar circumstances of the U.S.S.R., all activities of the state, every fresh step, every new announcement of policy, must be made intelligible as far as possible to every member of the community, every

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unit in the campaign. Broadcasting as entertainment is entirely subordinated to broadcasting as a means of public education in the progress of Five Year Plans in all their ramifications. Dealing with a population unversed in government and often unlettered, the authorities quickly realized that new ideas, schemes, experiments, orders, could only be "projected" by using a language and a form of expression which would be clear to the meanest intelligence. Theory and practice may not always be equally far advanced; technical apparatus may lag behind that of other countries; the element of compulsion may be considerable. But all broadcasting is ultimately a persuasive art, and Russia in her need has perceived more fully than most other countries the extent to which wireless may affect the smallest cog in the machine. This business of explaining and illustrating events and ideas seems to call for a "new way" of expression, utterly different from the literary, the rhetorical, the formal. Certain individuals have made themselves specialists in the study of this "new way"—this reduction to the simplest terms of each separate problem. Often the actual expression is entrusted to a worker addressing fellow workers of his own area, or his own occupation. Most interesting of all, care is taken to link town and country, peasant and artisan, by explain-

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ing to each the technical progress which is being made in the sphere of the other and what exactly this means in practice. There are signs that other nations also are beginning to realize the way in which broadcasting may help to make the modern state work. The public conscience in Great Britain was considerably stirred by a carefully planned series of talks describing slum conditions and the methods which were being tried or might be tried for dealing with them locally and nationally. Knowledge of the unemployment situation was spread in a similar series introduced by the Prince of Wales. In both instances the speakers were not official experts using official language, still less politicians; but broadcasters capable of surveying the field as a whole and of presenting it in this "new way" to the widest possible audience. If such methods are increasingly used, the yawning gulf between expert and citizen may yet be bridged, and the awkward lag in time between perceiving a remedy and making it understood and accepted may be appreciably reduced.

This discussion of public issues which are not the subjects of party dispute leads us to a cardinal fact of political broadcasting. One of the reasons for an almost world-wide impatience—particularly among the younger gen-

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eration—of politics as commonly understood is their apparent divorce from reality. People are told that the causes of the miseries, discomforts, uncertainties, from which they are suffering are economic, monetary, psychological, and above all international; yet they find their legislatures often engaged in debates on minor issues of domestic or local concern, and seldom discussing, from the wider standpoint, the evils which are admitted to be fundamental. In most countries the old lines of party demarcation are not wholly relevant to the problems of to-day, and this sense of misfit sends many people in despair to throw in their lot with short cuts of violence, or to shrug their shoulders at politics. Broadcasting comes into this picture in two ways. First, by including in ordinary programmes the kind of information and the sort of ideas which form the bridge between national politics and the larger background. A great deal can be done, a great deal is being done, particularly in Great Britain, to present composite pictures or frank symposiums on a wide range of issues, to which specialists of one kind and another, as well as representatives of the political parties, alike contribute. People have seldom had the opportunity to see, set side by side, the objective analysis of a situation and the proposed political solutions—the reports of the laboratory research men

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and the remedies of the bedside physicians. Such pictures are not easy to secure. Neither specialists nor politicians are always easy in each other's company. To secure agreement on a scheme of talks or discussions may need considerable force, persuasion and leadership. But the method as such can interest many people who are frankly bored, irritated or antagonized by party polemics ; it can bring out international aspects which are often ignored ; it can in fact give something which is seldom found in parliamentary debates or in the columns of newspapers, nor anywhere else on a large popular scale.

Secondly, broadcasting can focus attention on the important as distinct from the trivial elements in politics, which often have greater headline value. When political leaders come to the microphone it is usually to discuss a major not a minor issue ; those who listen are brought into direct touch with the business of responsible government, and they may hear debated the opposing principles rather than the tricks of parliamentary tactics. More important still, they hear their leaders under an acid test. The microphone has a curious knack of showing what is real and what is unreal, what is clear and what is woolly, what is fact and purpose, and what is stock phrase, what is sincere and what is an appeal to the gallery, what is constructive and what is des-

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tructive. It is perhaps true that the microphone puts at a disadvantage the speaker, however sincere, who is used to rhetorical platform methods. Yet such a speaker, unless he has become a mere mouthpiece for set speeches, may always learn the new technique. On the other hand, the privacy of a studio enables the shy, publicity-hating man, who distrusts purple patches and is more concerned with truth than with effects, to reach a public with whom he has never before been able to make contact. It is interesting to speculate whether broadcasting will come to play so large a part in political discussion and propaganda that it will influence the type of political leader who emerges. The prospect opens up pitfalls as well as benefits. It is said that a quack doctor with a persuasive microphone manner who acquired a private station in an American state almost succeeded in reaching high office without any political machinery or qualification whatever, solely on account of his powers of verbal fascination. But discounting such eccentricities of a "fan" public, it seems not unlikely that the influence of broadcasting will be definitely against the demagogue and in favour of the thoughtful statesman.

Politics are handled in almost every possible way in the principal countries. In many they are said to be barred; but enquiry often

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shows that government spokesmen have a right to broadcast statements of government policy. In Germany, conditions have undergone a succession of changes, varying from agreed quotas of government and opposition speakers to a virtual dictatorship. In the United States the big national chains devote large spaces to political speeches and to the proceedings of the party Conventions at the time of Presidential elections, but in addition there is much free discussion of home and foreign politics, by leading journalists, and by foreign statesmen speaking from Europe. More use is made of relaying public meetings than in Great Britain, where practically all the political speaking which is broadcast is given in the form of studio talks. A definite agreement was reached in regard to these in the course of 1928-9. An elastic form of quota was accepted, which allowed for a set of talks after a dissolution and before the election campaign (during which the government in power had the right of replying separately to each opposition party), and an equal share for each party during the actual campaign ; to this was usually added the concession of a special period to a new Prime Minister on taking office. Any such arrangements are liable to modification, to suit regroupings or sub-divisions of parties, to provide additional occasions of political debates

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or series of talks, or to meet the need of national emergencies. The trouble with emergencies is that they are apt to become chronic ; and an opposition which will submit with becoming grace to one or more appeals for national solidarity by the leader of the government may easily become restive if such occasions become too frequent. To this must be added the number of ceremonial or public occasions on which Ministers of the Crown may appear, in virtue of their office rather than as party leaders. The total weight of microphone publicity for Cabinet ministers may in fact be considerable. On the whole, the system works reasonably well and is generally accepted, since it applies equally to all parties, who all stand to reap the same advantages and disadvantages. It has, however, one serious limitation ; it provides so far only for the older established parties and makes at present no allowance for newer groups or for individual points of view.

There is one sphere of politics which as yet has no press of its own and only the beginnings of the machinery it is likely to require. Broadcasting seems likely to play an increasingly large part in giving to international politics, or rather to world authority, a visible, or, more literally, an audible substance. We have already seen how much can be done to vivify the dry bones of news, particularly such

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things as international conferences, and invest them with a life they do not possess for everyone in cold print. This field is still almost virgin soil. Little has yet been done to discover a technique which will relate and explain current events on a large scale and present them in a dramatic, pictorial form ; in short, to make radio drama out of the drama of fact, as has been done to some extent for the cinema. The possibilities are enormous and important. In the meantime, broadcasting does at least reflect a nucleus of world-direction, in two stations which embody two different conceptions of world-unity—the Vatican station and the League of Nations station. The fact that the Pope was, for the first time in history, able to speak to the whole Catholic world could scarcely fail to stir the imagination of anyone, Catholic or non-Catholic, who heard the Latin of the first broadcast. How far the religious instruction transmitted daily at different hours is received by isolated Catholic listeners, what will be the effect on Catholic psychology of this new and personal link with Rome, what may be its effect upon future administration and government in the Church, it is impossible to foretell. The same must be said of the League's station near Geneva. Talks are now broadcast regularly by prominent national leaders speaking to their own people, by officers of the League or of the International

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Labour Office describing work done and methods used, and the results, technical and otherwise, are said to be encouraging. Many countries regularly receive broadcasts of speeches made by their representatives during sessions of the Assembly, and a few appoint special representatives to describe and report the proceedings. The verbal publication of League reports and documents by broadcast telegraphy to every country in the world simultaneously, first used in connection with the draft report of the Committee of Nineteen on the Manchurian conflict, places an important new instrument for rapid communication and consultation in the hands of the Geneva authorities.

It must be obvious that at many points, if not all along the line, broadcasting in the sense discussed in this chapter touches closely on the work of newspapers. There are few things more important for the future than the working relations between radio and the press. The superficial conflict between their interests does not go very deep. It is less apparent now than it was ten years ago. The news agencies are still the main, though by no means the only, channels through which news is received by broadcasters ; their directors are usually in close touch with broadcasting authorities and share the responsibility for the conditions under which news is sent

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out. The printing of broadcast programmes, which many newspapers at first regarded as advertising matter for which broadcasters should pay, has proved in most countries to be first-class copy which no newspaper can afford to exclude. Comment on broadcast programmes, criticisms of broadcast concerts and plays, discussion of broadcast policy, has grown from nothing at all to a considerable volume in the last five or six years. It is rapidly being perceived—the process was perhaps quicker in America than in Europe—that anything which makes people more interested in more things is likely to make them keener readers of newspapers. Some evidence has been produced to show that the broadcasting of sporting results and of descriptions of matches, affects the sales of sporting editions. This may be true, in certain cases, to a limited extent ; but it may be offset by counter-evidence which shows that broadcasting has immensely widened the already large public interested in sport, and thus created a larger number of potential purchasers of sporting papers.

From quite another standpoint, it has been alleged that broadcasting is spoiling the pitch for the old-time cheap newspaper—that the public increasingly demands something better and a wider range of subjects. If this is so, it may prove annoying to newspaper proprietors, but it is scarcely an accusation of

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which broadcasting need be ashamed. There has been, indeed, a clearly noticeable tendency for newspapers of wide popular appeal to keep a vigilant eye on broadcast programmes and personalities, and to take up and develop any popular interest aroused by some scientific, political or social problem treated successfully by wireless.

Looking still further ahead, prophecy becomes difficult. There is a school of thought, notably in the United States, which sees the only future for radio as a servant of the press. Roughly, one-third of the actual stations in the American continent are said to be wholly or partly owned by newspapers or news interests. This view is not, I think, widely held in Europe, partly owing perhaps to the close association between governments and broadcasting, and partly to the fuller development of those æsthetic and cultural sides which have least in common with the press. Will broadcasting tend to become more and more the vehicle for actual news, in which its universality and the speed with which it can be diffused gives it an inherent advantage over print? Or will the inconvenience of having to listen in a fixed place, at a fixed time, give the newspapers a permanent value for news which broadcasting can never hope to rival? Will the newspapers of the future become more and more the place for comment, description

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and discussion, the home of special articles, expert criticism, the forum of public opinion? Here the press can claim an advantage over wireless, since no broadcast programme is ever likely to find room for the spoken expression of varying expert views on all that happens, still less for unlimited individual criticisms and comments. It seems likely that the artificial limitations imposed on the broadcasting of news by the press, or on account of the press, in the way of restricted hours, quantity and kind of material, in the holding up of important pronouncements for the benefit of the morning papers, will all in time give way before the claims of common sense—that news should reach the public by whatever channel is found to be the speediest and most universal. The complete linking up of communications throughout the world, which is only a question of time, will enable a responsible observer in Thibet, Central Africa, Manchuria or the South Sea Islands to broadcast an account of a *coup d'état* or a sea-serpent, civil war or a volcanic eruption, within a few moments of the event, just as a speaker can already do from Berlin, Paris or New York. Any conflict of interest in this matter between broadcasters and press should be capable of amicable settlement, to the mutual advantage of both; but broadcasting will look increasingly to its own

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methods and resources for authoritative news and description.

What, then, can we safely infer from this review of the facts? It is easy to overstress the case. Many people who listen to broadcasting no doubt are bored and switch off their sets when news or public affairs are discussed. Many may understand little or nothing of their significance; others are moved to nothing more than a momentary gape of wonderment. Even if allowance is made for all of these, there remains a vast public which is becoming better informed and more aware of the world and what it contains than any public of the same size at any previous moment. The ideal of the Greek City state—that it shall be possible for one man to address all its citizens at one time—is occasionally realized already over a considerable part of the globe. This may leave the older generation unmoved; there is evidence that the imagination of the younger generation is being influenced to think of foreigners as less foreign, and certainly less malign, and to find events in other countries not so very much less interesting than events at home. This implies no absence of patriotism, but a different patriotism, which may, in time, make world co-operation, social, political or economic, less difficult than it appears to-day.

CHAPTER V

LITERATURE AND DRAMA

LITERATURE, as we know it, both in prose and poetry, has for centuries made its appeal to our minds, our imaginations, and our emotions through the eye. It has been written to be read. Drama, throughout the ages, has been presented as an art, a show, in which vision was at least as important as hearing. How far can broadcasting hope to translate the appeal to the eye into the appeal to the ear? How far must it seek for a new literature and a new drama? And how far—to look even deeper—can any form of art,—most of all, perhaps, the intimate art of poetry—hope to make itself understood and appreciated when it is diffused indiscriminately through millions of loud speakers to the whole general public?

These questions not only open up large problems of psychology, of æsthetic, of literary technique; they also make the difficulty of any final answer unmistakably clear. Broadcasting, as we have seen, is still in the

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laboratory stage. Television may very possibly modify even those conclusions which have begun to take shape in the minds of broadcasters and listeners. Yet broadcasting cannot stand still, and its ultimate development will depend to a great extent upon intelligent understanding of the problems as they now appear. There is this much to help us in our enquiry—that, in spite of the infinite variety of conditions, of national taste, of technical possibilities throughout the world, experience and opinion on the whole converge, and a few general principles stand out.

The term "broadcast drama" covers so wide a range that it is well to attempt some kind of classification. It was at first taken for granted that the microphone offered a natural medium for the great plays of the world; that with a little necessary cutting, or even a great deal, a play which was conceived for the stage could be listened to almost as well through the microphone, provided the stage directions were clearly read and realistic sound-effects introduced. Microphones have been slung in theatre wings to enable plays to be heard from an actual theatre; professional companies have given theatre plays in studios, or they have been given by specially selected players. With certain notable exceptions, and without certain definite precautions, this procedure is not usually a success; but the

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notable exceptions are important and significant. They include great plays which are also great poetry, and conspicuously the plays of Shakespeare ; and they include also (with skilful adaptation and presentation) many plays of discussion, in which the dramatic interest is mainly centred in ideas rather than in incident. The plays of Mr. Bernard Shaw are examples of this class. Both types illustrate a truth which applies generally—and perhaps very obviously—to all broadcast drama ; the matter and context must be very good if they are to hold the attention by hearing alone. The absence of all the usual preliminaries and accompaniments which surround an evening at the play leave the listener far more critical than he would be in a theatre, in the company of his friends and with the surrounding audience to stimulate him. The ordinary interruptions and distractions of home life are in the foreground of his consciousness, or only just beyond it ; the performers, if not rightly produced, seem embarrassingly close to him in the room. Faults of construction, loose ends, lack of clarity, a poor texture, are made painfully clear to the listener, just as corresponding faults in casting and in presentation, and a lack of restraint in exploiting the intimacy of the microphone, may equally ruin his enjoyment. It is on the whole roughly true there-

fore that plays which are great poetry and plays which centre round the discussion of general ideas can, with intelligent presentation and simplification, carry to unseen listeners a great deal of their appeal to a visible audience. There is even more than this to be said. Something definitely happens by this act of translation.. The concentration upon one sense, the inevitable sharpening of the ear to catch fine shades of voice and meaning, the impression that the speakers are close beside one, may all help to emphasize the human element, to bring one more intimately into touch with the thoughts and emotions which the players are interpreting, and at the same time give a fuller weight to the beauty of language and cadence. This is, of course, to speak in terms of the ideal. Heightened effects are only the reward of first-class production; but they have been amply demonstrated in those countries which take broadcast drama most seriously.

Radio-drama proper, however, consists of plays and entertainments specially written for broadcasting, or adapted from books. The obvious secret of such work has been to make every use of impressions, effects and suggestions which the microphone was peculiarly fitted to convey—rapid change of aural “scene” (such as the cinema can provide for the eye), suggestions of infinite distance and

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infinite closeness, and the general fluidity of time and space. This very proper conception has sometimes led to a wearisome preoccupation with sound; the author's or producer's imagination has often been more engrossed with atmosphere and sound-effects than with the ideas which they were intended to illustrate. The end of the world, the transition from life to death, from the earth into space, living backwards in time—all such speculative or fantastic scenes offer scope to the radio-dramatist; but if their expression depends too much upon the humming of super-dynamos, on the beat of railway engines, aeroplane engines, or submarine engines, a certain monotony may easily supervene. There has been, however, a quite noticeable trend away from sound-effects to ideas, and this is surely a healthy sign. Plays for the microphone must, as we have seen, possess that solid basis of intrinsic interest without which virtuosity in noises is of no permanent avail.

The play of incident presents peculiar problems to the radio-dramatist. Adventure, excitement, fights and quarrels, are all apt to involve a confusion of noises and of voices which is exasperating to a listener. Exceptional skill is needed if the principal characters are to stand out unmistakably from their background, and if the secondary characters are to fall clearly into place. Overpressed realism

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may encumber the story and distract the ear ; it is learning to give way to a subtler and more effective conception of " background ".

This suggests the scope which undoubtedly exists for the play depending largely upon atmosphere—upon the creation of a sense of mystery, of the supernatural, of unearthly beauty or terror—on the kind of atmosphere, in fact, which is apt to be all too solid and concrete when presented to the eye upon the stage, and which may be suggested more vividly by an appeal to the inner eye of the imagination. The creation and presentation of radio-drama of this description obviously requires intelligence and delicacy of production ; a version of Henry James's " The Turn of the Screw " and of the story which forms the prelude to Mr. Walter de la Mare's anthology called " Come Hither ", both broadcast in England, illustrate the possibilities of this kind of play.

