

British Medical Journal.

SATURDAY, NOVEMBER 29TH, 1913.

THE REFORM MOVEMENT AT OXFORD AND CAMBRIDGE.

At one period—not long past—in the history of the Universities of Oxford and Cambridge, a discussion of any question of reform would have left those concerned with the study of natural science and medicine, as such, cold and unresponsive, for they would have held that the questions involved affected mathematics, philosophy, theology, or classics mainly, though they might have entered with enthusiasm into a discussion as to the place and value of these subjects in a university curriculum. Medicine and natural science then played so small a part in the work of the universities that any question of university reform could have had little interest for medical men. This attitude is no longer tenable, and is not maintained by those interested in medical education, for both Oxford and Cambridge are now the seats of medical schools possessing an importance not to be measured adequately merely by the number of students attending them. At neither school has the clinical portion of the curriculum been greatly developed, though facilities for a more or less complete medical curriculum have for some time past been in existence at both. With the development of the study of the natural and physical sciences, and in proportion to the number of men studying at each university, the application of these sciences to medicine has come to be a very important factor in the work of its students, and it is now recognized that both at Oxford and Cambridge the schools have assumed the function of providing a thoroughly scientific foundation for those students who intend to study and to practise medicine.

“At a university,” said Von Humboldt, “knowledge is fermenting in a large number of powerful, active, youthful heads. Its progress is quicker and more lively” (than in an academy of science or art). “In fact, knowledge cannot be communicated as knowledge without being on each occasion actually conceived anew, and it would be incomprehensible if one did not here and there—indeed, often—stumble on discoveries. University teaching, moreover, is not so burdensome as to be an encroachment on the leisure for research; rather does it serve as an aid to it. Moreover, at any great university there are always men who lecture little or not at all, but who study and research in solitude.”

In an essay, well conceived and clearly written, which Mr. Tillyard, of St. John's College, Cambridge, published recently,¹ special stress is laid on the teaching functions of the university, and it is with this aspect of the question that the reforms he suggests would deal. He has traced the history of the two universities, showing the method of their development and of the forces that have played a part in moulding the studies in each.

¹ *A History of University Reform from 1800 to the Present Time, with suggestions towards a complete scheme for the University of Cambridge.* By A. I. Tillyard, M.A., St. John's College, Cambridge. Cambridge: W. Heffer and Sons, Ltd. 1913. (Demy 8vo, pp. 408. 10s. net)

He believes thoroughly in the value of the collegiate system, if properly controlled and organized, but he is evidently of opinion that the distinctive features of the university in its professorial and collective work have unfortunately been overshadowed by the colleges; they have, he holds, gradually arrogated to themselves powers and functions which at their foundation were never contemplated by their founders or by the university. He maintains that much of the collegiate work would be better done in larger classes, where there is more spirited competition; he thinks that collegiate work has a great tendency to become repetition and coaching work, and that the larger outlook is lost. It is acknowledged that men in college help to educate one another and to form character, that the personal tutorial influence may be very great, that the tutor may give explanations and help men over difficulties, and generally simplify their studies by personal contact in a way that cannot be done in larger classes. On the other hand, it is maintained that the duplication of prelections on the same subject in different colleges leads to a waste of energy and of influence, and to financial extravagance that keeps the university exceedingly poor. This, of course, is merely a general statement of the views of the author, but those who apply themselves carefully to a perusal of the facts and arguments he has marshalled will rise from their study with a conviction that records and facts justify the author in his conclusion that the whole question of the relations of the colleges to the university and of tutorial instruction to professorial teaching calls for very careful and extended consideration.

It will, we think, be admitted that Mr. Tillyard has made out a case for inquiry, either internal or external. It does not come within his scope to suggest how far the preliminary scientific medical training can be brought into line with the training given in other fields of knowledge; but it is exceedingly interesting to note that at Cambridge there is a gradual removal of the scientific laboratories from the colleges and a concentration of the work in the university schools and laboratories; whilst in Oxford, where the medical and science schools are younger and as yet not so fully developed, some colleges have founded laboratories of their own instead of concentrating their energies and finances on those of the university. Mr. Tillyard evidently believes in the Cambridge plan, and his essay may be heartily recommended to the careful study of old Oxford and Cambridge men; in fact to all who are interested in university education. The author is no laudator of the old at the expense of the new, but he expresses the conviction that the ancient universities have high functions of their own, which can be developed only as time goes on, and then in all probability but partially by most of the newer universities; each of these has come into existence to meet the requirements of a locality rather than the needs of a nation.

