ages ago, just as calciferol has been formed in our own subcutaneous tissues by the bright sunlight of this summer.

CONCLUSION

I have tried to indicate some of the general principles underlying the action of drugs, the difficulties that are encountered in their study, and the problems that have still to be solved. I have not touched on such topics as idiosyncrasy and tolerance. It is still true that to a large extent we have to remain empirical in our use of drugs. In some instances empirical success has been followed long after by a rational explanation, such as the effect of mercury and arsenic in syphilis, ipecacuanha in amoebic dysentery, quinine in malaria, and cod-liver oil in rickets. In others the explanation is still to seek, such as salicylate in rheumatism and colchicum in gout. I am therefore constrained to utter a plea for empiricism, especially as I still remember the scorn of the pharmacologist for the clinical belief in cod-liver oil before vitamins were discovered. And in conclusion I will quote Timme's reminder that "the abysmally ignorant South American savages who gave us cinchona bark for malaria did not even know the formula for quinine."

THE HOUSING PROBLEM WITH SPECIAL REFERENCE TO THE PRESENT POSITION *

BY

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The housing problem, which includes the slum problem, is a highly complex one, and the Acts of Parliament and the Government circulars affecting it are so numerous and have been so often amended or repealed that it is difficult for anyone not specially versed in the subject to keep fully up to date. In this paper it is proposed to deal with the subject as simply as possible on the assumption that most medical practitioners, however interested they may be, have far too many other subjects occupying their minds to be able to devote much time to the intricacies of the housing question. Members of the medical profession—more perhaps than any others—must be fully alive to the evils associated with bad housing, and must necessarily desire to see drastic and far-reaching improvements effected. At the same time, the point of view of the medical profession will be rather different from that of many others who are interested in housing, for doctors see the human side of the problem at close quarters.

A vast amount of money has been spent since the war in the building of houses, yet the housing problem, in so far as the poor are concerned, is still unsolved. The slums and the slum dweller are still with us; a great shortage of houses at rents within the reach of the poor persists, and overcrowding of the worst sort is rife. This leads me to the first point I want to insist upon—namely, that the housing problem to-day is essentially the problem of housing the poor. The medical profession, I feel sure, will heartily endorse this, but until recently it has not generally been recognized or acted upon. I think we may say that it was largely the recognition of this aspect of the case which led the present Government to withdraw, rightly or wrongly, the subsidy under the Act of 1924 (the Wheatley Act) for the building of "ordinary" working-class houses, and, at the same time, to concentrate upon the building of houses for slum clearance.

* Read in opening a discussion in the Section of Public Health at the Annual Meeting of the British Medical Association, Dublin, July, 1933.

THE 1933 HOUSING ACT

The Housing (Financial Provisions) Act, 1933, which has just been passed, is probably, in relation to the importance of its provisions, the shortest Housing Act ever passed. It contains only three sections, one of which is purely formal, fixing the title of the Act. The first section repeals the Wheatley subsidy; the second gives substantial encouragement to building societies by authorizing local authorities and the Government to share with them the risk entailed in advancing a higher proportion of the building costs of new houses than they would otherwise have felt justified in doing. It is hoped that, in practice, this will mean that building societies will be willing to advance up to, say, 90 per cent. of the cost instead of only about 70 per cent. Schemes for building under this arrangement will have to be approved by the Minister of Health, and the houses so built must be "intended to be let to persons of the working classes." Moreover, the houses must conform to an approved standard as regards type and superficial area, and must not (except under very special circumstances) exceed twelve to the acre, while each house must be provided with a bath. The Act makes no new provisions with regard to slum clearance except in so far as the withdrawal of the subsidy on the building of ordinary working-class houses will undoubtedly encourage local authorities to concentrate all their efforts on building houses to replace those demolished in connexion with slum clearance. This, indeed, is the clearly avowed object and intention of the Government.

In Circular 1331, issued on April 6th last, the Minister states:

"In the view of His Majesty's Government the present rate at which the slums are being dealt with is too slow, and they look for a concerted effort between the central Government and the local authorities immediately concerned to ensure a speedier end to the evil, and an end within a limited time. His Majesty's Government are further of opinion that present conditions are favourable to the success of a vigorous campaign of slum clearance."

