

entirely for civil purposes, whether or not defence purposes are served at the same time.

It has to be remembered that scientific workers in Government service can only enter a protest against policy by leaving the service. A State department could not tolerate criticism or opposition from its own servants, and the responsibility for determining what constitutes honourable conduct in regard to specific duties lies with the profession as a whole. Accordingly, a healthy position and loyalty to the highest ideals are ensured as much by a widespread public spirit on the part of scientific workers generally as by the conscientiousness of individual workers. The existence of such a public spirit would not only afford full professional support to those members in actual Government service in the unlikely event of need, but also would induce scientific workers to take an active part in educating public opinion as to the true functions of research in the modern State.

Obtrusive Legislation

THOSE who have reason to know that infertile has an economic value, and that deliberate family limitation has been a factor of some importance contributing to their own social elevation, and wish to share with others the information and the practices which have been helpful to themselves, who hold the view that sex is not to be justified solely because of its relation to reproduction, and who think that parentage should be deliberate and voluntary and not casual and accidental, must necessarily wish to examine with the utmost care any proposed legislative measure which deals with the subject of contraception.

At the present time, a Bill, presented by the Lord Dawson of Penn, and entitled "An Act to Restrict the Sale, Display and Advertisement of Contraceptives", is before the House of Lords and comes up for its second reading almost immediately. A superficial examination of this Bill would yield the conclusion that no serious objection could be taken to its terms. Its purpose is to make it illegal (1) to sell or offer for sale in any street or public place, or by means of an automatic machine so placed that it can be used by persons in any street or public place, any contraceptive; (2) to go to the premises of any person and there sell or offer for sale any contraceptive, unless the sale or offer is made in pursuance of a previous request of that person, or the premises are used

by a dealer in contraceptives who buys to sell again; (3) to display in or outside any shop so as to be visible to persons outside the shop any contraceptive, or any picture or written description of any contraceptive; (4) to send or deliver, or cause to be sent or delivered, to any unmarried person who has not attained the age of eighteen years any circular or other document containing information of any kind whatsoever relating to any contraceptive.

From the fact that the Bill is sponsored by Lord Dawson, who has long been an advocate of birth control, and several years ago, at the Church Congress at Birmingham, stated publicly that he was in favour of contraception, it may be assumed that the Bill is intended only to shield inexperienced youth from the stimulus of the pornographic; it certainly would make it impossible for such to indulge in sexual intimacy completely freed from its more grievous repercussions. To rid the streets of touts and hawkers, and to force a certain kind of shop to adopt a different form of window-dressing is a truly commendable ambition, and if the sole effect of the Bill could be that those people who should use contraceptives would, in the future, obtain them easily from reliable and responsible sources, no one could cavil at it. No one would, if it were the case that birth control clinics were an integral part of the municipal and State medical services, as they might be. But, can one be sure that the difficulties this Bill creates in the matter of obtaining contraceptives will really affect the incidence of promiscuity? May it not be that its main effect will be an increase in illegitimacy and in venereal disease?

The obtrusive display of contraceptives may be objectionable, but from the point of view of the State it is nothing like so wicked as bringing unwanted children into the world. It may be assumed that in the immediate future, at any rate, the Bill, becoming law, would certainly tend to reduce the purchase of, and therefore the use of, contraceptives, not only by unmarried youths but also by those who, in the interests of themselves and of society, should use them for the limitation of their own families. The very ugliness and the vulgarity of the shop window can possess an educational value, revealing to the ignorant necessitous the fact that contraceptives exist. In the opinion of many, this Bill, in the light of modern scientific thought upon the subject of birth control, must appear to be somewhat reactionary and deplorable; it interferes with the

liberty of the individual, it hits others besides those at whom it is aimed, and it must interfere with the democratisation of contraception—one of the most socially valuable of all biological inventions. The further history of this Bill will show whether or not there is in the present Parliament anyone who can claim the privilege of wearing the mantle of Bradlaugh.

Position of British Broadcasting

The B.B.C. Year-Book, 1934. Pp. 480. (London: British Broadcasting Company, 1934.) 2s.

THERE is much of interest in this year-book. We learn that for every fee of 10s. paid by a listener for his licence the Government takes 5s. 5d. and the B.B.C. gets 4s. 7d. By issuing publications helping broadcasting, the B.B.C. manages to increase this sum to 5s. 10d. per licence. A considerable amount of the energy of the management, therefore, must be spent in helping forward their publishing business. It seems a pity that the B.B.C. has no capital resources and that all capital expenditure must be provided out of income. Considering its national importance, it is not good policy that it should be cramped in this way.

It would be interesting to know the reason why Hertfordshire is the county of England which has the greatest number (20) of licences for every 100 inhabitants. It is easier to see why Oxfordshire, Cambridgeshire and Surrey come second with 17. On p. 89 we are told that some 4,000 schools take broadcasting lessons, 80 per cent being elementary. Obsolescence of sets, reorganisation and transfer of teachers are given as causes why some of these lessons have been discontinued. There can be little doubt that the difficulty experienced in obtaining a trustworthy standard set for reception has greatly hindered progress. We are glad that the Council of the B.B.C. and the Department of Scientific and Industrial Research have prepared a list of sets on the market suitable for school use. Negotiations are also being made with the Radio Manufacturers' Association regarding the development of a hire service and maintenance system. We are sure that if these facilities were available more schools would employ the new medium.

Parts of the technical section of the year-book are of special interest to the electrician. There is an excellent chapter on the calculation and measurement of field strength. Not only are the best practical formulæ given but their limitations

are also pointed out. The usual formulæ postulate that the electrical conductivity of the earth is homogeneous throughout its mass. They also neglect the existence of hills and buildings. The proper corrections to be applied to the formulæ can only be learnt by experience. The would-be calculator need not, therefore, be disappointed if the measured values differ very appreciably from those calculated.

We were disappointed to find that little reference is made to the scientific and engineering research work being carried out by the B.B.C. The science of broadcasting is an outcome of applied physics, and judging by the rapid progress made in similar applications where research laboratories are considered necessities, scientific workers would like assurance on this point. The B.B.C. must know, as well as the manufacturer, the more urgent problems that have to be solved, and it has many facilities for experimenting which are not available to the industry. Continuous scientific and mathematical research is necessary if the B.B.C. stations are always to be in the front rank. In the next edition we should like to see the names of the engineers and scientific investigators employed by the B.B.C. and an account of the researches they have made and the progress achieved during the year.

The Institution of Electrical Engineers has formed a committee to combat electrical interference with broadcast reception. It is composed of representatives of all the many interests concerned, including the B.B.C. and the Post Office engineers. Various subcommittees have been formed to examine the problem and see how it can be remedied. The disturbances that arise due to various classes of interference-causing apparatus are specially considered.

We were glad to read about the short-wave work carried out last year both on the transmitting and on the receiving side. Particular attention was paid to the relative effectiveness of the many forms of aerial which are available at present. The closing down of 5 XX and 5 GB when the new Droitwich station is completed will provide accommodation and space suitable for research work. Experimental work has been carried out at the receiving post at Tatsfield in Surrey. A new receiver suitable for relaying programmes from distant short-wave stations has been developed.

Problems on acoustics were continuously studied during the past year. Every new building that