THE ETIOLOGY OF PELLAGRA.

At the eighth meeting of the Italian Pathological Society, held in Pisa last spring, Professor A. Perroncito of Pavia presented an excellent summary¹ of the views at present held as to the etiology of pellagra, dividing them into three main classes—the zeistic, the toxic-zeistic, and the parasitic.

The zeistic theories suppose that pellagra is due to poisoning by maize (*Zea mais*). Lussana, Strambio,

¹ *Lo Sperimentale*. Florence, 1913, lxxvii, suppl. al Fasc. iv, 94-142.

and Albertoni held that the patients were underfed, and hence developed pellagra. This view, however, does not explain cases of pellagra appearing in persons with a demonstrably adequate diet, nor the absence of pellagra in underfed communities that do not consume maize, nor the periodicity of pellagra; though it must be admitted that an exclusive or semi-exclusive diet of maize is inadequate (Tullio), and that pellagra increases or diminishes in proportion as the economic condition of a district gets worse or better. The argument that pellagra is absent from many of the poorest districts of Italy seems unanswerable. It was suggested by Zuntz that sound maize contained toxic substances, and so might give rise to pellagra. Experiments made upon animals have shown in some cases that sound maize alone cannot keep them in health; acute and chronic gastro-enteritis and loss of hair may occur in guinea-pigs, but rats did well for as long a period as a year, whether the maize they were given was sound or not. Rabbits gave results similar to those obtained with guinea-pigs. But in the case of man, several Italian workers have found that grave changes in the metabolism are not characteristic of pellagra; sound maize does contain toxic substances, but their relation to pellagra is not yet known. A toxic theory of pellagra would not explain the epidemiological facts—why pellagra is distributed irregularly about districts with a uniform consumption of maize; why pellagra is worse in spring and shows periodicity; why the patients may relapse years after giving up maize. A recent theory enunciated by Aschoff, Haussmann, Horbaczewsky, Raubitschek, and others, supposes that it is a photodynamic disease; the fatty and colouring matters of maize are believed to sensitize the tissues to the action of light, and so to give rise to the skin eruptions. This theory lacks support, and would not explain the common occurrence of new cases in February and March, when the sun's rays are weak. De Giaxa and others have found that *Bacillus coli communis* acquires particularly toxic and virulent properties in the intestines of animals fed on maize; if the animals die, death is due to the absorption of these toxins from their intestines. But these experiments do not prove that pellagra is due to *B. coli* intoxication, though, of course, it may be a factor in the disease.

According to the toxic-zeistic theory originated by Sette and Balardini, and now associated with the name of C. Lombroso, pellagra is the effect of an intoxication by poisons developed from spoilt maize by the action of bacteria that are in themselves harmless to man. The general facts in support of some such theory are as follows: Pellagra appears, not in proportion as the use of maize extends, but in proportion as the maize used is injured by damp; the similarity between pellagra and other intoxications (for example, by lead, arsenic, alcohol); the fact that a disease similar to pellagra can be produced in animals by the use of extracts of spoilt maize; the evidence pointing to an intoxication of the cerebro-spinal and sympathetic nervous systems in pellagra; the possibility of controlling pellagra by preventing the consumption of spoilt maize, and of curing it by substituting good maize for bad. Lombroso himself has seen places in which spoilt maize was consumed but no pellagra occurred, and Perroncito states that it is extremely difficult to obtain trustworthy and full statistics of the prevalence of pellagra. It appears that spoilt maize is spoiled by infection with the hyphomycete *Penicillium glaucum*. Lombroso claimed to have produced a mild pellagra in twelve persons given alcoholic extract of spoilt