At the opposite pole, a type of programme which will, I believe, figure more and more largely in broadcast programmes of the future is still awaiting development. This consists in a dramatized presentation of a set of current events (already mentioned as a means of increasing interest in news), showing in a graphic form their sequence and interrelation. The technique for this method of presenting the contemporary movement of events is still

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experimental ; a programme entitled " Crisis in Spain ", in which the events, personalities and moods which characterized the revolution in Spain and the end of Spanish monarchy were gathered into a dramatic whole, introduced a model in England which has had fewer successors than might have been expected. It is true that the dramatization of complex processes of politics and economics demands encyclopædic knowledge, a statesmanlike sense of responsibility, a rare imagination and a double dose of courage ; but if the ordinary man is to secure any perspective or sense of actuality in studying the world in which he finds himself, the dramatic, as well as the expository, method of presenting the news of the world must be developed. Some kind of international co-operation in programme-building may need to be discovered before the full possibilities of this sort of drama are achieved.

One obviously popular type of play is the chronicle play, which, in successive episodes, attempts to give a picture of a famous personality or of a famous event. The success of such plays in creating for those who may have no previous knowledge of the times or of the characters something intelligible and vivid depends upon an infinite variety of factors—choice of subject, choice of episodes, clear characterization, convincing atmosphere,

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and some dramatic form which saves the sequence from being merely a set of beads loosely strung. Some of the worst and some of the best radio plays have been in chronicle form. The method offers, of course, almost unlimited possibilities ; there is all history, all literature, to ransack and to recreate. From an educational point of view, there is everything to be said for it ; dramatized history now plays a large part in school broadcasting all over the world. From the point of view of the general listener and of the programme-builder, a high standard of dramatic interest is essential if the method is not to become a bore.

Another field into which the radio-dramatist thrusts his spade is the field of books. For the producer, the dramatization for the microphone of the great classics of fiction seems to be less attractive than the newer and more experimental handling of fresh themes. For the listener, however, the story, if rightly unrolled, will always have a very wide appeal. No single technique exists ; every book presents, or should present, a new problem if cut-and-dried methods are to be avoided.

It is probably true to say that the radio plays which arouse most interest and which take radio-drama furthest are those which are specially conceived and specially written for the audience of listeners. To take a theme

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that may be much in people's minds at the moment or which holds some inherent virtue for broadcasting; to consider its chief lines of appeal through the ear; to create characters likely to grip the curious medley of ages, classes, occupations and mental outlook which listeners represent; to cast it, present it, produce it in terms of the best that broadcasting machinery can provide—it seems natural that this should be the method which particularly attracts the imagination and the creative instinct of writers. This has been particularly true of Germany, where, owing perhaps to the depths of the economic depression, and to consequent lack of ordinary means of production and of publication, authors have been particularly ready to write for the microphone, although the financial returns of the two or three performances that may be given cannot hope to rival those of a long theatrical run. There seems every reason to hope, however, that good broadcast plays will more and more be acquired for translation and production in other countries, and that the inducement for writers to devote themselves to microphone work may consequently improve.

There are three elements in all radio-drama which may almost be said to be fundamental. First and foremost, there is music. There are those who would go so far as to say that music

is as important as actors to the broadcast play. All radio plays make considerable use of it ; it can supply a great deal of what the printed programme and the scenery contribute to a drama that is watched with the eye ; it can supply something of the emotion which the mass psychology of an audience supplies. Its most obvious use is to suggest, by association, an epoch, a fashion, a place, a company, an individual. Association may even be created for purposes of the play by joining a passage of music, like a Wagnerian motive, to the appearance of a particular character. Music may be used to create an atmosphere or to create an emotion. And it may be used to suggest a change of scene more effectively than can be done by an interpolated voice interrupting with stage directions. It is easy to see, therefore, that the music of a play must be a part of its fabric, and that its choice and use should be as much a part of the writer's task as the choice of theme and of characters.

The most delicate part of a producer's task is the choice of players. The whole characterization of a play, its human and dramatic interest, will depend on the distinctive individuality of each voice, on the degree of personality it contains, which yet blends with the personality to be portrayed. It cannot be said that the art of casting has yet been fully matured ; perhaps it would be fairer

to say that the growing standardization of speech and pronunciation make ideal casting difficult. There is the further trouble that the actor or actress trained for stage work has been trained for something differing in almost every respect from microphone conditions. The production of his voice, his articulation, enunciation and rate of speech, the degree of gesture in his voice—upon the rightness of these for broadcasting depends the real success of a broadcast play. Yet the untrained performer may have learned too little of voice and breath control, may be insufficiently supple and plastic for a producer's purpose, and the stage actor may have to be the choice in the end. Ideally broadcasting should develop its own players ; special repertory companies have been tried, and schools of dramatic art are turning their attention to microphone training. Until a greater range of first-class microphone actors is available, the full appeal of dramatic programmes to critical ears will not be made.

The technical problem of production has developed two rival schools of thought. In Great Britain, from early days, a system has been used which deliberately withdraws the producer from his performers, and puts him as far as possible into the position of the listener. Sitting in a quiet room before a Dramatic Control Panel, he holds under his

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fingers a series of knobs which connect him with all the studios under his command. Following the script before him, he mixes his players, his crowds, his sound-effects, his string orchestra, his singers, as he wishes, gradually superimposing one studio upon another, fading this one out and bringing this one up, adding, as required, a greater degree of "echo" from a specially resonant contrivance to suggest distance, a large building, or the open air. For rehearsal purposes he can speak to each set of players through a special microphone, and he hears the sum of his studios through a loud speaker in his own room. This method has recently been installed in the latest radio buildings in the United States. In Germany, however, a totally opposite theory prevails. The producer personally conducts his cast, his sound-effects, his music, from the nearest possible point, in one big studio in which all are assembled. He encourages here, represses there, nods, gesticulates, and in fact elicits his effects by the direct force of his personality and physical presence. There are practical drawbacks to this method; it involves a greater strain on actors and musicians and forbids any degree of relaxation to those temporarily silent. It is difficult to compare results; both theories have been responsible for good production, but the Dramatic

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Control Panel seems on the whole likely to establish its special advantages.

There is one other element which is needed to make broadcast plays effective, but this must be provided by the listener. The art of listening is as important in its way as the art of broadcasting, but in no department is it so important or, perhaps, so difficult as in that of drama. It demands concentration over a relatively long period—an hour, or even two. It requires an act of will, and often of ingenuity, to shut out possible distractions throughout this period ; it means giving up an evening to a play almost as completely as would be meant by going to the theatre or cinema. Many people have found that the kind of concentration required is made easier by turning out the lights and listening in a darkened room. It is impossible to attend to a play as a background to conversation, or in the interval of answering the telephone, reading the evening paper, or attending to household work. Radio plays therefore are a useful reminder of the fact that the worst and best results of programmes are largely dependent on factors at the listening end.

What, then, is the conclusion to be drawn from present experience and experiment ? It would seem that there is an almost infinite scope for the dramatization, in terms of aural

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expression, of almost every side of human interest and activity—the discussion of ideas, of conflicting theories, the presentation of news, or rather of general movements of events, the re-creation of the past, the re-creation of narrative, the suggestion of atmosphere, and the general stimulus which a new medium may give to familiar themes. It seems to be equally true that less advantage, relatively, has been taken of this scope than might have been expected. Costs of production, the relatively poor rewards of radio-dramatists, the labour of producing a successful play, may be as much responsible as any lack of vision or initiative on the part of broadcasters. There is special room for experiment and research in two particular directions—effects and voices. Attempts at realism in sound-effects are often very unconvincing ; successful illusion may often lie rather in the direction of suggestive, almost symbolic sounds. Realism, when it is used, will have to be a good deal more realistic to succeed. Above all, there is a need for greater perspective in sound. Isolated examples will occur to most listeners, of real depth and range ; but often sounds are disappointingly flat, and out of scale with the content of the play. There is still a lack of variety in the quality and type of voices which must represent men and women of different generations, localities, class, char-

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acter ; only special training is likely to secure an adequate supply. It was recently found that a voice could be invented and written down ; in other words, that a particular kind of voice, with the tones, inflections, accent, required for a special purpose, could be drawn as a graph on a strip of film, and reproduced in sound. Will the radio producer of the future create his voices, instead of casting his players ?

One way of conveying the essence of literature has been implicit in the foregoing pages—the broadcasting of plays, particularly poetic drama and the drama of ideas and discussion, together with the re-telling, with the aid of impersonation and of music, of stories and legends, of novels and short stories. What place is there, however, for literature as written for the eye ? Is broadcasting likely to revive the great era of reading aloud so characteristic of Victorian family life ? Can the disembodied voice of an unseen reader kindle any spark in a casual audience ? Most broadcasters and most listeners would reply in terms of their own natural inclinations, tastes and prejudices ; some can point to personal experience to prove or disprove their case, and most can cite examples of reading which have aroused extraordinary response.

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Certain general canons would be agreed. Difficult, obscure, experimental literature on the one hand, or literature whose allusions can only be understood by those possessing a particular kind of literary education, is unlikely to make a wide appeal. This does not mean that readings from such literature are necessarily unsuitable for broadcasting. Gramophone records made by Mr. James Joyce of certain passages from his "Work in Progress" were broadcast in illustration of a series of twelve widely popular talks on "The New Spirit in Literature" given by Mr. Harold Nicolson for the B.B.C. It would be idle to pretend that everybody liked them or understood them; but taken in conjunction with a talk, which attempted to analyse Mr. Joyce's method, they evoked genuine interest among a surprisingly large number of listeners. Setting aside exceptional writing of this kind, the broadcaster is faced with a problem which seems as if it should be easy, but which in fact is full of difficulties. Should he cast bread upon the waters in the form of occasional unexpected passages from the great writers, and trust to chance? Should he make careful selections of linked readings to be read at fixed times so that listeners may if they wish get the habit of regular listening? Should he drop his readings, like precious stones, between the baser metal of tea-time

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music and comic turns, or should he reserve them for the intervals and ends of concerts, when listeners may perhaps be found in the right mood? If these questions press insistently upon him in regard to prose, they press with far greater perplexity in regard to poetry. Is it doing a service or a gross disservice to poetry to speak it into a microphone, however perfectly, if it is emitted at the other end into radio dealers' stores, restaurants full of heedless diners, public-houses full of jokes and back-chat, living-rooms where the baby is crying and the steak spitting in the frying-pan, or inhospitable houses whose occupants are only interested in sport or business? Even when all these questions have set the broadcaster experimenting though still puzzled, there are the many questions of presentation—what kind of reader? what kind of voice? what kind of subject?

Since programmes have to be created day by day and week by week, and since the infinite variety of human nature is the only limit to variety in programme material, the broadcaster in most countries tries every kind of reading in every kind of form that commends itself to him as suitable for the medium in which he deals. He drops his casual readings into odd corners, as a fisherman drops his fly into a pool, and observes what he catches. He inserts readings in concert inter-

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vals or at the close of a symphony, some of which attempt to continue the mood of the music which precedes them, others to serve as comment on the music, or on the composer, or on the opera in question ; again, he will cater for those who are irritated by such patchwork, or for those who dislike music and will listen to a reading as a separate item and not as a link in an evening's programme. He uses readings to illustrate a series of talks on a particular author, or on a particular theme. In the mornings, or in the afternoons, he may provide for shift workers, housewives, invalids, who may like to listen to an adventure story, or to the serial reading of a standard novel of permanent human interest (as so many of Charles Dickens' works have shown themselves to be) or to selected readings, with comment, from a number of little-known books. He will think of special occasions which lend themselves to some collection of prose and poetry, with or without the aid of music ; and he will remember also those who like to keep in touch with new books and new poetry, but who cannot afford to buy them. He will not forget, moreover, the personal interest which sometimes attaches to a reading by an author from his own work, although experience shows that this interest can seldom if ever outweigh the disadvantages of poor voice and diction.

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It is not possible to say that any one of these experiments is unsuccessful; each will probably appeal to different kinds of listeners, in different circumstances. The B.B.C. in particular has devoted a great deal of research, enquiry and experiment during the last six or seven years to the question of poetry reading. A planned series of half-hour readings on Sunday afternoons entitled "Foundations of English Poetry", published beforehand in a substantial shilling volume, had a certain measure of success. These were read quite simply by a number of specially selected readers, devoid of theatricality of voice or manner. A weekly series of readings from modern English poets, published subsequently as an anthology in the Hogarth Living Poets series, achieved a degree of success although limited to a late afternoon audience. Popular narrative poems, readings from epic poems, from lyric poetry, satirical poetry, religious poetry, humorous poetry, from ballads and old rhymes, all have found their places in programmes. There are those who maintain that broadcasting demands a return to the days of the bards, to the chanting of heroic deeds in epics written by poets of to-day for listeners of to-day. This may be so; yet such an assumption ignores the basic fact of broadcasting, that the microphone transmits an intimate voice to the

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individual ; it is not a megaphone shouting at a crowd. The intimacy of broadcasting seems in fact to offer a special opportunity to that lyric poetry in which the English language is richer than any language in the world ; experience (lately enlarged by the reading of a poem of this type every night at the end of the B.B.C. programme), on the whole supports this view. However this may be, there seems every reason why broadcasting should do much to help the poet, and why, in so doing, it should tend to re-emphasize the appeal to the ear rather than to the eye, the appeal to emotion rather than to intellect. An interesting experiment announced by the B.B.C. for the spring of 1933, the results of which are not yet available, may provide material for a study on these lines. Poets were invited to send in not more than three poems, for broadcasting, the entries to be judged by Mr. Walter de la Mare and Mr. Edward Marsh.

What of the readers ? Controversy rages here as elsewhere, but it is important rather in theory than in practice. Dislike and irritation is invariably expressed of all extremes in reading—whether it be the over-produced, over-expressionistic elocutionist, or the reader who believes in rigidly intoning his lines. Practically no criticism is received from any quarter when the reader possesses a voice

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whose texture is in itself beautiful, who reads simply, without mannerisms, and without peculiarities of accent, who does not obtrude his own personality, and who gives due importance to structure, rhythm, cadence, meaning and feeling. Such readers are to be found in the proportion of one in a hundred of those who present themselves as would-be poetry readers.

A subject which still requires much research and experiment is the association of poetry with music. Nearly all broadcasters have made experiments; often it has been the crude intermingling of popular "programme" music and songs with verses bearing similar titles; sometimes it has been poetry spoken against a background of music; occasionally there have been programmes in which an individual programme-builder has chosen poems and music which to him seemed capable of some real emotional interplay; the result has had individuality and in consequence a relatively wide appeal. A series of experiments called "Mosaic" were broadcast in 1931 by the B.B.C., each programme being the work of an individual producer, and each centring roughly round some single mood or theme. All such methods are open to criticism; the original meaning of a passage may be distorted if it is torn from its own context and placed in another;

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the music chosen may have association or appeal for the broadcaster which do not exist for his listeners. But it seems to be true that such programmes, when presented with intelligence and delicacy, can attract new listeners to poetry and enhance its beauty for others. The practical difficulty lies in the immense labour which goes to the preparation, rehearsal and performance of relatively short items in a day's programme.

It seems to be true, therefore, that lovely prose and poetry can touch listeners through the machinery of broadcasting as well as readers through the machinery of print. It is always easy to prove that for one who listens to such readings, a hundred may switch off; but switching off is negative, and ends with the act. Catching fire is positive and infectious; and evidence of catching fire can be supplied in every country. Perhaps two examples may be quoted.

A number of translations from the great classical writers, timed to last for twenty or thirty minutes, were chosen for reading on occasional evenings, without much advance announcement, and usually about 10 p.m. The reader was a young Cambridge scholar with a flexible and sympathetic voice and a simple and sincere manner of reading. One of the passages included was the description of the death of Socrates. A large correspon-

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dence resulted, mainly from people who had scarcely or never heard of Socrates ; one, in particular, expressing the utmost amazement, came from a tea planter of little education lately returned from the East. "Where", he asked, "can I find and buy that book? Did you write it yourself? Is it in the Bible? I did not know that there was anything like that in the world." The reading had set alight in him a determination to read books which had hitherto been altogether outside his experience.

During the exceptionally severe frosts of 1929, which froze the Thames, a reader was commissioned to read the romantic chapter describing the great frost in Elizabethan London from Virginia Woolf's *Orlando* which had recently appeared. Some months later, the reader, who was contesting a parliamentary election in a large manufacturing town, was being driven from meeting to meeting by a young mechanic. "I never listen to your talks", said the lad to his passenger—a frequent and popular broadcaster on foreign affairs—"but I listened to your reading from a book about the frozen Thames. When you finished, I was so excited I went out into the night and walked and walked, I don't know where. I would give anything to have that book."

It is doubtful whether any skilful and sin-

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cere attempt to convey the pleasures of literature altogether fails to hit some mark, and the cumulative effect can be traced in all countries in the increased buying and borrowing of books, including particular books mentioned in programmes. Generalizations are of course difficult. It may be that the romantic and poetic elements in the English character, which exist, often unexpectedly, in most Englishmen, make them, as listeners, peculiarly susceptible to certain kinds of literary appeal. Against this must be set the whole trend of modern British education, towards sport and the despising of "high-brows" on the one hand, and towards the scientific and utilitarian on the other. Something can of course be done to stimulate response to books by the right kind of talks—not, I think, by academic talks, but by talks from those with a gift for communicating to others, without condescension, something of the enjoyment and adventure which they themselves find in literature. Bulletins on new books, which are little more than publishers' puffs, have little value beyond publicity; talks about books new or old which encourage a critical as well as an appreciative sense, and which suggest something of the peculiar flavour of an author and his work, can, and beyond all question do, exert a far-reaching influence on reading and on public taste.