Local authorities are therefore urged:

(a) To prepare and adopt a programme, the component part of which should be:

- (1) A list of areas in which clearance is necessary, with information of the number of houses to be demolished in each, and of the number of the inhabitants;
- (2) A list of the areas in which improvement by way of reconditioning or otherwise is necessary, with information as in (1) above;
- (3) A time-table of the initiation, progress, and completion of action to secure clearance or improvement, as the case may be, of all these areas;
- (4) A time-table of rehousing co-ordinated with the displacements contemplated by the time-table of clearance operations.

(b) To make an immediate beginning with the programme by the declaration as clearance or improvement areas of such areas as can be immediately dealt with, and by making the necessary orders."

The Minister asks to be supplied with a copy of the programme adopted not later than September 30th next, and he suggests that, as far as practicable, programmes should be so arranged as to be capable of achievement within five years. The circular adds that while slum clearance on a large scale may be necessary only in a limited number of large towns, there are few towns, or even villages, in which there is not urgent need for some action.

The Minister of Health (Sir Hilton Young) has supplemented his departmental documents by personal utterances both in and out of the House of Commons.

Speaking at a meeting of the Chelsea Housing Improvement Society on March 21st, he was reported to say:

"They all wanted to get rid of slums, but the progress made in that direction throughout the country in the past had been wholly unsatisfactory. . . . They had a great opportunity now in the fall of building costs and in the cheapness of money. That would enable them to concentrate the energies of the local authorities and housing reformers on getting rid of the slums and to concentrate the public money available on the same purpose. . . . He undertook that the whole driving force of the Government, both financial and administrative, would be behind the movement to see it through to a conclusion."

These expressions of the Government's attitude towards the slum problem are satisfactory so far as they go. Opinions differ considerably with regard to the withdrawal of the subsidy under the 1924 Act, but now that this is an accomplished fact there is not much object in discussing it. Rather let us consider the present position and opportunity and how to make the most of them.

THE DUAL FACTORS IMPLIED IN THE TERM "SLUMS"

The Government wishes local authorities to concentrate on the slums. That at once raises the question—Just what do we mean by "the slums"? There is no official definition of the term, and it is not used, so far as I am aware, in any Act of Parliament. Yet it is used so glibly and so frequently that it will be well to make sure just what we do mean by the term. The earlier dictionaries do not mention the word "slum," which, indeed, is of comparatively modern origin. Thus it is not mentioned in Dr. Johnson's dictionary, early nineteenth century, or even in the *Imperial Dictionary* published in 1878, but it is mentioned in *Stormonth's Dictionary* published six years later. Webster's *New International Dictionary* (1927) defines a slum as "a foul back street of a city especially with a slovenly and often vicious population," while the *Universal* (1932) says it is "a street or area which is in an insanitary, dirty, dilapidated and neglected condition, inhabited by the poorest and most thriftless of the population, and usually greatly overcrowded." The *Oxford (Shorter) Dictionary* (1933) gives "a street, alley, court, etc., situated in a crowded district of a town or city and inhabited by people of a low class or by the very poor."

Practically all dictionaries specifically include two distinct factors in their definitions: (1) the character of the houses and their environment, and (2) the character of the inhabitants. I want to stress here the importance of the second or human factor, because sometimes when the slum question is being debated this second factor is overlooked, especially by those housing reformers who are not also sociologists. Speaking as a medical officer of health, I say, frankly, that I regard the human factor—the slum dweller—as of even greater importance than the slum dwelling, just as flesh and blood is of more importance than bricks and mortar. Certainly it is the factor which presents by far the greater difficulty in dealing effectively with the slum problem. Thus, it is easy to pull down slum houses; after the necessary formalities have been complied with, a gang of workmen will soon do the job. But to secure that the slum dwellers will be permanently housed under decent conditions is a much more difficult task to accomplish.

OVERCROWDING

Another point I wish to stress is that one of the worst features of the slum problem is overcrowding. This, of course, is only one aspect of the human factor. The common cause of overcrowding is the large family, which is so much more common among the poor than among the well-to-do. Poverty is another feature of slum life, and

so is squalor; the latter, indeed, may be regarded as a chief characteristic of the true slum. Not all slum dwellers are overcrowded or in poverty and squalor, but these three factors are far more common in the slums than elsewhere. Large families, poverty, and overcrowding work in a vicious circle, sometimes one and sometimes another being the primary cause. The statement that large families are a cause of poverty needs qualifying. This is only so while the children are dependent; when they are old enough to work they add materially to the family income, and so become an asset and diminish poverty. They continue, however, to be a prime cause of overcrowding, which becomes more serious as they grow older and reach adolescence.