maize for ten to thirty days. But a scientific commission appointed to control his observations was unable to agree that his experimentally produced disease was pellagra. Lombroso then began experiments with extracts of putrefied maize, isolating a particularly active substance which he called pellagrozein, an alkaloid, which produced in animals a disease like pellagra. But no man eats putrid maize, and the toxin is so weak that not less than 90 kilograms of putrid maize, at one meal, would be required to produce toxic symptoms. Perroncito concludes that Lombroso's work has been an "admirable humanitarian apostolate," but has not proved that pellagra is due to spoilt maize. The view that spoilt maize might carry with it into the intestine microbes that would there develop toxins and so cause pellagra has been worked out by Monti, Tirelli, Pellizzi, Gosio, and others; *Penicillium glaucum* in particular has been indicated, and the toxin has been thought to be a phenol—possibly parahydrocumaric acid, $C_8H_{10}O_3$. But none of the work has proved that any connexion actually exists between pellagra and poisoning by the products of these bacteria or fungi. Antonini and Mariani have found the serum of pellagrous persons unusually toxic to animals; while the serum of a person cured of pellagra was found to contain an antibody neutralizing the toxicity of such serums. Volpino has shown that the pellagrous show a marked reaction of hypersensibility when injected with watery extract of spoilt maize, while normal persons do not; Volpino calls the active substance "pellagrogenin." At first he found that similar extracts of sound maize produced no such reaction in the pellagrous; recently, however, he has found the opposite. At the present time all efforts to find precipitin reactions or deviation of complement in pellagra have failed.

Of the parasitic theories, Perroncito considers in detail only those of Ceni, Tizzoni, Sambon, and Alessandrini. Ceni believes that pellagra is an infection with *Aspergillus fumigatus* or *A. flavescens*, or, rarely, with both; later he added *Penicillium glaucum* to the list as especially active in the chronic cases of pellagra. The fungi form spores in the intestine; these spores travel to various tissues—pleura, meninges, pericardium, lungs—and there produce toxins that cause pellagra. Maize free from these aspergilli does not produce pellagra. Ceni produces no evidence for this migration of spores about the body, and it is hard to understand how spores could produce large amounts of toxins; in his earlier work he grew the spores from the tissues of 42 out of 50 autopsied patients, but he now pays little attention to this line of research. His toxin, again, is a very feebly toxic substance.

-- Tizzoni attributes the disease to the pleomorphic *Streptobacillus pellagrae*, which he has described in detail; he finds it in the circulating blood (taking 10 c.cm.) of pellagrous patients, in the faeces of chronic cases, in spoilt maize, and, recently, in the milk of a pellagrous woman. It is pathogenic to various kinds of animals. It is a highly polymorphic microbe, and its unity has been denied by Bravetta. Perroncito failed to find it in the blood of 20 severe cases of pellagra, and other investigators have been equally unsuccessful. It appears to produce no immunity reactions in the pellagrous. Recently Tizzoni has come to the conclusion that his streptobacillus is a pleomorphic form of a fungus, perhaps an actinomyces. The researches of Sambon, conducted in Italy and other countries, have led him to conclude that maize has nothing to do with

pellagra; that pellagra has a definite topographical distribution; that its endemic foci may remain unaltered for at least a century, and are closely connected with running water; and that a blood-sucking insect (*Simulium*) probably conveys it. At one time he thought the parasite might be a trypanosome, later an ultramicroscopic virus. Perroncito gives the *pros* and *cons* here at some length. He estimates that from 90 to 99 per cent. of the pellagrous feed mainly on maize, and considers it impossible to exclude maize from the possible causes of pellagra; he states that pellagra undoubtedly occurs in the absence of running water and in places where *Simulium* is not to be found.

He believes that Sambon's views may be correct; but that as the parasite itself is still unknown to us, and the position of its carrier, *Simulium*, is still unproven, no more definite judgement can be passed upon them at present. The view of Alessandrini is that pellagra is due to an infecting agent in drinking water; he says that pellagra is absent where clear running water is drunk, present where standing or stagnant water is consumed, and disappears or extends in proportion to the care or want of care shown in safeguarding the water supply. He concludes that the infecting agent is neither bacterial nor protozoan, and has no intermediate host, but is a filaria; he has found larvae of the filaria in stagnant waters, and filarial ova in the skin of pellagrous patients. But Fratini and others have tried without success to trace any connexion between drinking water and pellagra in various parts of Italy. Again, the filariae are generally considered to be obligatory parasites, and to have an intermediate host; and Perroncito himself has for five years been looking for objects like their ova in the tissues of pellagrous patients, but never with success. Quite recently Long has attributed pellagra to an infection of the intestine by an amoeba.

Perroncito concludes his report by saying that destructive criticism has been his chief function in its composition. He points out that the present successful legislation against pellagra has been based on the toxic-zeistic theories, and that there can be no doubt about the toxicity of spoilt maize. A maize diet and poverty are, he considers, two of the most important factors in the etiology of pellagra; the disappearance of poverty (*miseria*) brings about the disappearance of pellagra.

THE ASYLUM SERVICE.