CHAPTER VI

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THE broadcasting of literature which is written for the eye necessitates, as we have seen, a process of translation from eye-language to ear-language ; this process has its own peculiar problems. In listening to broadcast music, there is no such switch over from one sense to another ; but the listener at home does not hear precisely what is heard by the listener in the concert room ; the process of transmission is in fact a kind of sound-photography. The actual range of tone and volume created, for example, by a symphony orchestra has to be compressed in order to bring it within the manageable compass of the microphone and the machinery of reproduction. What the listener hears is a reduction of the original to a smaller scale, in which, by the skill of balance-and-control, engineers working with the conductor, or the artists, the proportions of the original are as far as possible reproduced. The problem, in short, is to give the best possible

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photograph ; but some degree of distortion is still inseparable from the process. The broadcaster responsible for music is therefore dependent to a peculiar degree upon the skill of the engineer, and it is by a close working together of both, as well as by the evolution of a new hybrid, who is both musician and engineer, that the solution of these basic problems of technique are likely to be solved.

Many crimes are laid at the door of broadcast music. It is killing music ; it is killing musicians ; it is killing amateur music ; it is killing musical enjoyment. The facts are not easy to disentangle. Profound changes are taking place in music ; how far broadcasting is directly or wholly responsible, how far mechanical music in general is responsible, it is hard to say. We cannot ignore, moreover, the social changes which affect both the making of music and the listening to it—the decline of family self-sufficiency, the greater independence of the younger generation in the choice of their recreations, the immense increase in dancing, the cinema habit, and so on. The general process of mechanization and standardization is affecting the musical craftsman, as it has already affected the industrial craftsman. What are we to make of the situation ?

In order to get our perspective right, we

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should remind ourselves of the state of music before and immediately after the Great War. If we had been able to take a bird's-eye view of the situation in Europe and in America, what should we have found? In Western Europe, including Great Britain, one or more good permanent orchestras existed in most capitals, and in several of the more important cities. Subscription concerts of varying degrees of excellence were to be found in most towns at some time during the year, as well as occasional recitals by visiting celebrities. Germany and Austria were on a different plane, since music of all kinds could be heard constantly and cheaply even in small towns, while in Italy opera was to be heard frequently in all the principal centres. In Eastern Europe good music could be heard little if at all outside the capitals. Folk-songs and folk-dance music flourished among the peasantry, but mainly on high days and holidays. In America most of the greater cities, particularly in the East, possessed a good, sometimes a very good orchestra, and in two or three there was a good opera company. As regards the ordinary individual, hundreds of girls and boys, particularly girls, of the middle and upper classes, underwent a routine instruction in the elements of piano playing, sometimes of drawing-room singing and more rarely of

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other instruments. In most schools there was an occasional singing class for younger children, and in some secondary schools a school orchestra. The opportunity to hear music was, for children, limited to school concerts, and whatever else parents might be able to provide. It is a fact that, beyond sporadic concerts, gramophone records and church music, the ordinary citizen of a provincial town had little chance of hearing any music at all; while the country dweller was lucky if there was a musical festival in his area, or an occasional concert in the nearest country town.

To-day, any wireless listener in Europe may have a daily choice of concerts by first-class orchestras, and probably a choice of recitals and of chamber music; in America he may hear at least one or two first-rate combinations every week, such as the New York Philharmonic Orchestra. Added to this, there is an almost continuous stream of popular music, overtures to operas, airs from operas, "selections" and "arrangements", songs, dance music, and all the rest. The situation is completely changed; the peasants of Hungary and of Andalusia, the timber workers of Finland, the bus conductors of London, can all hear this outpouring of music; and because human nature is lazy, and also curious, listeners get into the habit

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of listening to things they might not actually have chosen, and are liable to acquire tastes that are new.

Now, this revolution in musical fare cannot be without some proportionate result, whether for good or for evil. Music forms the staple of every broadcast programme, with the exception of Russia. Is any estimate possible of what these results have been?

Let us look first at the ordinary listener; by which I mean the listener who, whether from ignorance, lack of inclination, lack of opportunity or lack of means, would not in pre-broadcasting days have been a concert-goer at all, and who in fact heard little except street music or church music. Every country can, no doubt, produce legendary figures as emblems of the change which has taken place in regard to the plain man; but historians and psychologists recognize nowadays that the heroes of legend are never invented; they grow out of accumulations of fact. The errand boy whistling Bach is quite a credible legend, when one remembers that Bach's church cantatas were broadcast every Sunday afternoon in the National programme from London for three years. There is a story that a well-known descendant of Mendelssohn was stopped by a London policeman for some minor motoring offence while he was over on business in London.

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When the offender gave his name the policeman stopped writing in his note-book : " Not a relation of the Mendelssohn we hear on the wireless, sir ? " and, on hearing that this was indeed the case, he waved the great man respectfully on. These stories, true or not, are portents. Anyone who cares to make even the most superficial enquiries, in towns and villages, of rich and poor, educated and uneducated, will find a new type of listener who is following musical programmes with a growing appreciation. Putting it at the lowest, it has brought music regularly and in great variety to that very large public whose love of music only needed a touch to be aroused, and to those who vaguely loved music, but seldom heard it. Many of these were limited in their likes to one or two favourite composers, partly by old association, partly for lack of opportunity—Handel, Haydn, Mendelssohn, perhaps Chopin. The wealth of unfamiliar music that has been poured into their ears is not always welcome ; but the study of the thousands of letters written on the subject to broadcasters, in every country, reveals a public steadily widening their range, sometimes with the help of the right sort of comment upon individual concerts, sometimes by regular talks from those who have a special gift for illuminating the musically untrained, like Sir Walford

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Davies in England, or Mr. Walter Damrosch in America. The evidence is all the same, and it covers not only those who were conscious of liking music, but those who were unconscious of it. In Great Britain a regular series of operas shortened and adapted for broadcasting were transmitted from B.B.C. studios for five years or so, the libretti being published and sold at 2*d.* each, or on a subscription basis. A very high proportion of subscribers were to be found among the very poor; in the outpatient department of a large women's hospital in a poor quarter of London, which dealt with a considerable charwoman population, many of these were discovered to be ardent subscribers. There has been, moreover, a marked increase in the tolerance given by the general public to contemporary music using unfamiliar language; concerts of modern music which at one time were regarded as fair game for sarcasm by the press and the man in the street are now received almost as a matter of course.

It is worth looking in some detail at the effect of musical broadcasting on children, because it can be more closely checked than is the case with grown-up people. The child who listens to broadcast music hears it for the most part within his school curriculum,

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or associated with it. Experiments may therefore be planned and controlled, and they provide a useful test of the kind of stimulus, the degree of attention, the depth of impression which broadcasting can hope to achieve. In most countries music for children has been included from comparatively early days. Classroom teachers have been in close touch with broadcast teachers, and the conclusions of both have frequently been made public. Briefly, they amount to this. Given reasonably good reception—a reliable set, a room free from interruption—given also a real contact between the broadcaster and school-teacher, and a sympathetic and enthusiastic personality to give the music broadcasts, children of school age may receive through broadcasting an entirely new feeling about music and may learn to listen to music with perception and intelligence. Music can be made no longer an “extra” or an accomplishment, but part of the ordinary business of life; children may learn the rudiments of musical form and musical language, the sound of the different instruments in an orchestra, and something of how music is written. Music thus taught and heard can interest practically every child. The child who is congenitally deaf to musical tone is said to be extremely rare. In some schools the most undisciplined and least civilized children

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have been specially responsive to school concerts, and the worst punishment has been to be deprived of them.

Mr. Walter Damrosch, who has for over thirty years conducted concerts for children in New York, extended his experiments to the air some four years ago. His method was to classify his audience in four different age groups and to accompany his programmes with a good deal of explanatory talk. He himself describes how he visited a school in Florida where the children had listened to his concerts for three years, but had never seen him :

“ We went to the school, and were met at the door by the principal herself, who said, ‘ Doctor, I will not introduce you by name to the children. I will say that you are a friend of the school ; and when you talk to them, just begin with the phrase which you always use before your concerts, “ Good morning, my dear children ” ’.

“ That seemed to me all right, so I walked into the large auditorium. There were one hundred and fifty little boys and girls there between the ages of nine and twelve years, with that sombre look on their faces when they see an elderly man whom they don’t know coming in to talk to them. There they sat, perfectly politely, but not very encouragingly ; and the principal said, ‘ Now,

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children, here is a friend of the school who has come here to say a few words to you'.

"There was a little uneasy shuffling of feet, and so forth, and I said, 'Good morning, my dear children'. A kind of electric quiver went through this class, and all of a sudden such a shouting and screaming and cheering and applauding went up from these little tots that I confess frankly for a moment I was quite knocked out by it. It took a little while for me to find my voice, and finally I said, 'Children, you don't know me'.

"'Yes, we *do*, yes, we *do*,' they all shrieked. 'You're Mr. Damrosch, you're Mr. Damrosch!'"¹

From the earliest days of broadcasting Sir Walford Davies was invited by the B.B.C. to talk every week about music, to school children in the afternoon, and to grown-up people at night. A simple friendliness, a sincere and unaffected enthusiasm, a belief in the ordinary person combined with brilliant teaching gifts most intelligently adapted to broadcasting, made Sir Walford, in the course of a few years of continuous broadcasting, one of the most popular figures in the country. Under his guidance, children all over the country learnt the simplest principles of musical construction, of melody, of counterpoint and harmony, and discovered

¹ *Radio and Education*, 1931 (Chicago), p. 176.

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the pleasures of making as well as of hearing music. One afternoon I was walking along a muddy country lane, past a rather dingy country school, when I heard, to my surprise, bursts of laughter, snatches of singing, silence, and again ripples of amusement, coming through the windows. A village woman coming in the opposite direction noticed my look of surprise and grinned as we passed. "That's Sir Walford," she said, as of a familiar friend. "I always knows it's Tuesdays when I 'ear them sounds. You never 'ear 'em like that any other day." These illustrations may be naïve, but, multiplied by thousands, they become impressive. It is absurd to suppose that broadcasting will turn everyone into a musician, or even into a musical amateur. It may, however, foster a generation caring more for music than their fathers or grandfathers have done, and who may perhaps revise the scale of values which rule their world. A chance to hear music may become for them as much of a necessity as a chance to breathe fresh air or to live in a good house. This may be significant in an age which seems more and more preoccupied with problems of riches and poverty, and the struggle for existence.

If we may assume—as I think we must—that the new public for music is a fact and not a fiction, what effect is it having on music,

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and on the musical world? There is one very obvious and practical effect which is everywhere in evidence—its effect on concert planning. Programmes have in the past been planned for concert-goers, that is, for a definitely musical public with some degree of musical knowledge. They must now be planned for a far larger, less sophisticated public, which is often hearing real music for the first time. How far should this make any difference? How far should the ordinary demands for the unfamiliar, for novelties, be met? How far is it possible, or even desirable, to help these new eavesdroppers to understand what they hear? Every broadcasting authority has experience of these problems, and most, if not all, have recognized a special responsibility towards this outer circle.

The effects of broadcasting on the musical profession in general is felt by most of the profession itself to be extremely serious. It is pointed out that broadcasting has inflicted grave hardship on individual artists, and on musical combinations; that it is adversely affecting musical academies, destroying the concert industry, and exercising a dangerous tyranny over musical enterprise and policy. It is undeniable that many performers have suffered serious hardship and unemployment, for which mechanized music in one form or other is to blame. It needs empha-

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sizing, however, that the general economic depression is responsible for a decline in all the less utilitarian and more highly trained professions, and music could hardly escape the general tendency. It is equally true that broadcasting offers an alternative to public concerts and recitals which is cheap, comfortable, and involves no waste of time, and which in actual standard may be far better than anything within reach of the listener's attendance. Yet on the other hand we cannot forget that broadcasting all over the world employs many thousands of musicians, even if cinemas and restaurants have replaced them by substitutes. Auditions are given to many thousands more. The new musical public is becoming not only larger every year, but also more discriminating. To increase the demand for something is equivalent to stimulating the supply. In the long run this may help the musician.

Broadcasting, moreover, is providing the musical world generally with opportunities to hear more music, new and old, performed at standards varying from good to very good, than has ever before been possible. With a good receiving set, the musical critic can get, if not a wholly satisfactory, at least a relatively satisfactory impression of composers whose works he seldom hears, and particularly of contemporary music all over Europe. Broad-

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casting is setting standards of excellence in every branch of music. The village organist or choir-master may hear organ playing and ensemble singing, ecclesiastical and secular, of a quality never readily available before ; he even knows that those whom he has to train are hearing them too. The same is true of military bands, the character and level of whose playing is being largely transformed as a result of broadcasting. It is an interesting fact that when in England the B.B.C. appointed the best military band conductor in the country to direct this branch of its own work, symphonic players were added to the band, special music was written for it, much more adapted for it, and the old high pitch of army bands was abandoned for the lower symphonic pitch. Following this lead, the symphonic pitch has now been generally adopted and the programmes of all military bands of any standing are no longer exclusively composed of " Selections " and " Pot-pourris " from light opera.

The orchestral situation is more obscure, and generalizations more difficult. In a country like Germany or Austria, with its established traditions, a public musically alert, and a reputable if not a first-class orchestra in most important centres, broadcasters had but to choose. In England, with a completely different musical atmosphere, and

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with only a limited tradition in the matter of orchestral playing, the situation was entirely different. After the war, the Queen's Hall Orchestra, under Sir Henry Wood, was the only orchestra in London whose players attended every rehearsal and concert. The other orchestras which gave seasons of concerts, or occasional concerts, such as the London Symphony Orchestra, though composed probably of more highly equipped players, all suffered from the "deputy" system, which permitted any member to send a substitute to rehearsals, while he himself undertook other engagements in London theatres, or in the provinces. London could in fact show no team work in orchestral playing which could compare with the Berlin, Vienna or New York Philharmonic Orchestras, whose playing took London by storm during the twelve years which followed the war. The fact that the B.B.C. now finances a permanent orchestra of picked players in London who themselves attend every rehearsal, practising and playing continually together under a permanent conductor, has been a definite contribution by broadcasting to orchestral music in England. All auditions for the orchestra were made in such a way that the judges could hear but not see the players, which rendered a completely objective judgment more certain, and which, among other

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things, threw membership of the orchestra open equally to women and to men. The standard towards which the B.B.C. orchestra is working is admittedly a high one, and it cannot be without influence outside. It has already encouraged other orchestras to abandon the deputy system.

As regards composers, broadcasting musical staffs are closely in touch with current and projected work ; good work is perhaps less likely to be overlooked now that the whole musical output of a country is under close and continual scrutiny. Moreover, a work once chosen and played comes before a wider public than has ever been the lot of new work before. It is less possible therefore for a single critic, or a contemporary fashion in criticism, or some equally fortuitous circumstance, to kill a work of merit when the general body of musical listeners replaces the handful of listeners in a concert hall. If a work is approved, it is likely to be repeated and thus to become familiar both to the public and to other musical enterprises. It is definitely unlikely to be buried for several years, as too often happened in the past, after a single first performance. Finally, the general intolerance of what is new in music, which is to be found all over the world, is giving way to discriminating appreciation by a large section of general listeners.

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There can be no greater help to the contemporary musician than this.

One other concrete contribution can be given to music by broadcasting, in the form of financial help. This, in Europe, is becoming more and more recognized and regulated. First-class music and first-class broadcasting may be mutually helpful. Opera in England, in Austria and elsewhere, has been subsidized from broadcasting revenue, in return for broadcasting rights. Similar links of different kinds exist with other musical undertakings. In England the B.B.C. make large annual payments to an immense number of musical undertakings throughout the British Isles, in return for the right to broadcast. It is no exaggeration to say that without these subsidies many of them would have found it difficult to carry on their work during the years of world depression.

What is the truth about amateur music? Broadcasting is blamed for the disappearance or diminution of personal musical effort, of the delightful ensemble playing of old days, for the unsuccessful struggles of many local musical societies. Apart from the responsibility of social changes which we have already noted, I do not think the charge can be denied. It is partly due to broadcasting, no doubt, that fewer people are learning to play an instrument, or to sing. Everyone

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who has enjoyed this experience will know this to be a pity ; not everyone who has listened to those performances will necessarily agree.

But, side by side with the decay in the older kind of music-making, we must also chronicle an immense increase in corporate musical activity—in amateur orchestras and choirs—which have spread, particularly in rural areas, in both Great Britain and America, in a very remarkable way. Broadcasting in both countries, as well as in Germany and Austria, has done everything to encourage these amateur movements, by expert judging, by broadcasting winning teams, and, in Great Britain, by limiting membership of the large B.B.C. chorus of 300 voices to members of amateur choral societies. To all amateurs of this kind broadcasting supplies a standard of excellence, in choral singing, in ensemble playing, in church music and organ playing, which must be to some extent a stimulus, an encouragement and a practical help, and which is available for even the most inexperienced individual.

