into the appeal funds out of their free moneys the total sum due from the covenants. This gesture illustrates the degree of co-operation that existed throughout the scheme between the hospital administrators and those running the appeal.

Unexpected Side-effects

The appeal has had several beneficial side-effects. Many communities found that the appeal united them more closely than before. The organizer of the Winchcombe village appeal—which produced £10,000—for example, said that “over 20 villages around Winchcombe helped to raise the money. One of the features of the campaign was the way in which everyone in the area worked together. It was a very good thing for the corporate spirit of the district, and people got acquainted with others in the same village whom they had never met before.” In the small village of Woodmancote everyone made new friends and new commuter families found themselves brought into the community.

The framework of the appeal organization will not easily die, and many of the local committees formed are already turning their attention to other charitable activities. Furthermore, existing local charity organizations such as the Leagues of Friends of various local hospitals have been stimulated into launching ambitious projects. For example, the Friends of Tewkesbury Hospital have provided a £5,000 outpatient department; the Delancey Geriatric Hospital Friends are financing a £2,000 day room; and Winchcombe Hospital Friends are building a £2,000 day room.

It is not intended to close down the North Gloucestershire Cobalt Unit Appeal—rather it will lie dormant until a new venture requires extra financial support. According to its terms of registration it can raise money for any venture connected with cancer. Meanwhile, as a result of contacts made during the appeal, the radiotherapy staff know where to ask for small extra sums of money for the centre. In addition, it is hoped to set up a League of Friends for the centre which will help to provide it with its day-to-day extras.

IS THERE AN ALTERNATIVE?

Hospitals Sweepstakes in the Irish Republic

G. A. DUNCAN,* M.A., LL.B.

One of the possibilities that has been raised from time to time is that of financing part of the National Health Service out of lotteries. For example, both on 2 December 1966 and on 17 March Mr. Graham Page, M.P., failed to get a second reading for his private member's Bill, which aims “to provide financial support for hospital work and medical research of a pioneering kind and for other prescribed purposes . . . on the result of specified horse-races; and for purposes connected therewith.” In this article Professor G. A. Duncan discusses the history and working of the Sweepstake in Eire.

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In the Kingdom of Ireland as well as in the Kingdom of Great Britain common and statute law forbade the holding of public lotteries, and this prohibition was carried over into the Irish Republic. Originally designed to protect the Government's monopoly of lucrative lotteries (like the existing *loterie nationale* in France), this aspect of the law lost significance as Government lotteries went out of fashion in the United Kingdom, until in our own day they were revived in the form of Savings Certificates, and later more openly in the form of Premium Bonds. As the merely fiscal significance of the prohibition declined, the latter became overlaid with a moral quality, and by the turn of the century was commonly regarded as sumptuary legislation designed to repress a social evil. Taxation of alcohol and tobacco underwent the same metamorphosis; and though this view is still strongly held by many people, so that at least one hospital in Dublin refused at first to participate in the Sweepstakes, the climate of opinion in general about gambling and the organization of gambling for profit or charity, or both, changed considerably after the first world war. Open betting shops, gambling clubs, football pools, betting taxes, casinos, etc., would have been unthinkable before 1914. The Irish Republic led the way in licensing betting shops in the same way as public houses, and again by the Public Hospitals Act, 1930 (now replaced by the Public Hospitals Acts, 1933 to 1940).

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Helping Voluntary Hospitals

It was in this climate of relaxed restrictions that the use of gambling—quite naturally based on horse-racing (with the added notion that it might somehow assist horse-breeding)—was canvassed for some time before 1930 as a means of helping the voluntary hospitals in Dublin. Being charitable institutions dependent on relatively inelastic incomes from endowments, subscriptions, and patients' fees (*plus* the unpaid services of their medical staffs), they suffered from chronic financial difficulties in the period following the first world war from the rising level of costs of maintenance, the development of more expensive equipment, and the introduction of new and costly drugs. They were in a condition of perpetual crisis.