HOUSE SHORTAGE

Overcrowding in the slums is greatly intensified by the shortage of houses to let at rents within reach of the poor. As to the reality of that shortage there is no doubt at all. The reports of medical officers of health all over the country tell the same story. How can we account for this shortage in view of the fact that nearly two million (1,956,782) new houses have been built in England and Wales since 1919? (This is exclusive of well-to-do houses of a rateable value above £78, or £105 in the metropolitan area.) The population of the country has not increased to any great extent—by just over two millions between 1921 and 1931—and the number of houses pulled down is altogether too small to have made any great difference.

An explanation is to be found in the detailed returns for the last census for such districts as have already been published, and doubtless the same will be found to apply to the country generally. Although the actual population has not increased very much the *number of families* has increased substantially. True, the average size of the family is smaller, due to the reduced birth rate, but as each family, even though smaller, needs a separate house, we have here a simple explanation of the continued shortage. As a concrete example of how this works in practice, take the case of my own city, Leicester. During the intercensal period the actual population only increased by 5,026 persons. Allowing, say, 3.6 persons to a house, this increase would call for 1,396 new houses. In view of the fact that the number of dwellings in Leicester increased during this period by 7,764, one might well have thought that the housing shortage would certainly be very much less in 1931 than it was in 1921. But the average size of the family in Leicester was only 3.6 in 1931 as compared with 4.3 ten years before, and the number of separate families increased by 7,968, or two hundred more than the increase in the number of separate dwellings. So that the pressure of families on houses in Leicester was actually greater in 1931 than it was ten years earlier. No doubt what has happened in Leicester is paralleled in other cities, for the fall in the birth rate and consequent reduction in the size of the family is universal.

EFFECT OF THE GOVERNMENT'S PRESENT POLICY

It is quite evident that merely to build houses to replace those which are pulled down will not increase the number of houses available, so that this part of the Government's programme will do nothing to relieve the shortage of houses, and, consequently, will do nothing to relieve overcrowding except as this occurs in the actual houses demolished. But overcrowding, as everyone knows, is by no means confined to slum areas. It is often to be found in quite good houses when these have been let off as tenements. It is very much to be regretted that the 1930 Housing Act makes no provision for the rehousing

of *individual* cases of overcrowding. Houses built to replace insanitary ones rank for subsidy, but this does not apply to overcrowded houses, although, as already urged, this really constitutes one of the worst features of the slum problem. This is a most unfortunate omission—whether accidental or intentional I do not know—but if the Government really wants to deal with the slum problem effectually, it certainly must encourage local authorities to deal with overcrowding, and while a shortage of houses exists it is quite impracticable for them to do so unless they can offer overcrowded families alternative accommodation. It is futile to take legal proceedings against overcrowded families so long as there is no alternative accommodation available.

The Government expects great things from Section 2 of the new Act, under which building societies will, it is hoped, be willing to advance another 20 per cent. (90 per cent. instead of 70 per cent.) for houses built to let to the working classes. But the secretary of the National Housing and Town Planning Council (Mr. J. G. Martin) has recently shown that the gross rental (including rates) of a three-bedroom house to be built by the building societies will almost certainly be beyond the reach of the lower-paid wage-earners. His figures are as follows:

The all-in cost of a three-bedroom, non-parlour house, with land, roads, and sewers, may be taken to-day as £350, although this figure leaves very little margin. On this sum the annual loan charges—that is, interest and sinking fund, for repayment in thirty years at 4 per cent.—would be £20 4s. 10d.; repairs, management, insurance, and empties, £6; rates, at 13s. 4d. in the £, £7 6s. 8d.; making a total of £33 11s. 6d.

This is equivalent to about 13s. per week, which is certainly too high for a working man, with a family, whose wages are under, say, 50s. per week. Indeed, local authorities have, in the past, been urged by the Ministry to concentrate on the building of small houses which could be let at 10s. a week (including rates), or less. It certainly looks, therefore, that whatever houses may be built to let by the help of the building societies, they will not be within reach of the poorer sections of the community. Yet, as we stated earlier in this paper, the housing question to-day is really the question of housing the poor.