There remains the grave charge that broadcasting is teaching people to listen, not to real music as it is actually played, but to a distorted version, to which their ears are now so accustomed that they no longer realize the distortion. This, of course, is a charge which may be laid with at least equal weight

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against the gramophone, the talkie and any other kind of mechanically reproduced sound. It is true that the almost perfect reproduction, which is technically possible, is a rare experience which the majority of listeners have probably never heard. One has only to go into a radio dealer's store and listen to one after another of many of the popular sets, to realize that one is listening to one kind of distortion after another—some harsh and sharp, some woolly and flat, some with poor high notes, some with deadened low notes, to any one of which one's ear would inevitably accustom itself in course of time, and accept as the real thing. There are certain definite steps which broadcasters can take to counteract this tendency. They must, and of course do, strain every nerve to improve the quality of actual transmission. This is largely controllable, not only by the engineer's skill and by the study of broadcast acoustics, but by a process known as "balance and control". Broadcast transmissions have already been described as a kind of sound-photography. What is played has to be compressed, as it were, within a smaller range and compass, and the success of the transmission depends upon the degree to which the mind of the conductor or of the artist can be reproduced, within the smaller scale, for the listener. In practice this duty falls upon a

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balance and control official, who is preferably both an engineer and a musician. By attending rehearsals, listening to the conductor's instructions, correcting any faulty balance in the placing of instruments which submerges an important passage, this official, with the score in front of him in a listening room, can by skilful manipulation of his controls ensure that proportionate effects are received by the listener. It cannot be the same performance for the listener in the concert room and the listener at home, but it can be made to correspond as closely as possible. The skill with which a climax is anticipated and prepared for, or sufficient reserve kept in hand for a supreme moment, is an all-important element in good broadcasting, which it is the obvious duty of broadcasters to develop to the full. But, in addition, they must, I think, accept a degree of responsibility for standards of reproduction. It should not be impossible to maintain in every considerable town listening centres accessible freely to the public, at which they could hear broadcasting at its best. Alternatively, or additionally, every encouragement and incitement might be given to the radio industry to perfect the accurate reproduction of the widest range of register and tone. There should be a pooling of research and experiment. Finally, broadcasters can do a great deal to train the ears

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of listeners and to keep them sensitive to the quality of sound by admitting the public to certain broadcast concerts of symphony orchestras or chamber music, combining the best broadcasting conditions with ordinary concert surroundings.

This raises a serious issue with the music industry. It is held by many in England that the regular weekly public concerts of the B.B.C. orchestra have almost driven out of business the other concert-giving orchestras in Great Britain and that there is not room for a more or less subsidized competitor in this small field. Some deplore the existence of a B.B.C. orchestra at all, or would keep it wholly for studio performances. This seems to overlook the service that such an orchestra may render to music in general, and it overlooks altogether the importance, to broadcasters and musicians alike, of stressing the difference between a concert hall performance and a broadcast performance. The solution would seem to lie in compromise, on the lines of a limited number of public appearances.

It is interesting to speculate whether broadcasting will have any special effect on general musical development. Will special music tend to be written for broadcasting? There have been a number of experiments in Germany and Italy in this direction, which

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have not been widely followed elsewhere. On the whole, musical opinion regards it as a retrograde move. Its only excuse is the present difficulty of reproducing excessively rich musical texture. These difficulties are rapidly diminishing and may altogether disappear. It may even be argued, as Dr. Adrian Boult, Music Director of the B.B.C., has suggested, that over-elaborate orchestration can never produce the same brilliance and intensity as a smaller and simpler combination, since the mere duplication of instruments tends to obscure the harmonics made by each. If broadcasting tends to emphasize this fact, it may conceivably influence musical composition in the direction of an older simplicity, rather than towards increasing elaboration.

Of the possible, and indeed actual, effect of broadcasting upon the building of concert programmes, something has already been said. There is every sign that the immense planning of music over a wide period will lead to more variety in what is played; there may be less of the curious neglect that has been the fate, for no apparent reason, of certain composers or of certain works. This is surely a gain. For the sake of the less sophisticated public, there will always be a large place and a permanent place for the great music which has become firmly estab-

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lished, and, for the specialized listener, a large choice of contemporary work, and of much that is novel and experimental.

We may speculate further on the possible internationalization of music. The most obvious influence will be the influence of East on West, and West on East. American and European dance music, thanks to gramophones and jazz bands, has now become almost universal; it prevails in Shanghai and Bombay, as well as in New York and Paris. In this sphere, broadcasting will only confirm an accepted habit. But the more interesting problem arises in connection with the serious music of the concert hall. Will Bach and Beethoven say something new to Chinese listeners? Will the native music of India and Africa influence the composers of the West? It is at least certain that broadcasting is fostering an increased curiosity about strange music and at the same time satisfying it. In the programmes of Eastern countries, there is usually a definite label affixed to foreign and native music—so much time being allotted to each. There is also a steady growth of interest in Japan in Western music which broadcasting is likely to encourage further. In the West, the music of every country is becoming widely known in Europe, and international relays of strongly national flavour are popular. The Inter-

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national Broadcasting Union at Geneva has in fact undertaken, through its members, to collect a body of folk-music and to make it generally available. This interest extends also to the less familiar music of Africa, and of the remoter parts of the world. It remains to be seen how strongly individual the music of differing peoples will remain, and how far influences hitherto remote will act and interact upon each other.

The last word, in this, as in other forms of broadcasting, remains with the listener. If he acquires a habit for a background of meaningless music, music of all sorts will have little or no value for him. If he can ration himself, and look upon "turning on the wireless" as a definite act of will, like choosing a book, or buying a ticket for a concert, then broadcast music may mean as much to him as he will let it. The fact that it is always there—that it is only a case of switching on to catch one of a hundred sets of waves which are echoing with music all over the world—will affect different listeners in different ways; to some listening will become a vice, like gin or opium; to others it may remain a source of pleasure, wonder, excitement and stimulus. If programmes contain a large proportion of music that is deliberately background music—trifling, tea-time sentimentality—broadcasting

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will tend to encourage the passive half-hearted listening, which will soon destroy itself. If those in control recognize that the public is ready for an increasingly large share of music that has some meaning, they may encourage the sort of listening which is capable of increasing the musical appreciation of a whole nation. If music be indeed a part of "the quick matter of life", then to reinstate it as a part of everyday experience, individually and collectively, may, in the end, produce results which are now difficult to foresee. It may not be fantastic to believe that music may prove not a mere anodyne for the discomforts, material and spiritual, of the modern world, but a moulding influence which, if it goes deep enough, may help to form a humaner and more perceptive generation.

CHAPTER VII

ENTERTAINMENT

BROADCASTING is most commonly—and rightly—thought of as one of the entertainment industries. “Entertainment value” is the test which is most often applied by those whose business it is to arrange programmes, whether under a commercial or a public service system. No one has yet defined what “entertainment value” is ; but there seems to be a growing tendency to regard it as almost synonymous with “interest”. Now this indicates a significant development in the public valuation of broadcasting. At first, the possession of a receiving set was entertainment in itself ; it was a game, a hobby, a magic box, from which one extracted unexpected and exciting sounds. The radio industry in general did not in those days look much beyond this stage, since people were ready enough to buy sets for the sake of a new experience. Programmes seemed then less important than mechanism. When the novelty began to wear thin, attention became

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concentrated on providing entertaining programmes which would keep listeners amused and prevent them from becoming bored with their sets ; and it was felt by many people that such programmes could best be found by transferring popular entertainments and entertainers from stage, music hall and cabaret to the microphone. It was some time before it began to be realized that the problem would not be solved so simply. Excerpts from musical comedies and from theatres, relays from music halls, suffered from certain drawbacks which sometimes aroused irritation and resentment. The funny man of the stage was somehow less funny when one could not see his face, and his jokes seemed poorer when one heard the audience laughing but could not laugh oneself. Acoustic difficulties made the patter of a musical comedy difficult to follow. Even if these particular entertainments were faithfully reproduced in the studio, they were by no means sure of success. Listeners began to grumble ; they asked why they should not have at least one hearty laugh a day, not realizing that in making this modest request they were asking for a great deal. Broadcasting authorities have in fact found that light entertainment, so far from being the easiest element in programmes, is in some ways one of the most difficult ; and they

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have realized that for the most part, and until television is in full swing, the solution lies not in approximation to the stage but away from it.

It is a platitude that humour, though it may often unite, quite as often divides. There are, I suppose, a number of elementary and primitive jokes which have a universal appeal, but these, I think, are mainly visual—the old gentleman slipping on a banana skin, the fat man sitting on a chair which is not there. There seems to be a strictly limited supply of humour which can be shared by the ears of a large variety of human beings. It is of course obvious that it must be so. The humour of a comedy, or of a music hall, or of a teller of funny stories, is related to and aimed at a self-selected audience, who go to a popular entertainment because, from what they have heard, it sounds likely to amuse them ; or else it is of a type which is known to appeal, for instance, to a West End, or an East End, to a New York or a Middle Western audience. Humour on the microphone has to take into account grandmothers and school-boys, navvies and invalid ladies, town and country, north and south, rich and poor, sophisticated and unsophisticated. It is not impossible to find a common denominator in music, in talks, in plays, in descriptive narratives ; but it is extremely difficult to find a

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common denominator in humour or in wit. Just as *Punch* amuses the average English middle or upper class reader for whom it is designed, but scarcely anybody else, so the jokes which are interwoven with the life and interests of an agricultural labourer, a miner, a sailor may seem meaningless to those unfamiliar with the background of such lives.

The mere questions of good taste, good form, convention, and propriety vary almost immeasurably between generation and generation, between one social group and another, between men and women, between one kind of parent and another ; the lowest common measure may be a very low supply of fun. The family circle side of broadcasting, and the isolated intimacy of a voice in one's own room, moreover, may cause remarks which would pass unnoticed in a music hall to sound like monuments of bad taste in a drawing-room or a kitchen. It is not, I think, generally realized how much this single fact circumscribes radio humour.

Over and above this comes the obstacle presented by lack of humour in the listener himself. A sense of humour is a gift which may vary in degree as much as in kind, and if there is too wide a gulf between broadcaster and audience, the result may be embarrassing. This seems to apply most particularly to burlesque and parody. Nearly everyone

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keeps some preserve from which his sense of humour is excluded, and these preserves are by no means the same in everybody. There is on record an occasion on which Father Ronald Knox, an Oxford wit as well as a Catholic priest, purported to describe, in terms of fantastic impossibility, the great revolutionary overthrow of London. It was thought that, treated so broadly, there could be no possibility of misunderstanding. The programme raised a chorus of indignant protest from many, who telephoned for instructions and prepared to fly to their country's defence ; and it was even alleged that several people died of heart failure from shock.

Quite apart from the actual content of a humorous programme, there is the question of its circumstances and its presentation. Humour is seldom solitary. The number of books which make us laugh aloud by ourselves is small. There are, of course, persons who find their chief amusement in the private and sardonic observation of humanity ; but for most people amusement has a social element. It is associated with a party of friends, an evening out, a convivial meal. Broadcasting, on the other hand, is not a corporate activity. The microphone speaks to ones, or twos, or threes, seldom to companies. The choice for broadcasting would seem to lie between the development of some new

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appeal to the sense of humour of the individual, and the artificial creation of an illusory social atmosphere. In point of fact experiments have been made along both these roads. Programme-makers have sought high and low for those rare persons who can be irresistibly amusing in an intimate and casual conversational manner; who can talk to the individual, not to an audience; who can find their own stimulus within themselves without being dependent upon the audible and visible response of a crowded house; who have, moreover, a fund of invention and a range of material far larger than anything which has ever been demanded of a comedian before. The average stage comedian can make a dozen themes last for almost as many years, provided he can surround them with enough variety of patter. The broadcast comedian spends the same amount of material in twelve performances which are transmitted to a single audience at once, and which can only to a strictly limited extent be repeated. There is a not unnatural tendency, when humorists of this kind have been discovered (and they are only rarely found among stage favourites), to exploit them until they have been drained of ideas or have become stale; the wise producer will increasingly come to use them sparingly and artfully. There are, of course, a very few remarkable

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personalities whose genius no microphone can conceal or suppress. Such figures are exceptions to every rule. There is, in addition, a much larger class who have won such success on stage or screen that people enjoy hearing them, whether they are successful broadcasters or not. Publicity and suggestion may play a large part in creating this pleasure, but their names will always find a place in radio entertainment.

Apart from discovering these individual radio-comedians and humorists, a great deal of ingenuity has been devoted to the presentation of entertainment "turns" in an atmosphere of jollity which may often be lacking in a listener's surroundings. The sense of excitement, of anticipation, or of uncritical amiability which is supposed to prevail in social gatherings, often makes a mediocre joke sound almost witty; one has only to listen in cold blood to the relay of after-dinner speeches to realize this truth. Since mediocre humour is more abundant than genuinely first-class humour, broadcasters must obviously depend a good deal upon creating an illusory atmosphere in which it will pass muster. An audience is introduced into the studio, to provide a response for the comedian and to suggest a sense of appreciation to the solitary listener. Or the entertainment is put into the form of a concert.

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party who themselves provide the laughter for each other's turns. Or the listener is invited to eavesdrop, as it were, in a music hall of the nineties. Or a *compère* provides the comment and patter which carries the programme through. Most programmes of this type obviously depend largely on suggestion and association. The atmosphere which is provided as a background, or as an integral part of the entertainment, produces its effect largely because it is the familiar atmosphere in which amusements usually take place, and because it suggests to listeners memories of gay evenings in which they have themselves taken part. This is clearly a very strong line of appeal, though it has certain dangers. It is only too easy for the atmosphere to eclipse the programme, by over-intrusion, by too much insistence upon noise and laughter, until the listener becomes exasperated because he cannot hear nor understand. It is also easy to fall into the trap of reverting to visual humour ; if comedians are provided with an actual audience in the studio, the temptation to drive home a point, or to score an extra laugh, by gesture, movement and expression, is difficult to resist, and once more the listener feels he is missing the best of the fun.

In humour, as in all other kinds of broadcasting, the same rule remains true—that

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the larger the audience becomes, the more infinitely varied must the programme be. "Universal appeal" applies to fewer items; listeners must choose more shrewdly, picking what is most to their own taste, and remembering that what seems rubbish to them is possibly convulsing someone else. Variety entertainments may be as varied as a producer can make them. With skill there is no reason why they should not appeal to almost every kind of listener. Vaudeville, the nearest approach to the music hall, should succeed in amusing the large number of listeners who would frequent music halls if they could afford them. What are usually called "feature programmes"—peculiarly radio entertainments built up round some central theme, or exploiting some novel device of broadcasting—probably appeal to a slightly more fastidious and critical audience, more, perhaps, because they are usually the creation of a specially inventive and original producer than for any other reason. There is a large scope for the kind of musical programme which recalls old popular songs—of the street, of the music hall, or of light opera; war-time songs and marches, and students' songs. Good presentation is the secret of success in all entertainment programmes. Speed—the negative absence of drag and the positive presence of spirit—personality, individuality, intel-

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ligibility, topicality, the use of music, and above all imagination, are indispensable ingredients if the ear is to be the only door to the listener's sense of humour.

There is one point which is perhaps specially worth mentioning. Radio-drama has produced good thrillers, good discussion of ideas, good narrative; it has produced little good comedy. There is an almost unlimited field for the dramatist who can do for the microphone what Bernard Shaw, Synge, Oscar Wilde, Noel Coward or any of the lighter wits have done for the stage, or what Charlie Chaplin and Walter Disney have done for the screen. The difficulties are obvious. Choice of a subject for wit, to say nothing of its treatment, presents a problem at the very start for an audience whose members will be shocked, bored or amused by totally incompatible things. But the poverty of material, and the welcome awaiting a good writer of comedy, ought to prove a spur.

One of the oldest forms of entertainment in the world would seem to find, in broadcasting, an incomparable chance for a new lease of life. Story-telling came into being as a spoken art; the microphone, one might think, would reinstate the story-teller. It is a curious and rather puzzling fact that the supply of story-tellers proper is relatively

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small. Great Britain can boast of one or two. Mr. A. J. Alan, who tells in an intimate, serious, inconsequent, casual and completely individual way, occasional stories of adventure and incident purporting to have happened to himself or a friend, is difficult to classify. There is nothing of the comedian, of the anecdote-monger, of the stage storyteller in his method ; it is a combination of personality and of the undefinable storyteller's gift for holding the attention, however reluctantly it may be given. Miss Rhoda Power has shown something of the same gift in her historical tales for children, although she makes use of dramatization and can scarcely be classed as a pure storyteller. Can it be that the human ear has lost its taste for hearing stories and can only read them ? Or can it be that the art is almost a lost one and will have to be re-created ?

There is one kind of entertainment which occupies an important place in broadcasting, and which cannot be left out of our picture. The family unit which gathers round most wireless sets implies a large number of children ; and, from the earliest days, particularly in Great Britain, the custom of a " Children's Hour " became an accepted part of the programme. Not the gibes of elderly adults, nor the criticisms of educationalists, have been

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able to shake the popular acceptance of an idea for which Longfellow must bear the original praise or blame. Even those who point out that the Children's Hour is not an Hour, but some quite other length of time, have passed unnoticed. The tide of popularity, moreover, has swept round the whole globe, and little Chinese, Japanese and Indian children share in the broadcast version of this very Western institution—the daily migration from nursery to drawing-room of the correctly brought up Victorian child.

The Children's Hour has been sharply criticized, and not least in Great Britain. To many, the *bonhomie* of "uncles" and "aunts" seems studied, their informal cross-talk embarrassingly jocose, the whole presentation artificially bright. The jokes may seem as standardized as in the strips of the cheap newspapers, the routine business of birthdays, of little accepted ceremonies, the heartiness, jar upon many fastidious listeners and probably upon some kinds of children. It is not possible, however, to dismiss children's programmes in this way. Light-hearted informality did once and does still degenerate sometimes into a studied facetiousness. To the child brought up with many resources of its own, and accustomed to the seclusion of its own nursery, the communal jollity of the Children's Hour may seem unattractive. But

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it must be remembered that these programmes are meant to supply amusement and interest for thousands of children for whom, outside school, little definite amusement has been provided before. A severe critic was once considerably shaken by a visit to a remote mining village in the English Midlands—grey, drab and poverty-stricken. The school-teacher, as well as the mothers themselves, explained that, before the days of broadcasting, no one had thought of doing anything to amuse the children, and that birthdays had always passed unnoticed and unobserved. The Children's Hour had given parents a new interest in the children and a new object in their own lives. It may, of course, be argued that this concentration of attention upon the child is a piece of modern sentimentality, and that children left to find their own amusements will be made of sterner stuff than the child provided with ready-made entertainment. But it is difficult to maintain this creed with complete rigidity in a world in which many children are without even the minimum of toys, books and family games and whose only playground is a backyard or a street. A skilfully and intelligently conducted Children's Hour does not need to depend upon condescending heartiness nor silly puerility to be popular. Good stories, good tunes, good plays, good speakers who can describe adven-

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tures, travels, books, games, are more successful than the second rate. Children have a passion for facts, as well as for fancies, and facts can be made as enthralling as any story. The B.B.C. has found that a ten-minute talk once a week on what is happening in the world can become a star-turn, even if it covers such apparently unpromising subjects as unemployment, the gold standard, war debts and economics. The secret, as usual, lies in personality—a complete sincerity, a complete simplicity and a humanity which can reach across to invisible children.

