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Radio Broadcasting in Great Britain.

THE delay which has arisen in connexion with the inauguration of the proposed provision of a comprehensive radio broadcasting scheme in the British Isles has caused questions affecting the policy the Government should pursue in relation to broadcasting to be widely ventilated, and has, at the same time, directed attention to the great variety of interests that are involved in this matter. In view of the immense importance of radio-telegraphy to-day in connexion with measures affecting national defence, and of the fact that this means of communication is easily susceptible of interference from accidental causes as well as those of wilful design, it is the duty of the Government to ensure that the radio interests in its own care shall be properly safeguarded in the new situation which has come into existence in the wireless field.

Hitherto the authority and powers under which the Government has exercised control in relation to radio-telegraphy are those which it has derived under the Wireless Telegraphy Act, 1904 (4 Ed. 7, c. 24)—herein-after referred to as the principal Act—a temporary Act which was placed on our Statute Roll a very few years after the practical utility of radio-telegraphy was first demonstrated, and has since been re-enacted in its original form from time to time as required. With the progress of time the need for governmental control in this field has in no way abated. Early in this year, about the same time that broadcasting first prominently attracted public attention, the Government took steps to strengthen its position by introducing the Wireless Telegraphy and Signalling Bill (12 & 13 Geo. 5—No. 148) in the House of Commons: therein provision is included for placing the principal Act permanently on the Statute Roll and, at the same time, for greatly enlarging the powers hitherto enjoyed by the Postmaster General. Under these new provisions the Government will undoubtedly possess extremely large powers, but probably not larger than are required to enable it effectively to cope, in the general interest of the public, with the wireless situation in this country. It is unfortunate, then, that a suspicion should have arisen in some quarters that the new powers may possibly be misused by the Government in their application to broadcasting: particularly is this so as many conflicting interests are involved in connexion with the putting into operation of broadcasting services, and therefore, in pursuing its policy, the Government needs to secure the fullest confidence of the several groups affected.

Indications have already been given as to the policy

which the Government intends to follow with regard to certain aspects of broadcasting. The decision of the Government to leave this branch of wireless activity in the hands of private enterprise to develop, has been widely welcomed: however, fears have been expressed lest, in giving effect to its policy under a licensing system, the Government may allow an industrial monopoly to grow up. It has to be borne in mind that the situation under discussion is altogether an exceptional one, and that although a complete monopoly cannot be tolerated, on the other hand, as is the case with ordinary telegraphy and telephony, and, indeed, with many other public utility services, so in the case of radio broadcasting, the field is not one which lends itself to unlimited competition; for, on purely technical grounds, a limitation has to be placed on the liberty of free competition in those cases where the radiation through space of electro-magnetic waves for signalling purposes is involved.

This latter point requires to be emphasised, as a proposal has been seriously put forward that, in spite of the grave risks of mutual interference incurred thereby, full liberty of action should be permitted to those whose wish it is to develop and trade in radio broadcasting, rather than that a complicated system of licences and supervision should be introduced. But full liberty of action is not feasible here: radio broadcasting cannot, on the transmission side, be conducted untrammelled by bureaucratic restrictions. The removal of such restrictions would not only defeat the aims of those who are seeking to establish useful, efficient and continuous broadcasting services in the British Isles, but would also, at the same time, put in serious jeopardy the radio communication services established in connexion with our national defence arrangements, as also the commercial services already in existence. For practical reasons, it is found necessary to lay down a definite upper limit to the number of radio transmitting stations which may be erected within a particular region. In the British Isles, the number of radio services of the several kinds connected with the fighting services and required for commercial purposes are already so great, that a central governmental authority has had to be created in order effectively to regulate the situation: it determines and allocates the radio wave-lengths that shall be utilised for particular purposes.

It is on the advice of this authority that the Government will, so far as the technical aspects of the situation are concerned, be obliged to act. In the matter of competition there are, of course, apart from the technical considerations referred to, financial aspects also which have to be brought under review. Normally it certainly is not the function of the Government to

attempt to control the financial side of a private enterprise. However, so far as broadcasting is concerned, the Government is committed, *nolens volens*, to a certain measure of control of the organisations about to be licensed for this purpose; therefore, so long as everything is done to allow of the fullest amount of competition permissible in this field at the present time, and to admit of an increase of this competition in the future should technical and other considerations permit this safely to be done, it would not be unreasonable, at the present juncture, for the Government to exercise such further control as may be required to prevent anything being done the inevitable result of which would be the almost immediate destruction of a part of the capital of the investing public. On the other hand, by playing a part, as is proposed to be done by the Postmaster General, in the framing of the articles of association of the companies which it is intended to license for providing broadcasting services, the Government is likely, at some future date, to be deprived, wholly or partially, of its liberty to modify its policy in relation to competition should this be feasible, and desirable in the public interest, and it may thus lay itself open later to the charge of having allowed a monopoly to come into existence. It is at this stage that care should be taken by the Government to guard against entanglements which may afterwards prove embarrassing.