THE CLAIMS OF THE CHILDREN

No solution of the slum problem will be satisfactory which ignores the special claims of the children. Children comprise that section of the community which is most in need of good housing; they suffer most from bad housing conditions. Moreover, as the children are the plastic material from which the next generation is being moulded, it is very bad policy not to give priority to them. The most serious charge which can be brought against the housing policy of the nation, since the building of subsidized houses was begun after the war, is that a considerable number of municipal houses have got into the hands of people with no children, or with only very small families (one or two children), while so many big families have been left to languish in the slums. The difficulty has been largely an economic one. The man with the large family has a smaller margin for rent than the man with a small family, and, so long as municipal houses were let on a flat-rent principle, the man with the large family was at an obvious disadvantage. Even when he was successful in having a municipal house allotted to him, he very frequently found that he could not afford to pay the rent, especially if he was short of work, and so he drifted back to the slums whence he came. Often he was allowed to effect an exchange with someone anxious to obtain a council house and better able to afford it—that is, with someone having fewer children or no children at all.

Under the 1930 Act, where houses are provided in connexion with slum clearance, the practice of differential rents has become general, and under such a scheme the number of dependent children necessarily has to be taken into consideration when fixing the rent. This has, to a large extent, removed the handicap on the man with a large family. One could wish that the same system could be applied to existing municipal houses whenever they fall vacant. Housing departments are afraid of differential renting, thinking it will entail a great deal of work and unsettle existing tenants. But surely this need not necessarily be so, especially if the scheme takes the form of granting temporary rebates while leaving the standard rent unchanged. All who are qualified to receive the rebate, whether on account of the large number of dependants or the smallness of the family income, should have it. On the other hand, those who do not need assistance should no longer go on occupying a subsidized house, or, if they do not wish to move, they should pay the full economic rent—that is, the rent at which their house could be let on the open market. Such a change would no doubt cause a little grumbling at first, but its essential fairness is so obvious that any discontent would soon subside. People who have enjoyed the subsidy for years have no cause to complain if, when their circumstances improve, they are asked to let someone else have a chance. Something of this sort is essential if we are to make the greatest possible use of existing municipal houses.

METHODS OF SLUM CLEARANCE

There are three alternative methods of clearing the slums.

1. *Clearance Area Procedure.*—This is intended only for the really black areas, where practically all the houses are bad. All houses in the area have to be demolished.

2. *Improvement Area Procedure.*—This is intended for areas where some of the houses are capable of being improved, repaired, and made fit. In both these methods special schemes have to be prepared and approved by the Ministry of Health. Many formalities have to be complied with, and much time is taken up before a scheme can be carried out.

3. *Individual House Procedure.*—This is much the simplest and least expensive method, individual houses being dealt with under Section 17 (repair and reconditioning) or under Section 19 (demolition). For many towns probably the bulk of the work of clearing up the slums will be effected by this method. Unfortunately, as already pointed out, no subsidy is available for houses built to relieve "individual" overcrowded houses, but only for overcrowding occurring in an area. The sooner this is rectified the better, if the slum problem is really to be dealt with.

No landlord wants unsatisfactory or "difficult" tenants, and municipal landlords (that is, housing authorities) are no exception. But such tenants constitute the worst feature of the slum problem. Therefore we shall not really solve the slum problem until we have devised means for dealing with the unsatisfactory and "difficult" tenant.

CONCLUSIONS

1. The housing problem to-day is essentially the problem of housing the poor. In the past the needs of the poor have not been adequately catered for.

2. The new (1933) Housing Act has only two sections. The first abolishes the subsidy for "ordinary" municipal houses, and the second offers encouragement to the building societies. The Government hopes by the first to concentrate municipal efforts upon the clearance of slums, and by the second to secure the building, by private enterprise, of working-class houses to let. Opinions differ as to the wisdom of the first provision; while with regard to the second, it is

improbable that the houses to be built will be let at less than 13s. a week, which will usually be beyond the reach of the poor.

3. There is no official definition of the word "slum," but dictionaries concur in giving two factors in the making of a slum: (1) the character of the building—the slum dwelling; and (2) the character of the occupant—the slum dweller. From the medical point of view, the second, or human, factor is probably of greater importance than the first.

4. Overcrowding—an aspect of the human factor—is one of the worst features of the slum problem. We shall not really solve the slum problem until we can deal effectually with overcrowding. It is a serious defect of the 1930 Housing Act that while it makes provision for dealing with the "individual" insanitary house, it makes no provision for dealing with "individual" cases of overcrowding. Overcrowding can only be dealt with under the Act when it occurs in a clearance or improvement area, and many bad cases of overcrowding occur outside such areas.