This brings us back to our starting-point—that “entertainment” in broadcasting is becoming increasingly identified with “interest”. No entertainment impresario would ever, I think, have believed, some years ago, that the entertainment of children might take the form of interesting them in the world of affairs, nor that the discussion of housing problems might be regarded as first-class programme matter. Yet “interest” seems now to be the criterion which commercial broadcasters in America most frequently apply to programme matter, and it seems that broadcasters of all kinds can ask no better.

This leads to the conclusion, which will, I believe, become increasingly recognized, that the chief entertainment agency which broad-

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casting possesses is what is called "Outside broadcasting", or "the travelling microphone". The interest and entertainment which this device can unlock is almost unlimited; accompanied by the right sort of descriptive speaker, it can make us see as well as hear. When television becomes more manageable than it is at present, there is no field in which it may more vividly amplify the powers of broadcasting. But even without sight there is almost no limit in space or distance to what may be brought to our ears; microphones have been taken up in aeroplanes, down in submarines, to the bottom of coal-pits, to mid-Atlantic, through city streets, to erupting volcanoes, to the nightingale's copse, into factories, to the Zoo, to the Niagara Falls, as well as to every sort of sporting event and public function imaginable. Such broadcasts probably come nearer to the goal of universal appeal than any other kind of programme. Great races, like the Grand National or the Schneider Trophy race, can excite a public many hundreds of times larger than the public which goes to race meetings or understands about aeroplanes. Old ladies have been known to follow football matches with an altogether unsuspected absorption; while the comings and goings of interesting people, the great spectacle of sound which the microphone can convey, may be brought so intimately into

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listeners' rooms that they cannot but feel part of the actual audience. There is an interest and excitement for everyone in hearing the varied sounds of human activity, ordinary or extraordinary, of which the world is full ; nor is there any reason why the supply of material should ever fail. If nightingales should ever become commonplace, which is fortunately doubtful, there is no reason why we should not in time hear the beasts of the jungle come down to the stream for their evening drink, or hear the parrots scream in the forests of the Amazon. If football matches lose their excitement—which seems equally doubtful—there is no reason why we should not attend, with a competent guide, the popular amusements of every country on earth. Actuality programmes—to use a convenient anglicization of a French term—have an entertainment value which can scarcely be equalled. The British Empire Christmas programme of 1932—which interested a large audience outside that Empire—aroused intense interest because the listener could feel himself travelling in person to each place of call in the world's circumference, could almost feel the earth roll as he chased the hours from night to day, from winter to summer. The mere sound of Big Ben in the Persian desert has been known to move strong men to tears ; and although this may scarcely rank as light entertainment,

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entertainment it certainly is. The imaginative stimulus which such broadcasts produce may owe something to their novelty ; but it is difficult to foresee a time when new discovery will cease. The adventurous spirit of man will continue to find adventures so long as man, as we know him, exists, and so long will the microphone find a story to tell. Moreover, we are still far from being familiar with the ordinary life of ordinary people whose circumstances, or whose environment, or whose part of the world is widely different from our own. In so far as the travelling microphone learns how to travel thoroughly—to let us hear impressions of strange ways of life, at home and abroad—the field is as wide as the world. It can at least offer a variety with which few other forms of entertainment can ever hope to compete.

Is there then an antithesis or an antagonism between broadcast entertainment and other functions of broadcasting ? It is hard to see it. It is commonly supposed to exist in an aggravated form between entertainment and education, but it is difficult to see where one ends and the other begins. For purposes of classification and enquiry, the term may be narrowed down, as it has been narrowed in this chapter, to mean something nearer amusement than entertainment to the listener who pleads for at least one good laugh a day. Yet

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even here the distinction is not wholly applicable, since that laugh may conceivably lurk in some unsuspected quarter—even a news bulletin, a talk on gardening, a Shakespeare play, or a gramophone recital. This does not mean, of course, that the search for wit, humour, comedy and general jollity in programmes can be slackened. It is quite as important to raise a smile as a laugh, and if broadcasting can add to our common stock of the ridiculous, the inconsequent, the absurd and the fantastic, as well as to our fund of genuine comedy, it will serve the public as truly in this direction as in any other.

CHAPTER VIII

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THE art of entertaining and the art of educating have a common meeting-point, at any rate in their broadcast versions, in the art of arousing interest. This indeed remains the clue to the whole of broadcast education, for the very obvious reason that if it is not interesting it will cease to be listened to. In any discussion of education in relation to broadcasting, an understanding of the listener is all-important ; it is no use deciding what people ought to learn without at the same time considering how it may be made interesting—without, in fact, an unremitting study of human psychology.

It is a truism that all broadcasting, or nearly all, may be educational. Even the most passive, unintelligent kind of listening may make people aware, in a dim way, of ideas, events, facts, places and people of whose existence they would otherwise never have dreamed. In a very different sense it applies to the kind of general listening which excites curiosity

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and response. It may even be held that this pervasive, inevitable kind of education is the chief end of broadcasting. It is certainly the way in which its educational effects are felt by the largest number of people. Nevertheless, in every country in which broadcasting has become a normal part of life, conscious and deliberate education has been accepted as an inevitable responsibility. The succeeding crises which have afflicted country after country, and, collectively, have enveloped the whole world in economic or political disorders, have shown that most of us are ill-equipped to understand, still more to deal with, the causes of our troubles. No amount of experts can save us, without the intelligent consent and co-operation of the general public of every country. This necessitates popular education of a kind and degree never before contemplated and not easily obtainable. The need, moreover, is admitted to be urgent; and if broadcasting cannot help to meet it, it is difficult to see what can. Broadcasting, as we have already seen, is being widely used to spread such knowledge as we do possess, about life, about government, about citizenship, about other countries, about science, about economics and business and farming, about research, about what is happening. But, in addition, there is a large and growing number of people who want something more,

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who are prepared to make a sustained effort to fill for themselves gaps in their own early education. More has been written and talked about the educational side of broadcasting than about any other; special enquiries, controlled experiments, and numbers of reports have all resulted, including an international survey undertaken in 1932, at the instance of the League of Nations Assembly, by the International Institute of Intellectual Co-operation.

It would be useless to attempt any detailed picture of what is actually being done; in a growing and experimental business like broadcasting, this would be out of date before it was printed. The most useful approach for our purpose is to look for any general principles and conclusions which may have emerged from common experiences, and to consider how these are likely to influence future development.

First of all, we must distinguish three large fields of educational broadcasting, each of which has a different aim and a different technique—the education of children, the education of grown-up people, and the education of what are usually called backward peoples, who, though they cannot read or write, can listen. There are sceptics and critics with a good deal to say in all three classes; there are also those who can speak

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with confidence from practical experience ; and both are worth hearing.

Broadcast lessons to children began early in most countries, and very foolish things were said about them by some who did not understand much either of broadcasting or of education. Newspapers indulged in visions of robot schools staffed entirely by loud-speakers. Economy propagandists hinted at savings in teachers' salaries. The universal conclusion now reached is that so far from eliminating the teacher, or reducing his importance, broadcasting makes still greater demands on him, although at the same time it gives him something as well. It is a supplement, not a substitute, and only in that light can it be usefully considered. As a corollary, the closest co-operation between teacher and broadcaster and between schools and those who plan the lessons is everywhere recognized as fundamental. This co-operation is gradually taking shape along certain well-defined lines. The first requirement is that teachers should have advance knowledge of what is offered, so that they may select what best suits their own circumstances ; they must have printed material to help them to prepare the class beforehand, to accompany and illustrate the talks, to follow the lessons up and to link them with the ordinary school work.

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This undoubtedly adds to the duties laid upon teachers ; but those who have made the experiment have almost everywhere recognized the new interest, new ideas, new suggestions in teaching methods which broadcasting can bring them. This is obviously true of country schools, in which one teacher may be responsible year in, year out, for teaching all subjects to boys and girls of all ages with little fresh material or stimulus. Methods have been worked out by which those who give the broadcast lessons may judge how far they are reaching the children. Written work is constantly submitted from listening schools. Records are sometimes made of a lesson before it is given ; it is then broadcast from the record, so that a broadcaster may actually sit in a classroom and watch the effect of his own lesson on a typical class. There is general agreement, too, upon another fundamental requirement. No school broadcasting is worth doing unless good technical reception is assured. The children must be able to hear clearly and without strain. Much of the adverse criticism of early days was due to the fact that cheap and unsuitable sets were often the only apparatus available. Children soon grew bored and restless, especially if large numbers were crowded into a hall to hear a loud-speaker designed for half a dozen people in a small room. Most school

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broadcasting authorities now maintain that it is essential to have first-class equipment, or none at all, and various methods have grown up to secure it. In the United States generous donors have often lent or given equipment for a number of schools, or wireless dealers have found it a profitable piece of publicity to install school model apparatus. In many places educational authorities have equipped the schools of a whole city. In Great Britain, after a period of unfortunate *laissez-faire*, a special "reception" sub-committee of the Central Council for School Broadcasting tackled the problem from every side. They secured the co-operation of scientific bodies and manufacturers in drawing up specifications for educational sets and in promoting the designs of ordinary commercial sets suitable for schools. Educational engineers on the B.B.C. staff were available for advice to schools and to local authorities and gave demonstrations of good and bad reception for the benefit of local authorities, educational conferences, and training colleges.

An even more vital agreement exists on the special and peculiar technique of broadcasting to children. Wireless lessons, it is recognized, are not schoolroom lessons given to a larger audience; whatever their subject, they are something new, something entirely different,

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which require a kind of personality which is rare and a method which is in the making. Given the right person and the right method, broadcast lessons can hold the attention of a class of children as firmly as a visible teacher, and can command the same degree of concentration, or even more. It is everywhere insisted that the test of school broadcasting is this—that children should be interested not in the novelty of the experience, but in what they hear. The reports of all successful experiments make it clear that the child forgets the mechanism and is preoccupied with the matter. All discussion of who should give the broadcast lessons—teachers, experts, celebrities—ends in the affirmation that the broadcaster must above everything else possess, along with the right credentials, the kind of personality which compels attention and response, and the imagination to present the subject for broadcasting.

It is when we come to *what* is broadcast that divergences of opinion begin. Practically all countries report that something is being done to counteract the narrow teaching of national history by special courses in world history, by tales about other countries and by interesting children in the League of Nations and the problems of war and peace. Everybody is agreed that children can be genuinely interested in current history by

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hearing events take place, by listening to national and international leaders whose names they know, or to the heroes of some great endeavour ; that current events discussed can make newspapers more interesting to them, that personal descriptions and narratives by travellers can give geography a new meaning, that history can be made alive for them by new kinds of approach or by dramatization, and that, as someone has put it, broadcasting can carry genius to the common child. It is agreed, in fact, that broadcast lessons can supply a background for the ordinary curriculum, and can give certain things which the ordinary school cannot supply. It can give concerts of first-class music, expert teaching on musical subjects, and the opportunity to hear foreign languages spoken as they should be spoken. A sharp difference of opinion begins to show itself, however, in considering instruction as distinct from stimulus. Are some subjects totally unsuitable for broadcasting, or can everything be successfully taught by an unseen teacher ? In Great Britain the accepted policy is to admit instruction in certain limited directions, particularly in speech-training, in foreign languages and to some extent in music, but to avoid mathematics, chemistry, and technical subjects generally. In America, on the other hand, special success is claimed for the teaching of arith-

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metic by a carefully worked out technique, which is said to arouse far greater interest than routine class instruction. It is admitted, however, that the success is mainly dependent on the outstanding skill and personality of the teacher, and that the lessons are of service chiefly in demonstrating to listening teachers how arithmetic should really be taught.

The main serious criticism of school broadcasting comes from those who distrust the lecture method in teaching and believe that the child must work things out for himself, with personal encouragement, supervision and help. To them broadcasting seems likely to strengthen a form of teaching which is obsolete or obsolescent. The absence of personal contact between teacher and taught, and the lack of opportunity for questions to be asked and difficulties explained seem to them insuperable objections, which encourage the passive apathetic acceptance by the child of what he is told, instead of an active questioning and enquiring. Such criticism demands respectful hearing. Much of it is probably true of some of what has been done in the name of school broadcasting. It is a mistake, however, to accept it as the last word. The positive evidence on the other side is accumulating into a solid body of fact which cannot be ignored in quantity or in quality. Each

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year more is learnt of the ways in which the dangers and limitations of the lecture method may be avoided. If broadcasting brings something new which can infuse new interest, life and meaning into the ordinary stuff of lessons, can set light to imagination, stretch ideas, quicken response and send children off on personal investigations in books and nature, then it is not a cramming with undigested knowledge nor the overloading of an already over-full curriculum, but an illumination of it. The good broadcaster does not lecture, he talks in such a way as to evoke response, action, thought and even experiment ; sceptics should see for themselves the extent to which the apparent remoteness of the speaker is offset by the intimacy of the microphone. The truth is, that there is no room for bad broadcasting to schools, nor for any broadcasting which provides what can be given better by the school teacher or in books. There is, however, a definite place for a method which can bring exceptional talent, new personalities, new ideas and points of view into the service of the school, and which, in matter, manner or method, supplies something new and something valuable.

There are, of course, certain practical difficulties. The right machinery of co-operation is not always found at once, the right solution of cost, of equipment, of supplementary pub-

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lications. The difficulties are in one sense greater in those countries in which education is not a centrally administered service. Each state in the American union presents a separate administrative problem, just as each local authority in Great Britain may adopt its own policy towards broadcasting. In Germany, by a stroke of the pen, sets can be installed in schools throughout the Reich. Decentralized organization, on the other hand, makes possible a wide range of experiments, and ensures that co-operation is based on conviction, not on command. It is possible that the gains under a decentralized system may be more solid and thorough, if less spectacular, than in a system in which new methods are imposed from without.

The need at present, and for many years to come, lies in research, experiment and enquiry. Generous foundations in America, and the Carnegie United Kingdom Trustees in Great Britain, have made several important surveys possible already. But there is as yet inadequate machinery for pooling results and sharing experience. There is, moreover, a continual need to discover those rare broadcasters who combine profound knowledge of their subject, and the gift of communicating it, with the voice and personality which, without any condescension or cheapness, com-

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mends itself to children of different sorts, with different ideas of speech and different degrees of intelligence. It is useless to think that the same results can be achieved artificially by the joint efforts of specialists, teachers, broadcasting officials and a golden-voiced announcer. The secret of personality in broadcasting so far evades all such methods.

We must note one unlooked-for by-product of school broadcasting—the interest of parents, and particularly of mothers, who can share these lessons with their children. It is not a little pathetic to discover that many parents with little or no education themselves are eager to keep up with their more fortunate offspring, so that the children need not be ashamed of them, and in doing so, they have found new interests awakening for themselves individually. These new links may have unexpected effects on family relationships.

Adult education in its wider aspect is part and parcel of the general education of public opinion already discussed in Chapter IV. In this chapter we are only concerned to notice two more specialized ways in which broadcasting is being used for education. The first borders closely on that general education for citizenship which we have already noticed,

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but it consists in providing for special sections of people. This provision illustrates admirably the importance of studying *interests*, as a basis of all programme work, including education. It illustrates also the underlying paradox of broadcasting, that the larger the audience, the less general in their appeal can programmes remain. To extend and retain the listening audience, programmes must try to meet particular needs and interests at every point. Out of this natural fact has grown the whole group of special services which, in some degree or other, are found in all well-organized systems. An obvious field for special programmes lay ready to hand among those women who, through the circumstances of their lives, were bound to spend the greater part of their days at home. It is difficult to exaggerate what broadcasting has done and is doing for women. The world at large stands to gain much from the wider outlook, greater interest, and more up-to-date practical knowledge which wireless has brought into their homes. During a great part of their lives, many women who are not only wives and mothers but also housekeepers, houseworkers and cooks, have little opportunity of enjoying outdoor or indoor recreations, of going to meetings, concerts, even cinemas. This is true even in an age of universal suffrage and labour-saving devices. A much

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larger proportion of women than one usually suspects fails to be wholly satisfied with producing and rearing children and caring for a husband. However deep their maternal instincts—and often because of their depth—many women have wished to be better equipped to help and understand their children and the problems presented by their growth and education for life; many have felt a half-expressed resentment at being classed with lunatics and infants as the weaklings of the state; many more have found their minds empty and their energies unsatisfied after the children have gone out into the world. The evidence from women, particularly of the poorer classes, as to what a wireless set may mean to them, is one of the most remarkable and encouraging results of broadcasting. In most countries a high standard is reached in talks on all the specialist activities of domestic women—on maternity and child welfare, including ante-natal care, on choosing careers for children, on understanding their psychological development, on feeding, clothing and amusing them, on budgeting for a small income, on food values and cooking, making and mending clothes and the hundred and one other practical tasks of the woman at home. The actual value of such education may be very high, particularly if speakers or broadcasting authorities are pre-

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pared to follow up talks by advice and correspondence. There is, however, an equally strong demand for talks outside the common round of household drudgery, on travel, on books, on play producing, on current events, on how people live in other countries, which may be given in simple terms at hours of the day when busy women can most easily afford a pause. Women listeners stand to gain from the whole range of programmes—concerts and plays to which they could not ordinarily go, public ceremonies, which bring them in touch with people and events of the day, news and topical talks, sporting events and entertainments. But broadcasting can give them also, as it were, a preparatory course to help them to catch up, to feel less at a disadvantage, to keep abreast of wider interests. This side of programme work, especially if supported by printed matter which makes practical directions easily available for reference, holds unquestionable promise for the future in all countries.