One solution to these difficulties would have been to approach the Government for direct assistance from the Exchequer. Nevertheless, on the one hand, the hospital boards were anxious to retain their independence, and, on the other, it is doubtful whether any Government was at that time ripe for a complete take-over. Hence the idea of a sweepstake scheme, which had powerful advocates in the medical and bookmaking professions, secured acceptance. Thus it required only the indirect assistance of the Government in enacting the necessary permissive legislation in the Public Hospitals Act, 1930. In the event, as will appear below, under this Act and successive amendments the voluntary hospitals have lost a great deal of *de facto* independence. The Act, of course, relates only to the

Republic; neither the hospitals nor the Government of Northern Ireland are associated with the organization created by it. Furthermore, it was set up solely for the benefit of the voluntary hospitals.

The procedure recommended by the promoters, adopted in the primary Act and retained since, has been that of separating the collection of the cash from the distribution of the sum available to the hospitals. The collection is entrusted to a private company, now known as Hospitals Trust (1940) Ltd., which organizes advertising, sale of tickets, management of funds, draws for and payment of prizes, and payment of the hospitals' share to another body, the Hospitals Commission. Each sweep has to be separately licensed by the Minister for Justice, and a voluntary committee appointed by the associated hospitals, called the Associated Hospitals Committee, is legally responsible for holding the Sweepstakes, the Trust being its agent.

For obvious reasons, as a rule Sweeps are limited to three per year, on three leading races. Begun originally on English races, a representative collection may be seen from the ones used in 1966—the Lincoln, the Irish Sweeps at the Curragh, and the Cambridgeshire. On each of these in recent years the Prize Fund has been close to £3m.

The Sum Raised

Up to September 1966, before the Cambridgeshire, the gross sum realized from the sale of tickets for 107 draws may be estimated and distributed as follows. The Trust, being a private company, is not obliged to publish its accounts, to show a profit-and-loss statement, or to exhibit an appropriation account. Nevertheless, consistent estimates can be framed. The gross "take" for the 107 draws was probably £297m., while the promoters' expenses and profits came to £45m. The surplus was therefore £252m., and of this the Prize Fund got £178m. The share of the Hospitals' Fund was £74m. Of this the Government took £18m. in tax. Over a period of 36 years this means about £1½m. per annum for a group of institutions which now numbers 410. The scale of the turnover has naturally been increasing with its success, and the 1965 result can be estimated as: total take £14.4m.; Prize Fund 8.6m.; Hospitals' Fund £3.6m.; deduction by Government £0.9m.; sum remaining for the use of the hospitals £2.7m.

Nobody, least of all the promoters, would deny that the Sweeps have been a profitable venture, but the figure of £45m. above (some 15% of the gross takings) is partly illusory. The Sweepstakes are big business, with the corresponding problem of nourishing a large and growing organization whose members know well that their jobs are skilled and confidential, but also confidential in a very special sense. While the sale of tickets is legal in the Republic, it is illegal everywhere else, and especially in countries with Government-owned or Government-sponsored lotteries of their own. The Sweep is an export industry, but it requires an undercover network of agents of all sorts, from clandestine ticket-sellers to respectable deposit-addresses, and an elaborate organization to enable subscribers to defeat the postal censorship and fiscal squeeze of their own Governments. The rules are stated explicitly on each ticket. The costs are therefore large: what remains as profits nobody knows, or can know.

About 60% of the gross take has so far gone into the Fund. The odds do not sound too good—of every £1 you spend on a ticket, 8s. has gone before you have a chance. Whether this rate can be equated with the terms of *la loterie nationale* or of Premium Bonds is irrelevant. What matters is the seductiveness of the prizes. At first enormous prizes were offered, such as can still be won on the football pools. Common gambling sense regained control, however, and the present system is one of dividing up the prize fund on each sweep into units of

£120,000, with a top prize of £50,000 and others accordingly. This is a sagacious compromise between the fantasy of a remote chance for an enormous prize and the prudence of better odds on a smaller but still substantial prize. The change was also partly motivated by the obloquy attending some of the earlier enormous prizes. A £2.5m. Prize Fund on a race with 63 starters can yield 4,600 prizes (including sellers' bonuses), 60 being of £10,000 or upwards, and 80 of £1,000. This means that every £1 put up stands one chance in 913 of winning a prize of some sort.