5. In any attack on the slum problem the claims of the children should come first. It is a waste of municipal resources to allow three-bedroomed municipal houses to be occupied by people without children.

6. People with large families of dependent children constitute the class whose housing need is greatest, but whose margin for rent is smallest. To enable this class to take proper advantage of municipal houses some system of differential renting is essential, preferably by means of temporary rent rebates based on an approved scale.

7. To compensate for the loss in rental consequent on these rebates, such municipal tenants as no longer really need to be subsidized should be called upon to pay the full economic rent.

VALLECULAR DYSPHAGIA

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(With Special Plate)

The elucidation of the causes of dysphagia arising in the lower pharynx has always presented difficulties. Following the perfection of the indirect laryngoscope during the past fifty years, gross, neoplastic and ulcerative lesions of the lower pharynx and upper oesophagus have been recognized. But there still remained a large number of undiagnosed cases which were termed "functional dysphagia" and "globus hystericus."

Within recent years, owing to the advances in radiological technique and the more universal use of peroral endoscopy, hitherto unrecognized causes of such dysphagia have been described—for example, spasm of the cricopharyngeus muscle, post-cricoid webs and strictures, exostoses of the cervical vertebrae, etc. Recently Dr. R. R. Woods¹ reported a case which he had called "vallecular dysphagia." His case was that of a man, aged 54, who gave a history of eighteen months' dysphagia. Investigation showed that, on swallowing, masticated food filled the patient's valleculae, so that his epiglottis was forced backwards against the posterior pharyngeal wall, impeding breathing and causing dysphagia. This report threw light on a number of unexplained cases of dysphagia which have been seen by the present writers during the past five years. These latter cases showed no lesion by direct or indirect examination of the pharynx, larynx, or oesophagus, but, on careful radiological examination, "hold-up" and abnormal passage of the opaque material in the lower pharynx was observed. These contradictory findings were explained

by Dr. Woods's report, and, although the present observers' cases exhibited less violent symptoms, they are convinced that their patients' complaints were caused by a similar mechanical abnormality, and that the condition described below under the title "primary vallecular dysphagia" is a definite entity of not infrequent occurrence, and one which may easily, but erroneously, be attributed to a "functional" disorder.

ANATOMY OF THE VALLECULAE

The valleculae are two fossae situated in the anterior aspect of the lower pharynx, between the pharyngeal portion of the tongue and the epiglottis (Fig. 1). They are bounded

FIG. 1.—Pharynx opened from behind. (Modified from Cunningham.)

anteriorly by the base of the tongue covered with lingual tonsil. The mucous membrane of this region of the tongue passes to the anterior surface of the upper free half of the epiglottis, forming the floors of the two depressions. The fossae are separated from each other by a prominent fold of mucous membrane—the glosso-epiglottic fold. Laterally they are bounded by less prominent ridges of mucous membrane—the pharyngo-epiglottic folds—which pass from the free lateral borders of the epiglottis to the lateral pharyngeal walls. Between each of the two layers of mucous membrane which constitute these three folds there is a small amount of elastic tissue. The floors of the valleculae lie immediately above and behind the hyoid bone, at the level of the third cervical vertebra (shown in Fig. 2), and sometimes the cornua of the

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 2.—Diagram of normal pharynx (resting).

FIG. 3.—Diagram of Phases 1, 2, and 3 in deglutition. Nasopharynx shut off by Passavant's ridge. Mouth closed—larynx raised and closed—pharyngeal cavity obliterated—epiglottis and vallecula compressed.

FIG. 4.—Diagram of Phases 4, 5, 6, and 7 in deglutition. Nasopharynx, mouth, and larynx closed—negative pressure in pharyngeal cavity—larynx dropped. Laryngo-pharynx remains high up—food sucked into pharynx and oesophagus not touching epiglottis.

hyoid bone are visible through their mucous membrane. Indirect laryngoscopy shows that in a small number of cases the fossae may be partially or completely hidden by the base of the tongue, and that they vary very much in depth in different individuals. Their mucous membrane is less red in colour than that of the surrounding structures, and it may be tightly stretched, crinkled, or even raised by large veins into prominent ridges. The valleculae are developed in the third cleft, between the field formed by the fused ventral ends of the second and third arches in front, and the central mass of the central end of the fourth arch behind. Their sensory nerve supply is derived from the third and fourth arches—that is, the glosso-pharyngeal and the superior laryngeal nerves. The writers have been unable to find any record of developmental abnormality occurring in this situation.