Health has already been noted, but, apart from the health of children, broadcasting can do a great deal to make effective the modern campaign for preventive medicine. It is obviously unsuitable to attempt to prescribe treatment by wireless (though this is not unknown in some countries); but men and women may be interested in the whole problem

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of keeping well, of avoiding things liable to cause ill-health, of managing problems of diet, of exercise, of growing old, of sedentary lives, and the advice given should be, and can be, the very best available in the whole country. Broadcasting authorities are slowly finding experts who are human too ; and although medical etiquette in many countries, through fear of unmerited publicity, creates certain difficulties, there is nothing to prevent the service from growing and extending in many directions, particularly as a personal link in a fully organized national health service.

A third special activity of broadcasting, which is found in nearly every country, is a supply of special information and advice to farmers and those engaged in agriculture. It did not take long to show that broadcasting provided a peculiar link with isolated country-people, and that farmers who had neither the time, energy nor inclination to meet for lectures would be very glad to have advance news of the weather, up-to-date market prices, and practical advice based on the latest scientific and experimental work. Universal agricultural depression has perhaps made these services more welcome than they would otherwise have been. There is evidence that farmers everywhere are willing to listen to a fellow-farmer giving his own

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experience, and will listen also to new knowledge if it is given to them by someone whom they come to know and trust. Conditions of success remain as usual, first-class knowledge and first-class broadcasting.

Apart from these and other special provisions (e.g. for fishing interests, for gardeners, for business men) there is an educational implication in the whole range of those talks which correspond with the best type of weekly or monthly review—the talks on new books, new plays and films, new discoveries and inventions. These find room in practically all countries' programmes, although they vary greatly in quality and importance—from mere publishers' "puffs" to literary causeries by distinguished men of letters, from publicity notices to genuine criticism. The educational value of the lower levels is negligible, but the results to be found at the other end of the scale are illuminating. The right kind of broadcaster, particularly a regular broadcaster, may become enough of a familiar friend to be able to convey his own enthusiasm, his own critical perception, his own interest, and his own encouragement. For the broadcaster, particularly in a monopolistic service, these services impose a heavy responsibility; he must avoid cliques, graft, and special pleading, he must set a high standard of intelligence and integrity—all without any sacrifice of

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interest and a wide appeal. Services like these, moreover, must satisfy a particularly mixed audience altogether different from the select subscribers to a literary review. Many people who may be specialists in one subject have little time to keep pace with new developments in other sides of life, in which they nevertheless take a general interest. These, as well as a large vague public who cannot afford the luxury of magazines, all seem to use broadcasting as a means of keeping in touch with the world of thought and ideas, of books, music, drama and science.

When all this has been said, the story is by no means ended. There remains a department of broadcasting for grown-up people which meets a need scarcely realized—scarcely indeed wholly aware of itself—before the war. The whole democratic movement has felt the need for better education; the rank and file of the labour movement, certainly its leaders, have always been conscious of the handicaps imposed by an education which ceased at fourteen or younger; and provision for workers' education had grown up since the beginning of the century in most industrial countries, as well as in certain progressive agricultural countries, like Denmark. The war and its aftermath accentuated this desire to learn, and immensely

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increased the public which felt the want of it. Some of the demand was narrowed down by political circumstances to purely utilitarian education in Marxian economics in order to arm the workers for a class struggle ; but for the most part they wanted to know about everything. They wanted to be rid of a sense of inadequacy and of limited opportunities, so as to be free to build the new order of society which seemed so urgently needed, and so nearly attainable. In Great Britain an alliance between universities, local education authorities and popular organizations had already resulted in special courses of one, two or three years, in which university graduates acted as tutors to classes of workers in a range of subjects of which economics was usually the most popular. The war interrupted this development, and when work was resumed circumstances were changed by the addition of the less politically conscious men and women for whom the ordinary tutorial classes were either too advanced or unsuited in type. At the suggestion of the British Institute of Adult Education, a committee of enquiry was set up jointly with the B.B.C. under the chairmanship of Sir Henry Hadow, to discover what place broadcasting might hope to fill in the field as a whole. The report, published in 1928 as *New Ventures in Broadcasting*, is worth noting, since its con-

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clusions, based on a prolonged study of eighteen months, embody opinions which are very generally and very widely held to-day, while the policy which it advocated has been independently developed on similar lines in Germany, Sweden, Austria, the United States and elsewhere.

Broadcasting, it has been found, can supply an existing demand for specialized adult education, and can create a demand for more. On the one hand it can provide expert presentation of new knowledge and new perspectives; on the other it can relate new knowledge to the normal interests and everyday circumstances of the average listener. By providing detailed and carefully annotated book lists in connection with series of special talks, it can stimulate further reading and personal study. A close co-operation with public libraries has grown up to secure a proper book supply. By stressing the controversial elements in subjects and by suggesting topics for discussion, group listening and group discussion under suitable leaders has become an established institution in Great Britain, Sweden and elsewhere. In connection with some kinds of talks, listeners may even take part in experiments, enquiries, the answering of questionnaires, in a way which turns passive into active listening. In Great Britain week-end schools have been organized,

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with scholarships to cover expenses for those unable to afford the fees, at which the speakers in forthcoming series may meet prospective listeners and group leaders, and together work out improved technique and co-operation. The responsibility for adult education in this sense is, in England, devolved by the B.B.C. on to a Central Council for Adult Education, with regional sub-councils, upon which various organizations of all shades of opinion interested in the subject are represented. Both central and local councils work with a B.B.C. official or executive officer. This means in practice that the programme time allotted (averaging eight national periods a week of 20 or 30 minutes, mostly between 7 and 8 p.m.) is planned jointly by the appropriate B.B.C. staff and the programme committee of the Council, and that the organizations concerned use their own national machinery to organize listening groups, to receive suggestions, to promote local co-operation, and to provide group leaders. Talks pamphlets, usually in the form of introductory essays and bibliographies, are prepared by speakers to accompany their series, and the principal talks—general and educational—are attractively reproduced in an illustrated weekly journal published by the B.B.C. The growth of listening groups has been steady and continuous and their value and interest

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is increasingly recognized. It is difficult to say what proportion of members pass on to the more formal courses provided by such bodies as the Workers' Educational Association ; but the field of recruitment is certainly much larger.

This English experiment has been quoted not because it is unique, but because it is typical of similar work which is growing up in other European countries and in the United States, where the National Advisory Council on Radio in Education works on similar lines and with similar means.

Educational talks have of course to compete for a place with other kinds of programmes, and in some ways educational talks find themselves in conflict with general programme considerations. For the group listener following a series or symposium, the hour of his talk must be fixed and his series uninterrupted ; the time must be late enough to let him get home from work, have an evening meal and reach his place of meeting ; the period must be long enough to give him food for further discussion and thought. For the general programme-builder fixed points limit his range of choice, and long talk-periods in the most popular evening hours may bring him considerable abuse from those who only want light entertainment. In practice the antagonism has tended to wane, as the general

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public has grown more interested, as speakers have learnt more of the art of being interesting, and as the choice and treatment of subjects has steadily improved. Scholars, philosophers, scientists, of the front rank, have become more and more interested in the business of broadcasting, both in the effects on themselves of the new discipline of brevity, clarity, simplicity imposed by the microphone, and in meeting with a non-academic audience which is new to them. The kind of talks mostly given is indicated by the phrase used above—expert presentation of new knowledge and new perspectives, and the relation of knowledge to normal interests and everyday circumstances. Two main points emerge, from the common experiences to which many countries are contributing—one, that there is an immediate response to international subjects and indeed to everything which makes the people and politics of other countries more intelligible; two, that controversy and the free expression of differing views is essential if educational talks are to have any educational value.

The future for adult education in broadcasting seems promising, given two conditions. Educational series need to use a "new way" of presentation as much as any other form of broadcasting; one dull, dead, formal talk

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undoes the good of dozens of living talks ; there is in fact no excuse for a bad talk, and every justification for a good one. In so far as educational talks can conform to the inescapable requirement of all programmes—that they shall be interesting—without lowering in any way their intrinsic quality and standard, their influence will reach its high-water mark. The other condition is the spirit in which broadcasting authorities face the problems of free speech. New ideas will always appear revolutionary, and those who are responsible for them cranks or worse. An impression of left-wing bias is always liable to be created by any agency which voices unfamiliar views ; it does not follow that the ideas themselves are of the left. In practice, they usually hail from every point of the compass. How is the inevitable fear they provoke to be reconciled with the spirit of open-minded enquiry which is inseparable from all education, from any search after truth ? The experience of England and America shows that by choosing responsible speakers accustomed to fair-minded discussion and free from reproach as narrow propagandists, an open forum can be maintained with success and without offence. Whatever may be the case with political broadcasting, education can afford to make no compromise with free thought. There will always be those who fear to upset

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the old, or the young, this interest or that group. It is only by being upset that thought can grow. But to be sincere and frank it is not necessary to be aggressive, offensive or insulting; the greater the scholar, the more ready he is to believe that he does not know the whole truth, nor the only truth. The bogey of revolution is from time to time raised up to invest adult education with nameless horrors. Broadcasters are sometimes accused of aiming at a "radiocracy", in which a group of iconoclastic economists and scientists will diffuse standardized opinions to an apathetic public. In a critical survey of the times, called "Broadcast Minds", Father Ronald Knox has endeavoured to show that broadcasting is responsible for a single type of shallow, pseudo-scientific, inaccurate and tendentious habit of mind. If the indictment were true, educational broadcasting would stand condemned. But if the widest controversy is genuinely safeguarded, and if the quality of broadcast talks is kept at its highest pitch, the allegation of "dope" falls to the ground.

As far as security is concerned, educational broadcasting has won a permanent place in all public service systems, which is more likely to increase than to decrease. It usually works to a fixed budget, paying its speakers not inadequately and meeting supplementary ex-

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penses out of revenue. In the United States, where informed public opinion is as favourable as anywhere in the world to educational broadcasting, finance and security are less visibly assured. Its promoters are for the most part dependent upon the goodwill of commercial broadcasting organizations, who, however generous in the granting of free space, cannot guarantee that with the return of trade prosperity, advertisers will not buy that space in the best programme hours. Moreover, although educationalists do not pay for their time, they have little money beyond grants from philanthropic trusts with which to pay speakers ; many speak for no fee, but this, it is realized, is not a situation which can continue indefinitely. It is unthinkable, however, that funds should not be forthcoming in a country which rates education, and particularly civic education, high ; and that some kind of security will not be established, either by agreement, or by Federal legislative action.

There remains the third class of adult education—the education of illiterate populations. This may prove to be the most important class of all, though as yet it lies more in the future than in the present. The world, after all, cannot move very much faster than its slowest members, and if the physical

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diseases of dirt and ignorance, and the mental diseases of ignorance and bigotry, continue to breed unchecked in large areas of the globe, the whole human race may suffer the consequences. To teach a whole population to read and write is the work of generations ; but people can think even if they cannot read, and broadcasting offers an agency by which habits and customs of thought may be changed or modified within a few years. The two most notable experiments in this type of education are to be found in India and in the Oriental provinces of the U.S.S.R. Broadcasting stations in centres like Samarkhand and Tiflis are reaching a considerable audience of illiterate listeners with talks on hygiene, health and scientific agriculture as well as with Soviet propaganda. There are two absolute essentials to this kind of broadcasting—the broadcaster must accept responsibility for the listening end as well as the transmitting end, and the personal factor must somehow be combined with the impersonality of a magic box. The early experiments in Indian broadcasting came to an unfortunate end for a number of different reasons ; but the principal reason was the attempt to apply a Western system of licences to a population of 400 million villagers living in poverty and isolation. It might have succeeded as an amusement for the small proportion of town

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dwellers and for the white population ; but it could play no real part in India on that basis. With a supply of village sets, with a responsible leader in each village, with a system of visits by broadcasters to meet their audiences, and with a distribution of stations on the basis of language and dialect, people who can read no print, who have seen nothing outside their own village and its immemorial ways, might listen to news of a larger world, might hear how to increase their crops, to manure their fields, to avoid the plague, to destroy pests. Grandmothers and mothers might even be persuaded that clean water will not kill babies, that hygiene may add to general comfort, and that pain and illness may be prevented or cured. In a country in which any form of purdah prevails, the possibilities of this appeal to women are incalculable.

Since the Indian Broadcasting Company came to an end, and broadcasting reverted to the reluctant shoulders of the Government of India, faced with political troubles and financial burdens, progress has been at a standstill. Individual experiments have been made in various parts of the country, some by municipalities working on a licence basis, some by individual enthusiasts for Indian welfare. The most illuminating of these was due to the initiative of a British member of the

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Indian Civil Service, Mr. F. L. Brayne, whose experience as a district officer convinced him that broadcasting was the only weapon with which to defeat ignorance, and the only counter-attraction which might divert time and money from litigation and the other unprofitable ways of getting into debt which now offer the only relief to the monotony of village life. Through co-operation with the Y.M.C.A. in Lahore, experimental programmes were transmitted to a number of villages for the purpose of discovering the principal difficulties and the villagers' tastes. There seems reason to believe that India's needs might be met by a network of low-power stations covering the principal dialect areas ; that the cost of village sets could be met either by very small local contributions, or by assistance from special funds ; that programmes could be devised which mixed news, music, instruction and suggestion in a way to attract the audience, and that specially qualified announcers might provide the essential personal links between broadcasters and listeners. The future of Indian broadcasting is of course closely related to the political development of India. Lord Lothian's Committee on Indian Franchise—one of the outcomes of the Round Table Conference—recommended a wide extension of the vote on the ground that broadcasting as it

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developed would overcome the impediment of illiteracy.

Education by wireless has definitely passed its probationary period, though it has a long experimental stage immediately ahead. It has won its place, for the most part, within the framework of ordinary programmes. Special educational wave-lengths have their attractions, but pressure of space is putting them more and more beyond the bounds of possibility. Even if there were wave-lengths to spare, however, it is doubtful whether the idea would have as many supporters as it once had. To incorporate programmes of educational value in the fare of the ordinary listener gives a far wider sphere of influence than a specialized service which only the converted would patronize. For the sake of broadcasting as a whole, moreover, it is important that programmes should contain something which not only makes people feel : " How wonderful that I, in my kitchen, can hear Mr. X Y Z who has flown round the world more quickly than anyone else " ; nor even " How interesting to be told by Mr. A. B. of everything that is going on in the world " ; but also " What an exciting theory ! What lovely words ! Where can I read more of that philosopher, or more of that poet ? " To provide food for thought, or

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stimulus to individual effort, is an essential task for an agency which can with such fatal ease encourage the native laziness of the human race.

CHAPTER IX

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WHEN we talk of the effects of broadcasting, we usually think in the first instance of the effects upon the body of actual listeners—upon their tastes in music, their general interests, and their social habits. It is obvious, however, that the ripples in the pond reach much farther than this. It is true that the general public is rapidly becoming synonymous with the wireless public; yet there are still those who seek to escape from the direct impact of broadcasting by stopping their ears and burying their heads in the sand. There is, however, no hope for the ostrich; the very sand in which his head is buried is changing its consistency. Some may avoid broadcast music, others broadcast talks, while others may forbid a wireless set inside their houses; but there are some directions in which listeners and non-listeners are alike inescapably affected. Broadcasting is becoming a part of national and international machinery, which touches the indi-

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vidual at innumerable points ; something also upon which every citizen must come to hold a definite opinion. The student of social institutions cannot afford to ignore this aspect.

Something of this process has been apparent in foregoing chapters. Governments, as we have seen, have had to take cognizance of broadcasting almost from the beginning, either to control, to licence, or to regulate in some shape or form. Apart from the question of enforcing order in the air, of preventing interference between stations, a general body of precedent is growing up to govern the relations of broadcasters and the State, while broadcasting is increasingly taken for granted as a part of the normal administrative machinery.

The State has in the first place a definite interest in the formation of public opinion discussed in Chapter IV. In the autocratic State this becomes a controlling interest ; in the democratic State it varies from a benevolent neutrality, to an indirect parliamentary control. The tendency of democratic authorities is to acquiesce in any broadcasting which does not offend against decency and which is not subversive of the State. The point is rapidly being approached at which the precise interpretation of these principles will become exceedingly interesting. How far

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is the State justified in admitting doctrines which undermine its authority? How far is it safer to give them open expression than to drive them underground? The State—and therefore the individual citizen—may not long escape the responsibility for a definite ruling on this matter. Different kinds of government will, of course, interpret decency and subversion in very different ways. Extremes of minority opinion, whether of right or left, have been fairly thoroughly excluded on grounds of public policy. No Communist organization—outside Russia—has so far been given a share in any political broadcasting, nor in any symposium on industrial problems. The case for their inclusion has been forcefully argued in the British House of Commons by a Conservative member, and in England the steady growth of tolerance by the State towards broadcast controversy will probably lead to the future inclusion of views which may seem highly subversive to many people. It would be, after all, only a natural development of that unrestricted Hyde Park oratory of all and every sect and party which strikes the foreign observer as remarkable when he visits London. It will be curious to see how far the United States will equally find accommodation for extreme left-wing opinion. It is significant that an American broadcasting company secured a broadcast

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talk from Leo Trotsky during a visit to Sweden, when European countries were clearly apprehensive lest he might broadcast over Europe. It might, however, be less easy for an American company to broadcast the views of an American Communist leader. Japan has shown considerable nervousness of subversive opinions coming from outside her own territories and for this reason has discouraged short-wave reception of European and particularly of Russian programmes.