In the case of receiving apparatus the technical situation is relatively a simple one, and there is every reason for permitting the fullest competition in dealings connected therewith. It is desirable, therefore, that individuals wishing to possess such apparatus should have the greatest latitude allowed them in procuring what they want. Announcements have appeared that the types of apparatus to be used in connexion with broadcasting must conform to certain technical standards approved by the Post Office: if this merely means that the Post Office will issue a general specification, no objection can be taken. However, if it is intended that manufacturers must submit to the Post Office for its approval the designs of the apparatus they propose to put on the market for broadcasting, a serious mistake is being made alike from the manufacturers' point of view as of that of the Post Office, which will thus be saddling itself with a responsibility that it should seek to avoid. In the interests of all parties, it would seem best that the sale and purchase of wireless receiving apparatus should be carried on in these islands on the customary commercial lines free from restrictions of all kinds. It follows, therefore, that whoever may so desire should be permitted to make use in his or her broadcasting receiving installation of any home-made apparatus, provided that the same complies with the general technical requirements laid down officially.

It has been announced that the Postmaster-General is in favour of subsidising the organisations which are to be licensed for broadcasting purposes out of fees to be collected on the licences issued in connexion with wireless receiving stations. The situation is one which requires to be carefully handled, if mischief is not to be done. The authority given to the Postmaster-General to grant and renew licences in connexion with radio receiving apparatus exists primarily, not for revenue-raising purposes, but for that of effecting the registration of wireless installations of every kind; a step which is necessary as a measure of police precaution and also for facilitating control over all individuals using radio receiving sets. Since the law requires every person with a wireless installation to take out a licence, the charge for the same should be kept as low as possible. At the same time, it is reasonable that those who desire habitually to avail themselves, for one reason or another, of broadcasting services should be expected to contribute towards the cost of the same: strictly, this contribution should depend upon the extent of the user. The situation is one that lends itself to treatment by the grouping of the licences, on some practical basis, into two easily distinguishable categories, and by a differentiation in the charges to be levied on the licences in these two categories.

Now, broadcasting is essentially a luxury demand, and it has to be borne in mind that there are to-day, and will always be, many owners of licensed wireless installations who are not desirous, as a practice, of making use of broadcasting services. For this reason, anything in the nature of a general levy on all wireless receiving stations must be avoided. On its merits, broadcasting is deserving of the fullest encouragement and the greatest assistance which the Government can give it, alike in the interests of those who seek amusement therefrom, of the research workers in this field, and of the electrical industry. It seems improbable that any sum likely to be raised at the present time by fees on the grant and renewal of licences will go anywhere near providing the contemplated annual outlay on the broadcasting scheme which has been projected. It has been estimated that an outlay of 180,000*l.* per annum² will be involved in connexion with the proposed broadcasting stations. Now, there are at the present time in this country some 10,000 holders of licences for wireless receiving installations. In view of the relatively high cost of providing complete receiving installations, an increase in the number of licences may, in these days of trade depression, be a slow matter; but assuming that an immediate increase may multiply their number tenfold, even so, approximately 2*l.* per annum would, on a flat-rate basis, have to be levied on every licence,

in addition to the registration fee, if the whole annual cost of the broadcasting stations is to be met in this way. There is, however, a serious risk that an annual contribution on this scale may have the effect of retarding materially the rate of the growth in the number of private wireless installations.

In these circumstances, it would seem that the licensed organisations will be well advised to endeavour to raise the annual revenue they require largely from audiences attracted to public entertainments promoted and run under their auspices: evidence exists tending to show that large audiences can be attracted to broadcasting entertainments of a high class. The licensed organisations can, of course, at the same time, raise additional revenue by hiring out wireless receiving installations for entertainment purposes, by sales of apparatus outright, and by other means. It is in relation to the carrying out of this wider policy, which caters for the needs of all classes interested in radiotelegraphy, that the Government can best help in popularising broadcasting and aid in promoting the commercial success of licensed organisations rather than in the attempt to subsidise them out of moneys raised by means of fees charged on licences, the amount of which may, more than likely, prove extremely disappointing. For example, the Government can, on the technical side, help the licensed organisations materially by allotting to them the necessary number of suitable radio wave-lengths to enable them to carry out their programmes, and in many other incidental ways: it can also to some extent afford them assistance on the commercial side by causing all applications for entertainment licences to be collected by them for transmission to the Postmaster General, a course the adoption of which would provide the licensed organisations with opportunities for selling broadcasting services, whilst at the same time promoting genuine competition in this field.

In connexion with broadcasting, other rights are threatened, such, for example, as copyright and patent right. In all the circumstances of the present situation, it behoves the Government then to keep itself as free as possible from responsibility in connexion with the details of the radio broadcasting services. This it will do so long as it confines its rôle to that of a licensing authority exercising general control and supervision over the purely wireless situation, and by allowing, in collateral matters, the old doctrine to prevail, that where the likelihood of the invasion of the legal rights of others is involved, every subject in the realm acts at his own peril and must be held personally answerable for his own deeds to him who establishes in due course of law that he has suffered an injury from an actionable wrong at the hands of another.

² See NATURE for August 5, p. 197.