From the point of view of the amounts of cash contributed there can be no doubt of the Sweep's world-wide popularity (in spite of obstacles), and it is interesting to speculate on the reasons for this. One certainly is the wide appeal of horse-racing as both an exciting and elegant form of gambling in a fairly big way—not esoteric like baccarat, nor trifling like housey-housey, nor classifiable with fruit-machines. Another certainly is the skill with which the vast organization has been built up. Yet another is the scrupulous honesty with which all transactions have been conducted. Whatever we may think of the morality of trading on people's amiable weaknesses for the purpose not only of charity but for that also of the profit of the promoters (which was probably large in the early stages), their skill and honesty cannot be denied. A fourth reason is the threefold publicity the Sweep gets: the turning-on of the limelight on the draw for prizes on a limited number of occasions each year; the world-wide and often *sub-rosa* propaganda on the "charity" theme; and the auditing of the Trust's accounts by Government officers.

Questions and Answers

This very success, however, raises three questions. Is the Sweep right? Is it precarious? What do the hospitals, and the sick poor for whose relief they were founded, and the teaching of medicine which was part of their function, get out of it? As things are, the first question is irrelevant: in contemporary politics the adjective "right" has become so fluid that it possesses either no meaning at all or so many meanings that it does not matter. The second question is a practical one, and can be reduced to the form: Could new similar lotteries licensed in the United Kingdom or elsewhere seduce custom from the Dublin Sweepstakes to a serious extent? The Trust is confident that it could not, and I agree with their main reason—namely, that a solid clientèle of gamblers and well-wishers, without any suspicion of smart-aleckry, has established the position of the Sweep at the top, and that therefore any newcomer is up against a position fortified as by Vauban himself. Philip's ass would have to be very heavily laden with gold to break the prestige-barrier.

There remains, however, the feeling of doubt—our hospitals, our organizers, and our Government are conniving to undermine the laws of Governments otherwise friendly, or even not so friendly. Nevertheless, there is nothing ultimately repugnant here: it is a matter of licensed smuggling, and the only question is which Government smuggles or anti-smuggles best. It is no longer a matter of private charity. Indeed, the net receipts from persons outside the Republic now figure among the Government's guesses about "balances of external payments."

The third question—what do the hospitals get out of it?—is more difficult to answer. At present the Trust, after its accounts for each Sweep have been audited, pays over 25% of the gross takings set aside for the hospitals to Trustees (appointed by the Minister for Health) for the Hospitals' Fund. Control of this sum then passes from the Trust to the Hospitals Commission, also appointed by the Minister, and handsomely remunerated. Since the Act of 1933 this Commission effectively replaces the representative committee of the boards of the participating voluntary hospitals (which all, incidentally,

afforded free medical and surgical treatment, the form of words now used to cover the enormously wider range of institutions now benefiting). The survivor of this original functional committee is still called the Hospitals Committee and is representative, but its functions are confined to making suggestions to the Commission. Subsequently the Commission makes recommendations to the Minister, with whom the final pay-out, through the Trustees, rests. The mode of operation is that associated hospitals go on incurring deficits and financing them to the extent their bankers will permit by overdraft; then they send their accounts to the Commission with a request that their deficits be met in full; the Commission decides what items are admissible, and recommends accordingly to the Minister, who again may disallow certain items.

Instrument of Policy

It is not surprising that the associated institutions—particularly the original partners—have found this arrangement less satisfactory than the large amounts of money involved would suggest. Indeed, they are all still in a state of chronic financial stringency. This arises mainly from the procedure. Though certain policy lines are known beforehand, no hospital has any security that any expenditure undertaken in good faith and inflating its overdraft will be allowed by the Commission and Minister. In the interval the hospitals are meeting resistance from their bankers to a continuous rise in their overdraft limits, particularly as the hospitals' former cushion against this kind of difficulty—namely, their endowments—has been removed by the policy of the Commission and Minister. Moreover, the financial situation is also an odd one. While the hospitals are piling up overdrafts, the Hospitals' Fund is piling up cash, and from the time-lag it must always have a large liquid balance. This balance is a difficult matter to handle economically in any case, and it also offers a temptation to an enterprising Minister. For example, on one occasion £5m. of the accumulated surplus was taken to build local authority hospitals. This incident exemplifies the fact that the Sweep has become an

instrument in the hands of the Minister for enforcing a policy of his own on the hospitals, and the views of the Minister and of the hospital boards may not always coincide on what is best.