The practice of the State in normal times must of course be set beside practice in abnormal times. Broadcasting offers a convenient means of dealing with national crises. The leaders of every *coup d'état*, revolution, or political upheaval have found the control of the microphone a handy method with which to breathe courage and enthusiasm into supporters and to wither the hearts of opponents. In circumstances like these the State herself throws impartiality to the winds. It is significant to remember, however, that in the General Strike in Great Britain of 1924 the British Government did not commandeer the B.B.C., as they were by law entitled to do. They asked the Company (as it then was) to continue its work, but provided for closer personal contact with the central government. Thus encouraged, the B.B.C. succeeded in preserving its separate

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identity, and in discharging its duties to its own, as well as to the Government's satisfaction. It is no secret that it was owing to B.B.C. insistence that the bulletins of the Trades Union Council, as well as the *communiqués* of the Government, were both broadcast. It is not suggested that the weight of the B.B.C. was not thrown preponderatingly on the side of authority; the important point, for the social historian, is that a degree of independence and impartiality could be preserved at all.

We have already seen the value which broadcasting may have for the State in the "projection" of national plans, departmental reports and orders, public health instructions and other administrative measures. All "service" aspects of broadcasting strengthen the links with the State. Educational talks lead to co-operation with educational departments; farmers' talks are built up on consultations with departments of agriculture; national ceremonials involve close association with central governments. Cabinet ministers describe the working of their own departments, legislators describe the working of Parliament. Police authorities rely on broadcasting as a means of tracing wanted persons, meteorological authorities as a means of warning sailors of storms and farmers of drought.

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This partnership may have important influence on ordinary administrative practice.

Apart from these internal uses, broadcasting has obvious uses in speeding up international government. The League of Nations secretariat is able to broadcast to all states members, in morse or in speech, the actual text of important reports and findings within a few minutes of their completion. When the beam service between South Africa and Great Britain was inaugurated by a broadcast conversation between General Herzog and Mr. Ramsay Macdonald, both statesmen, heavily burdened at the time by the claims of international and inter-Imperial conferences, expressed the hope that time and travel might in future be saved if a certain amount of discussion could take place by wireless. How far an international conference of the remote future could actually do its work by broadcasting it is not for me to say, but the increasing pressure of international government will certainly become an incitement to discover the means, if they exist.

There is a further unexpected way in which broadcasting is useful for long-distance purposes to governments. Although the days of conquest and imperial aggrandisement may be over, and freebooters, adventurers and traders may no longer with impunity plant their countries' flags on unoccupied con-

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tinents and defend their claims with force, yet the modern version of this process is still carried on by less picturesque means. "Spheres of influence" take the place of New-found-lands, captains of industry have replaced captains of privateers, and various forms of infiltration and propaganda have taken the place of cutlasses and beads. Of these, wireless stations seem likely to prove the most influential. Sometimes concessions are openly secured by an important foreign firm, to erect and operate a station; sometimes broadcasting companies are more effectively disguised as institutions native to the country, although financed by foreign interests which may or may not have government backing. There is as yet little reliable information on these developments, but it offers, or will soon offer, an interesting field of study for students of international politics, particularly in South America and the Far East. If a broadcasting company is working with a free hand on an advertisement revenue, there are no limits to the influence it may have in promoting the sales of goods and the spread of ideas which hail from its country of origin. The influence is comparable to that of the cinema, but it may be both wider and deeper.

The paramount question in the relations

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of governments to each other is the question of war and peace. What has broadcasting to say to this? Has it any part to play in influencing future policy? Does it bring any new element into the situation?

It is obvious that the public opinion which broadcasting is so powerful to mould, inform and educate is itself a new factor. No one can yet say with certainty what the effect of a better educated democracy will be on the passions that make for war. It may be argued that any gain in this direction may be offset by the immensely increased power which the microphone gives to any government or to any individual to stir up mass emotion, mass feelings of revenge, or of national fervour. Against this it must be urged that broadcasting is mainly not concerned with crowds, but with separate listeners, and that the ordinary tricks of rhetorical appeal do not usually succeed without the physical existence of a crowd. But in order to estimate the possible effects of broadcasting in a time of international tension and crisis, it is worth imagining in detail an actual situation, comparable to the state of Europe in 1914.

Let us assume that broadcasting is as well established as it is to-day. The murder at Serajevo (or its equivalent) would figure prominently in the news bulletins of every

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country ; but in addition to the formal announcement—" We regret to announce . . ." —there would be talks by specialists on Balkan questions, explaining the circumstances which lay behind the murder, and commenting on the serious international issues likely to be raised. The general public of Europe would therefore be on the alert for developments ; the idea that grave events might follow would be in the minds not of a select few, but of everybody. As the circle of events widened, comment would widen too. Not only would the audience of each separate country be well informed ; the governments of all countries concerned would have a clear idea of the trend of opinion abroad. Ministers, as well as their expert advisers, would be in a position to judge the strength of genuine indignation, or fear, or wounded pride, among the populations as a whole, as distinct from the official reactions of Foreign Offices, War Offices, and Courts and the semi-official reactions of the press. General bewilderment would perhaps be less, general confidence greater. Such an atmosphere would enable newspaper comment to be more free and outspoken, since the fear of ignorant panic would be reduced. As the weeks passed, the state of tension would become known to every man in the street, as well as the causes of that tension. No country could be in

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doubt, as Germany was in doubt, of the probable action of any other nation, given certain contingencies. A widespread understanding of the situation would give an opportunity for expressions of opinion from different sections of the community; people would not be kept back by ignorance or fear of hampering their governments from making criticisms of policy. Moreover, the general level of knowledge of the ordinary man concerning other countries, their politics, their people, their way of life, their interests, sports, recreations, would be enough to make them seem not vastly different in certain respects from his own. It would probably be less possible to-day to find a soldier's wife who thought the Germans were black than it was in 1914.

In addition to national broadcasting, and the fact that each country's presentation of its case could be overheard by all the others, we must not omit the whole international machinery to which broadcasting would serve as an ally. Speed is admittedly of prime importance in handling a situation in which feelings run high and may easily boil over if allowed to simmer too long. Through its own station, Radio-Nations, the League of Nations would broadcast any findings or decisions of the Council, or of a Council Committee or group of arbitrators, as soon

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as they were known, to every country in the world. The co-ordination of conflicting views, the scrutiny of military preparations, the exchange of notes, would take place with a degree of publicity hitherto unparalleled. Though it is obvious that the discussion of diplomatic difficulties requires privacy, detachment, and the absence of premature disclosure, yet the speedy release and discussion of decisions when once made is likely to clear the air rather than obscure it.

But let us assume that the worst occurs ; that diplomacy, national and international, private and public, fails to avert a clash of arms. It is usually assumed that the essence of any future war will lie in sudden and unheralded attack. A fleet of heavy bombing machines will appear over a great city and devastate its inhabitants, its buildings and the surrounding country by mustard gas or poison gas, before anyone could know of its approach. Think of this in a world linked by a network of broadcasting. The defensive and precautionary measures which every country prepares would certainly include the use of wireless and of broadcasting to mitigate the surprise element. The instantaneous world-wide publicity given to the initial act of aggression would at once label the aggressor and render him liable to whatever pains and penalties of joint action

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were in force among the nations. But let us suppose that the first bombing raid was successfully destructive, and that the peace machinery was too weak and ineffective to prevent war or to restrain it. The question then arises : would not broadcasting be suppressed on the outbreak of war, or even in the preceding period of tension ?

Every British listener possesses—or should possess—a strip of thin green paper marked “Receiving Licence”. Printed on its back appear eight “Conditions” under which the licence is granted. Condition No. 7 reads as follows :

“This licence may be cancelled by the Postmaster-General at any time either by specific notice in writing sent by post to the Licensee at the address shown hereon, or by means of a general notice in the *London Gazette* addressed to all holders of wireless receiving licences, and will be cancelled on breach of any of the foregoing conditions. In the event of cancellation no part of the fee will be returned.” The British Government, in other words, and other governments elsewhere, reserve the right to prohibit the use of wireless sets as and when they wish. It is now some years since these particular regulations were first drawn up ; much has happened since that date, and two considerations may conceivably modify govern-

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ment action. In the first place, no amount of official intimation could possibly enforce the universal dismantling of wireless sets; it would require an army of officials to search the houses and persons of every inhabitant. If wireless receivers can be comfortably hidden in pockets and bowler hats, the task becomes a large one. In the second place, although the difficulties of maintaining broadcasting services in time of war are great, the advantages are probably even greater. Instructions, appeals, news, exhortation, explanations, discouragement of panic, can be more effectively delivered to a nation by wireless than by any other means. It is highly probable, in short, that although governments may be technically free to suppress broadcasting in time of war, they would find it neither practicable nor desirable to do so.

Let us therefore take it for granted that war would be carried on in the face of universal broadcasting. The picture we must draw will differ in many curious ways from the picture created in our minds by the Great War. Once again it is interesting to refer to the back of British Wireless Licences. Condition No. 5 reads as follows: "The only messages received by means of the station" (i.e. wireless set) "or the portable set shall be those intended for receipt thereby or sent by a duly authorized broad-

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casting station for general reception. If any other message is unintentionally received the Licensee shall not make known or allow to be made known its contents, its origin or destination, its existence or the fact of its receipt to any person (other than a duly authorized Officer of His Majesty's Government or a competent legal tribunal) and shall not reproduce in writing, copy or make any use of such message or allow the same to be reproduced in writing copies or made use of." What does this mean? Primarily its object is to secure that private messages sent by wireless telegraphy or telephony are not divulged. Presumably, however, it might be possible for ingenious persons in time of war to intercept and make use of messages intended for military purposes, or for diplomatic or political purposes, and not at all for civilian consumption. Still more would it be difficult, if not impossible, to ensure that the citizens of one country should not hear news, announcements, talks and descriptive commentaries broadcast specially for their benefit by enemy countries. Wholesale "jamming" of stations by each other is said to be virtually impossible; at any rate, it would be liable to put the jammer as well as the jammed out of action. Not only therefore would the wireless direction of actual operations by land, air and sea be

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deprived of much of the secrecy upon which they depend, but, once it was realized that publicity was inevitable, there would be a positive competition in it. In its later stages the Great War itself developed into a war of propaganda. A future war would be a war of super-propaganda, in which the art of publicity would be exploited to the full. News would be broadcast in the principal combatant languages. Any listener with an even moderately good set would—or could—hear the *communiqués* not only of his own army, navy and air force, but the accounts of the same engagements given by his enemies, probably in his own language. Each country would obviously secure the most persuasive and authoritative speakers, fluent in enemy tongues and if possible honoured in enemy countries, to expound its general aims, methods, and policies for the benefit of foreign listeners. Similar presentations of facts and views would be broadcast for the principal neutrals—if any still existed. Publicity might go even further. In the Sino-Japanese fighting of 1932 microphones were taken to the scenes of fighting and the battles were described not only by Japanese eye-witnesses for Japanese listeners, but for American listeners by American broadcasters. If governments found it necessary to invite the press to assist at the last war, they are likely

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to find themselves inviting broadcasters to describe the next. And if the forecasts of television materialize (which seems only a question of time), listeners throughout the world may conceivably both see and hear much of what in the last war they knew dimly from carefully worded *communiqués*. However strictly these privileges were limited and selected, they, together with the continuous background of international voices, would create a setting for war totally different from anything of which the world so far has had experience.

It is fair to ask ourselves, however, how these new circumstances are likely to affect national consciousness, international relations, and the prosecution of war. It may be argued that the causes which underlie war, which provoke it and which keep the war spirit burning, lie too deep to be greatly influenced by any of these new factors. To see and hear war, to have fighting made more vivid, might enhance its heroic aspects, might act as a greater lure to youth to share its dangers. Although Englishmen, Americans, Frenchmen and Germans might hear each other's versions of events, motives and policies, they might disbelieve all versions but their own. So it is possible to argue, but not, I think, very convincingly. A government may delude most of a nation most of the

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time, but not all of a nation all the time. The weight of contrary views actually heard by individual listeners, especially if they came from sources impossible to dismiss lightly, would in the end carry, if not conviction, at any rate doubts into people's minds, and make rigid and unbending attitudes difficult for any government to maintain in the face of a wavering public opinion. In particular, supposing that some shreds of international machinery were left from the wreckage, any considered opinions which were transmitted from Geneva or the Hague might carry considerable weight as a welcome relief from partisan statements and counter-statements. On the whole it seems probable that broadcasting may make wars slower to break out, more difficult to prosecute and even more difficult to maintain over a long period. If this seems too optimistic an estimate, it must be remembered that broadcasting has already gone a long way to reduce the general ignorance of other countries, to make foreigners seem less dangerous, and even perhaps to make all populations less credulous.

It seems probable therefore that, as part of the machinery for administering the world of to-morrow, broadcasting will assume a growing importance. As a new-comer, it has had to push for room ; it will probably have to go on pushing for some years to come.

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Other wireless services may have more apparent importance, particularly if important commercial and financial interests are involved ; others, again, more immediately in touch with central governments, such as the defence forces, may claim greater prestige and greater urgency. There is perhaps a danger ahead, that the present overcrowding of broadcasting stations in the air may be allowed to continue, for the sake of reserving wide enough strips of wave-lengths in the supposed interests of national safety. It may perhaps be worth considering whether adequate broadcasting facilities may not be as good a safety device for a people as wireless communications between naval bases and fleets, or between air ports and bombers.

CHAPTER X

TO-DAY AND TO-MORROW

THE student of social institutions should have been convinced, by the time this chapter is reached, that he cannot afford to leave broadcasting out of his reckoning. He will be confronted with it in politics, education, language, literature, music, public opinion, public taste, entertainment, government. So far from being a toy, or a hobby of which people will soon tire, it seems likely to become more pervasive, more accessible, more interrelated with the other amenities, encumbrances or accessories of life. The irritations and limitations of broadcasting to-day are likely to grow less in face of the demands of listeners, the enterprise of the radio industry and the infinite capacity of scientific workers to go on worrying at an obstacle until it yields to treatment.

The irritations come chiefly from four causes : the inability of unscientific listeners to get the best results from their sets ; the necessity of remembering successions of exact

hours and minutes, which produces the restless state of mind of those who are perpetually catching trains ; the necessity of being in a particular spot at a particular time ; and the annoyance which arises when several people wish to listen to different programmes on one wireless set. It seems possible that all these irritations may in time be reduced. The first—inability to handle a set—will decrease as the unscientific older generations die off and the generations born with a capacity to grasp mechanical contrivances have covered the earth. This is happening rapidly. For the remnant, the growing simplicity and convenience of popular receivers will largely solve the problem ; but with those who have neither time nor inclination to manipulate their own sets, the system of “wired wireless” may become increasingly popular. In those places in which it exists, the listener may subscribe to a central relay station containing one or more powerful receiving sets, which gives him a choice of programmes on his own loud speaker. Up to the present the cost is relatively high ; for the same sum or less the listener can buy a fairly simple set for himself. Many of the most far-sighted authorities, however, have always felt that broadcasting would never reach its zenith until programmes were laid on to private houses and public buildings

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very much as gas, water and electricity are laid on. It is difficult to see how far the method could ever provide a very wide choice of stations at home and abroad without prohibitive expense ; but in many countries the habit has spread rapidly and has become extremely popular. It is at present almost wholly confined to cities of some size.

The irritation of remembering particular hours for particular items, of failing to remember them, of being interrupted in the middle of listening by a telephone call or some household duty, of being unable to get home in time to reach one's set for some special programme—the solution for these real yet petty troubles lies mainly in the hands of the scientific experts. The portable wireless set may perhaps become really portable ; the pocket receiver may in future really get into a pocket and allow the listener to hear what he wants to hear wherever he may be in a way not too disturbing to other people. Methods may be found for reminding the forgetful or the busy listener that the programme he noted is due, by the ringing of a bell or the sounding of an alarm which he could set for himself. The recording machinery which has made such amazing progress within recent years may become cheap enough to be attached to or incorporated in any wireless set, so that it may automatically record

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anything which it is set to record, and play it over for the listener at some convenient time. Finally, the problem of sharing a wireless set between people of different tastes, which is always acute when house-room is limited, will probably be solved—in so far as it can be solved—along the lines of cheaper sets, which will make individual ownership more common, and, perhaps, of “listening rooms” in larger houses, in which particular programmes may be heard with quiet and concentration.

The limitations of broadcasting as we know it seem also likely to be overcome, though not necessarily at once. Much depends, of course, on what things are considered to be limitations. When broadcasting began, it seemed enough that music and speech could be heard across a continent. To-day it is felt that this is incomplete, that one should be able to see as well as hear. Ever since the cinema added sound to sight, it has become obvious that broadcasting must eventually add sight to sound. The same inevitable development awaits the gramophone. The far future seems to hold an infinite vista of “home talkies”, whether broadcast in the form of concerts, news, events, talks, or projected from a privately owned collection of film-records. Whether Mr. Aldous Huxley is right in foreseeing that they will inevitably

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become "feelies" too, no one can say. It does not seem as if much would ultimately be left to the imagination. And yet, to say this is perhaps to underestimate the self-preserving instincts of man as well as his intelligence. This ultimate junction of sight and sound—to leave the other senses out of it for the moment—may, if rightly used, add as much to our horizon and stretch our interests, sympathies and perceptions as much as hearing alone has done, or even more. The isolation of the single sense of hearing has already had its effects; no subsequent addition of sound to accompany certain kinds of programme is likely to undo them. Much has been learnt since the first crude talkies, and no one would now seriously suggest that sight would add value to every kind of broadcast any more than sound is now thought necessary to every kind of screen movement. The alliance which may ultimately grow between all the various methods of sight and sound reproduction may broaden the scope of each. Listeners at home may see and hear an occasional film broadcast as a programme item; the audience in a cinema may find an actual concert, entertainment, debate or play included in the evening's bill.