Nevertheless, the hospitals have undoubtedly benefited greatly, though the benefit has been diluted by the inflation of the number of beneficiaries (all done by legislation, not by adhesion). They have been enabled, in conjunction with the universities, to pay their regular professional staff on not too bad a scale. Their technical facilities have been greatly improved. Funds from the Sweep, directed mainly at current deficits, have been supplemented by grants from the Exchequer and local authorities for the replacement of plant which had become antiquated during the penury of the voluntary hospitals. The proceeds of the Sweep have clearly helped towards a workable solution for Dublin's primary problem—namely, that the large number of small teaching hospitals (a great virtue 50 years ago) had become an anachronism because of increased specialization and more elaborate equipment. Federation, leading to amalgamation, was an obvious necessity, and the inevitably difficult negotiations were considerably helped by funds made available from the Sweep.

In conclusion, the Sweep has left more questions than answers. Originally it offered the prospect of promoting a specific charitable object without involving the taxpayer. Progressively it has been merged in the general revenue system, not only ostensibly by the Government's seizure of one-quarter of the hospitals' share, but more subtly by the financing from this source of expenditures which the Government would finally have professed itself compelled to undertake anyway at the expense of the taxpayer. So far, so good—let the gambler pay rather than the taxpayer, especially as the bulk of the money comes from outside the Republic. The established position of our Sweep, and its money-spinning capacity, give no clue whatsoever to the prospective success of a similar semi-Government or fully Government lottery in the United Kingdom, aimed at either the limited range of services that obtains in the Republic or widened to include the National Health Service. The fundamental problem is still the ancient one of earmarking one section in a general revenue and expenditure account.

CONFERENCES AND MEETINGS

Research on the Liver: Advances in Diagnosis and Treatment

[FROM A SPECIAL CORRESPONDENT]

The annual symposium of the Colston Research Society was held in Bristol from April 3–7, under the Presidency of Dr. A. M. MACLACHLAN. This year's subject was "The Liver"; the director was Professor A. G. RIDDELL (Bristol) and the annual address was delivered by Professor SHEILA SHERLOCK (London). This was only the second occasion in the history of the Society on which a medical topic was discussed, and among the many contributions from Britain and abroad were papers on newer aspects of diagnosis and treatment.

Techniques in Diagnosis

With Dr. S. J. SAUNDERS (Cape Town) in the chair, a paper by Dr. HANS POPPER (New York) on electron microscopy was read in his absence by Dr. W. J. HARRISON (Bristol). Though as yet electron microscopy of liver biopsy sections had not

improved on diagnosis by conventional light microscopy, it had led to a better appreciation of the interpretation of structural details. Alterations in structure of the viable hepatocytes due to changes in cellular organelles were shown to correlate well with functional indications of liver damage. For example, an early response to injury was an alteration in granular endoplasmic reticulum—the site of synthesis and secretion of proteins—which could be seen after small doses of chemicals and in virus hepatitis. Similarly, damage to cell membranes was reflected by increased permeability to tissue enzymes and their increased activity in the serum. Mitochondrial changes, particularly swelling, were a feature of many types of liver injury and were especially prominent after administration of alcohol. The damaged organelles within the cell became segregated and partially digested, leaving a pigmented end-product which was lipofuscin. Accumulations of lipofuscin therefore indicated to the

pathologist preceding injury of the liver cells.

The smooth endoplasmic reticulum was the site of various enzymatic activities, especially those concerned with detoxification, and administration of drugs such as chlorpromazine and phenobarbitone led to an adaptive increase of processing material. This initially beneficial effect might eventually lead to reduced activity as a result of excess exposure. Such a biphasic response had been observed after the experimental administration of the pesticide Dieldrin, and might explain the variable response to liver-function tests based on detoxification. There was also the possibility that enzymes might be induced which were harmful to liver-cell function, since all drugs which damaged the liver were potent enzyme inducers.

Dr. K. WEINBRENN (London) emphasized that orthodox methods of examining liver-biopsy material were still valuable, and pointed to the recently recognized lesion.