Time and space are even ceasing to be the limitations they once were. We cannot, like Joshua, make the sun stand still, but we can

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follow him round the globe in a fraction of time and reach the other side of the world in conversation before he reaches it with his beams. We can put events in time into cold storage and bring them out again at our convenience. The twenty-four-hours-a-day service which the B.B.C. has undertaken for the British Empire provides programmes on specially suited wave-lengths for the different parts of the world at whatever represents the evening hours in those areas. Part of those programmes consists of selections from the usual British programmes, which are recorded at the time and re-broadcast. This experiment will almost certainly lead to a closer linking up of the whole English-speaking and English-understanding world in an interchange of programmes and a network of special communications which may enormously facilitate the broadcasting of news, descriptive comment, and expressions of opinion. The thought has even haunted many people that it may be possible in some remote future to abolish time in retrospect; that some super-sensitive microphone may learn to pick up the still journeying waves set in motion by poets, philosophers, prophets, orators, wits, as far back as the dawn of history. The possibility is derided for the present by all reputable scientists; it still remains therefore an idle speculation.

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The greater the development of broadcasting, the more important becomes the problem of control and direction. One may be tempted to ask : " Why all this solemnity ? Why this portentous insistence on control ? Cannot broadcasting be left to find its own level, to amuse and distract us ? If the cinema is working out its own salvation, cannot broadcasting do the same ? " Broadcasting, however, uses a medium which is at present limited and coveted ; the rationing of wavelengths alone makes control inevitable. A non-stop supply of programmes in individual homes every day and all day all over the world makes some limit on exploitation essential in sheer self-defence. The power to make trouble and to do harm, inside and outside a country, seems to ask also for some degree of international co-operation. The next twenty or thirty years must provide some answer to this riddle of control. It will be based on a comparison between the three main types which occupy the field to-day—(i) private commercial control, which we may call the American method ; (ii) government control, which we may call (not quite accurately) the European method ; and (iii) public corporation control, which we may call the British method.

The American system, as we have seen, grew up as the form most natural to the

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American people. Under that system, it has shown immense vitality and has grown to enormous proportions ; it has partially solved the problem of interference and it has found methods of co-operation which make possible broadcasting on a national scale. It can, for instance, secure an almost complete coast to coast hearing for important series of talks, for important political occasions. Commercial broadcasting does not mean that all programmes consist of advertisements, or even of programmes paid for by advertisers. The two largest companies, the National Broadcasting Corporation and the Columbia System, devote substantial parts of their programmes to unsponsored matter, including the regular services of special correspondents on foreign affairs, important relays from Europe, and educational broadcasting to schools and adults. There still seems to be a limited place, moreover, for stations owned and operated in the service of education by universities and colleges. It would probably be agreed that under the American system there is a less high level of general excellence, a less high development of broadcasting technique, particularly on the cultural and artistic sides, than under the best of the other systems, and a far wider difference between the worst and the best. But if the bad can be very bad, the good can be very good, and

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the variety very wide ; while the absence of government responsibility, direct or indirect, for what is said allows a greater freedom of speech with less bother about bias and balance. Complaints of partisanship can be ignored, up to the point, but only up to the point, at which they annoy large advertisers, or important financial interests. The two chief requirements of American broadcasting are : security for educational programmes—for which perhaps the good sense of commercial broadcasters and the intelligence of the general public may be sufficient guarantee—and a financial basis for educational broadcasting, for which at present there is no final solution in sight.

Governmental broadcasting varies as greatly as the nature of governments themselves. The control of a democratic country—e.g. Denmark—differs in almost every respect from the control of an autocratic state, e.g. Russia. Freedom of speech is incompatible with the idea of the "corporate state" ; this may be good or bad, according to one's personal conviction, but broadcasting, in such circumstances, inevitably becomes the handmaid of autocracy and multiplies many times over its power to mould or coerce a submissive people. The level of musical and dramatic programmes will presumably continue to be high in Germany, even if the

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standard of free speech becomes so low as to disappear from sight. The potential danger of governmental broadcasting, as an instrument for suppressing civil, social and intellectual liberty, or for encouraging and consolidating aggressive nationalist feeling, is incalculable ; but it is fair to remember that much government monopoly reflects a genuine popular control which is democratic and liberal in spirit.

Public corporation control is held by some—probably by most American observers—to be indistinguishable from government control. This has not yet been proved. British methods and the British temper are apt, not without reason, to puzzle the intelligent foreigner. There is little doubt that public opinion in Great Britain is almost solidly in favour of the system of public control. It is also, I think, in favour of the utmost freedom of speech, limited only by the ordinary considerations of decency. The House of Commons has accepted without blenching the theory that Communists, as well as individualist rebels who represent no organized party, should have their turn like everyone else. It has received without alarm the view of a Conservative member that there is bound to be a bias to the left in broadcasting, since all new ideas and new approaches are apt to appear revolutionary. It

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is the B.B.C. which has been inclined on occasion to compromise with freedom. The amount of actual government interference has been small ; some of it has been successfully resisted, some of it might have been resisted. Some of the occasional timidity of the B.B.C. towards new ideas and provocative personalities is due to internal, not to external causes ; or if external, to private criticisms that have been given disproportionate importance. Each of the two special enquiries into broadcasting has emphasized the importance of a genuinely independent service, not identified with the government ; the prestige which the B.B.C. has won under the continuous direction of Sir John Reith entitles it to claim that independence which Parliament and the public alike seem anxious to accord it. The position is, of course, delicate. A public corporation enjoying a monopolistic position is peculiarly aware of the need to keep on good terms with the government ; it is easy to oblige a department, a ministry, by refraining from comment on a critical situation, by withdrawing a talk, or a play. Most government departments have an inborn nervousness of publicity ; it is natural for them to feel that silence is safer than speech. Mr. William Hard, who, as a regular speaker on foreign affairs for one of the largest broadcasting interests in America, has an

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unequalled knowledge of his own and other systems, has summed up his conclusions in this way :

“ I will concede that European governmental broadcasting ” (in this he includes Great Britain) “ generally exceeds American private broadcasting in the potential cultivation of good taste—by a graceful margin. I will contend that American private broadcasting exceeds European governmental broadcasting, in any European country, in the potential cultivation of free citizenship—by a vital margin. It is for everybody . . . to decide which margin he prefers.”

This is a challenge which the B.B.C. in particular has a great opportunity to take up. At the same time, free citizenship may be less safe, in the long run, in the keeping of big business than in that of the representatives of the people. Mr. R. J. Smith, of the Yale School of Law, in discussing the future of broadcasting in America, has uttered this warning :

“ To the extent that private interests become more and more entrenched in this method of communication, it will be possible for them to exert more and more a censoring influence upon the types of all programmes which go before the public. If the question resolves between private censorship and public censorship, I take it that it is in the interest of the country that the censorship be public rather than private.”

Vested interests, in other words, may become a harder taskmaster than democratic governments.

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It is doubtful whether Europe will abandon the general ideal of public control in some form or other. It is, I think, probable that the policy of broadcasting by public corporation will be confirmed in Great Britain by any future enquiry, but it is not perhaps beyond the bounds of possibility that there might be some modification of monopoly in regard to speech. It is by no means certain, as we have seen, that rigidity or timidity in broadcasting can necessarily be laid at the door of governments. It is important to disentangle the parts played by a conservative directorate, and still more, by the monopoly element. Monopoly confers an almost unbearable responsibility; it reduces the balancing of contrary opinions to a fine art, and is only tolerable when it is governed by the highest public spirit and integrity. These have never been wanting in British broadcasting. But the pontifical note which is apt occasionally to irritate is due to the fact that the B.B.C. speaks with the voice of undivided monopoly, not to the fact of government restriction.

The British experiment has laid the foundation well and truly; it has made a high standard possible from the beginning. Signs are not wanting that the constitution of the B.B.C. may serve as a model for a new type of control of other great national interests and industries. It remains to be seen whether the system is

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compatible with any division of responsibility in respect of certain types of programme. The practical difficulties would be very great. It would presumably be necessary to devote the whole of the revenue from wireless licences to broadcasting; the actual engineering plant and apparatus would probably have to be under a single control. Something of the sort indeed already exists in Holland, where three interests—a Catholic broadcasting society, a Protestant broadcasting society, and a workers' broadcasting society—share the right to broadcast.

Broadcasting, however, is ultimately an international, not a national concern; it follows that national control will not by itself meet the whole case. The International Broadcasting Union in Geneva has done invaluable work as a voluntary association of broadcasting authorities for mutual benefit. It has discovered and consolidated the international outlook which exists among broadcasters, as among airmen and all other people engaged in work which ignores frontiers. The periodic world conventions on telecommunications provide a working co-operation between the posts and telegraphs and wireless services of the world. But there have already been moments when the absence of any disciplinary authority in broadcasting policy has been felt to be serious. If a

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country, or a station, decides to take more space or use more power than it has been allotted, or if it engages in abusive propaganda against its next-door neighbour, or if it incites an unruly racial minority in another country, there is as yet no effective means of dealing with the situation. There are the usual diplomatic channels, the usual remonstrances and appeals. But the world may find it convenient to give the League of Nations the ultimate oversight for disciplinary purposes, or to include broadcasting within the scope of some other already existing or specially created international authority which will comprise nations as yet outside the League. Whatever happens, the necessity for free speech between countries is as important as it is between schools of thought inside a country. It would be disastrous if gentlemanly conduct were interpreted to mean the avoidance of all criticism or of everything likely to give offence. The new practice of sending special broadcasting correspondents abroad to study social and political conditions and to broadcast from foreign capitals is so excellent that it is worth a great deal to secure their freedom from censorship and control. The choice of responsible speakers, with sympathy, tact and judgment, can do much to secure these rights; but this will not be enough in itself without the

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determination of broadcasting authorities themselves.

Any survey of broadcasting is apt to stir a speculative mood. We may be approaching an age in which the individual will cease, comparatively speaking, to count. A high standard of comfort for a large population may conceivably involve mass organization and standardization on a vast scale, with machinery serving yet dominating mankind. Or again we may be approaching an age so difficult and dangerous that Nature will use her powers of selection as ruthlessly as in the past, when whole species were extinguished by cold they could not support, or greater beasts they could not subdue. Will broadcasting have any influence to quicken or to counteract either of these possible tendencies, the reduction of men to cogs in a machine, or their elevation to supermen? Will it assist or modify the process of urbanizing, standardizing, mechanizing? The answer lies in the hands both of broadcasting authorities and of listeners. The mechanization of dangerous, dirty, or unhealthy kinds of work, the standardizing of things which add to health, cleanliness, or even comfort, which increase interest and gaiety, seems part of the ordinary business of civilization. It is the mechanization of mind and imagination that

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we instinctively resist. Broadcasting will only mechanize men if it becomes the tool of a mechanistic state. If we have the sense to give it freedom and intelligent direction, if we save it from exploitation by vested interests of money or power, its influence may even redress the balance in favour of the individual. It is encouraging to remind ourselves that what counts in broadcasting is the sense of life, whether this be in entertainment, in education, in music or in any other kind of programme. It provides an intimate touch between human beings who might otherwise never come within hail of each other; it enhances the factor of personality. This is true for broadcasters and for listeners. The good broadcaster is vividly aware of the units of his audience; the listener often feels he has made friends with those who speak to him—not in a merely sentimental way, but through a real communication of thought and feeling. Mr. H. G. Wells gave his first broadcast talk in a series of entirely unfettered and uncensored half-hour talks broadcast in Great Britain in 1928, called "Points of View". He had taken immense pains to think what he most wanted to say on such an occasion, and what single line of thought would best express his message to his hearers. He decided to speak about immortality, that immortality in which,

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as he saw it, the individual mattered so much less than the race. He prepared his manuscript in his country house, and, feeling reasonably satisfied with it, he went to a small country station to pick up his train a few hours before his talk. As he came on to the platform, the man in the signal-box put his head out of the window and said, "Hullo, Mr. Wells, I'm going to listen to you to-night." Mr. Wells was thunderstruck. Somehow he had not visualized that signal-man; he had been thinking of an audience, a public, a vague mass of his countrymen, the readers of his books; suddenly he found himself forced to think out his whole talk in terms of an individual, of a kind he had not considered. Pencil in hand, he spent the hour in the train revising, rewording, rethinking what he had to say, and his revisions bear witness to the process that went on in his mind. The address became an intimate confession of faith to a signal-man, and in so doing became a brilliantly effective talk.

It is interesting, too, that broadcasting seems able to discover or to evoke an imaginative rather than a utilitarian response. I do not mean that there is no demand for practical advice, for news and general information; but it was broadcasting, for example, which partly discovered the almost fantastic appeal which astronomy and cosmogony hold

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for ordinary people to-day. Men have, of course, always been fascinated by the heavens; popular astronomy has always had a large public; but there seem to be peculiar factors in the post-war world which gave "the mysterious universe" something of the appeal of poetry to an immense audience. This has been shown both in Europe and America. In the autumn of 1928 Sir James Jeans gave three talks, as simply as was possible, on certain aspects of the universe. The results surprised everyone. On account of the overwhelming demand, they were published in 1929, with a great deal of additional matter, in the volume called *The Universe Around Us*, which at once became a best-seller on the scale of a popular novel. The same kind of interest has been evoked by Dr. Millikan in the United States, and by similar talks in Germany.

The immense popularity of Sir Oliver Lodge as a broadcaster owes much not only to his personality, but to his appeal to the imagination of his listeners. A census of likes and dislikes taken several years ago in a large factory girls' club in East London showed Sir Oliver Lodge in the list of favourites. "But do you understand what he says?" asked the sceptical investigator. "No," said the girls, "but he makes us think of queer things we hadn't thought of

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before." This particular kind of thinking may not be worth very much intellectually, but it may have an effect on the imagination which is not to be despised. On the whole it is true to say that, while it takes all sorts of items to make a programme, the speculative, imaginative, religious and philosophical elements meet with a reception quite as impressive as the popularity of good dance music and good vaudeville.

The universalizing effects of broadcasting, as we have seen, may have their good as well as their bad sides. It may give the countryman the amusements and interests of the town, but it may make the townsman more appreciative of the point of view and interests of the countryman. It is possible to get both to discuss the right use of the countryside and the preservation of amenities and open spaces ; it is even possible to get the townsman to understand something of the march of the seasons in the farmer's year and to realize its importance for himself. We have already seen how quickly the interest in other countries, in other people and customs, has spread, and the importance of this interest in relation to peace and war.

But if good broadcasting must depend a great deal upon intelligent and liberal administration, it will depend as much, or more, upon right listening. This moral is well-

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worn, and is almost too obvious to point. Yet if any single thing can destroy the good that broadcasting has done or may yet do, it will be the habit of indiscriminate and unrestricted listening. People can become so used to a loud-speaker that a quiet room comes to be as uncomfortable to them as the country is for the slum-dweller. They hear nothing, remember nothing, or become bored by what they do hear. Anything which makes the listener feel himself an active partner and not a passive receptacle is worth a great deal; the American who thanks God for his free wireless service may even find that a few shillings paid for a licence, which seems to him an odious imposition, confers a sense, and fact, of ownership which has a positive psychological value. Many methods have been tried or considered which would give the listener a bigger stake. The Danish broadcasting authority attaches a questionnaire of preferences to every wireless licence, of which a high proportion are filled in and returned. Subscriptions to cover printed pamphlets, magazines or illustrations, encouragements to submit contributions, from poems to cooking recipes, replies to enquiries and general correspondence, conferences with speakers, guilds and associations of listeners, the broadcasting of musical festivals and competitions—all these and more

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may do something to encourage a valuable co-operation.

The reader who has completed this brief sketch of broadcasting, and has filled it in from his own knowledge and experience, may find himself in two minds when he tries to sum up his conclusions. Few of us are altogether proof against the lure of new prospects; few of us are without regrets when this means—as it usually does—parting with much to which we cling. What is called progress seems often to bring a surfeit of new experiences, facts, machines, noises, producing a feeling of helplessness, almost of despair. In so far as broadcasting merely adds to the general welter, it may fill us with foreboding; in so far as it helps us to co-ordinate, to select, to apply scales of value, to give us time to think, it may relieve some of our present perplexities. It is worth remembering—(since poets are the best of guides)—that broadcasting seemed to one great poet, fastidious scholar and uncompromising critic, a possible vehicle for truth and beauty. His words stand in the beginning of this book.

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THE field from which books on broadcasting might be chosen is at once too large and too small to make selection easy. It is too small in the sense that much that is written is of necessity out of date in a short time ; it is too large in the sense that the total output of reports, pamphlets, periodicals, year-books and other publications of broadcasting authorities would fill a library. In the following list reference is made only to what is available in English ; but it must be pointed out that a great deal of material on programme and juridical questions exists in German, and some in French.

TECHNICAL

A general understanding of the way in which broadcasting works, and of its scientific basis and limitations, is in a sense essential to any judgement of what it provides. There are a number of introductions to wireless intended for the non-scientific reader. Here it may be enough to mention the recent volume on *Wireless* by Dr. Eccles in this series.

Another side of the technical field is studio acoustics, in which broadcasting authorities and the gramophone industry have alike conducted experiments. *Broadcasting House*, a technical description published by the B.B.C. (5s.), and the special number of the *Architectural Review* (August 1932) devoted to the same subject, are both worth consulting, as well as papers by Noel Ashbridge, Chief Engineer of the B.B.C., in *Engineering*, October 16th and 23rd, 1931.

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