A MEETING of assistant medical officers of the public asylums in the Midlands of England was held in Birmingham on November 18th, when, in view of the widespread dissatisfaction owing to the disabilities under which assistant medical officers laboured, it was resolved to form an Association of Assistant Medical Officers of the Midlands of England for the protection of their interests. A provisional committee was appointed and a guarantee fund of £100 raised. Dr. F. J. Stuart, Berry Wood, Northampton, undertook to act as provisional secretary, and it was arranged to hold meetings of assistant medical officers in other parts of the country. The arrangements at present made are that a meeting of assistant medical officers in the North of England and North Wales shall be held at the Midland Hotel, Manchester, on Wednesday next, December 3rd; another for the officers of the West of England and South Wales at the Royal Hotel, Bristol, on Thursday, December 4th; and a third for London and the South-East of England

at the Westminster Palace Hotel, London, on Friday, December 5th. All the meetings will begin at 3 p.m.

Two years ago the Medico-Psychological Association of Great Britain and Ireland appointed a special committee to consider the status of psychiatry as a profession in the United Kingdom and the reforms necessary in the education and conditions of service of assistant medical officers. In October last the committee of the Durham County Asylum, as was noted in our columns at the time, sent a circular letter to the county asylums authorities of England suggesting that a conference of representatives of these authorities should be held to discuss the present position of the asylum medical service and to formulate a scheme for its improvement. The circular letter made reference to the difficulty experienced in obtaining medical men to fill the junior branches of the asylum medical service, and pointed out that this difficulty might be attributed to the greater attractiveness of the public health, school, and tuberculosis medical services. In commenting on the matter at the time we observed that, if a proper class of medical men was to be obtained for the asylum service, it was necessary that the conditions should be such as to ensure to every member of it "freedom to live a normal life, with opportunities for making himself efficient in his specialty, and of advancing our knowledge of it, and with a reasonable prospect of attaining a position of greater freedom and responsibility when he has proved himself worthy of promotion." Shortly after this article was published, the interim report of the special committee of the Medico-Psychological Association was issued in the *Journal of Mental Science*. The annual meeting of the Medico-Psychological Association, after discussing the report, directed that copies should be forwarded to the Lord Chancellor, the Home Secretary, the Lord Chancellor's Visitors, the Commissioners in Lunacy, and the governing bodies of asylums, licensed houses, and registered hospitals.

The report was divided into three parts, in each of which the conditions in this country were contrasted with the methods adopted in other countries. The first part of the report dealt with the absence of proper provision for the early treatment of incipient and undeveloped cases of mental disorder; the second with the inadequacy of the facilities available in this country for the study of psychiatry and for research; and the third with the unsatisfactory position of assistant medical officers in respect to professional status, the prospects of a career, and the conditions of asylum service. In this third part of the report it is observed that the appointments in this country are made by lay committees, which, though genuinely desirous to appoint the best candidate, are in most cases without expert advice, and without adequate knowledge of the factors involved, so that their action has generally been haphazard, and often dependent upon considerations having little relation to the actual claims and qualifications of the candidate. The report stated that there was no general standard of requirements for candidates, but during the discussion it was noted as a favourable omen that candidates were now presenting themselves who had obtained the special diploma. The Committee reported that with comparatively few exceptions a junior medical officer obtained promotion only in the asylum in which he began his work, and that in many asylums promotion was altogether arrested by the failure of the seniors to get appointments elsewhere. In Germany, France, and America

State services exist, and the facilities for interchange between the various asylums is therefore considerably greater than in this country. In France appointments to the lunacy service are made after examination, and further examinations must be passed before promotion. In Germany, where a satisfactory examination in psychiatry must be passed in order to obtain a degree in medicine, appointments to the asylum service are made without further training or examination, but an assistant physician receives a higher initial salary if he has had post-graduate training in a clinic; medical officers are appointed in the first place for a probationary period of one to three years, and only become members of the regular staff if their work has been satisfactory.

In dealing with the lack of attractive posts in this country, the report stated that only a minority of those who entered the service could hope to reach the position of superintendent, and that there were very few well-paid appointments available for those specially qualified to carry on scientific investigation and research. The ratio of the salary of a senior assistant medical officer to that of the superintendent is generally low; he is frequently forbidden to marry, and has but little autonomy and independence. In many countries the senior assistant medical officer has a considerable degree of autonomy and independence, and the ratio of his salary to that of the superintendent is high—5 to 7 in some asylums in Germany. In America from one-half to one-third of all assistant medical officers are married. In Germany marriage is generally permitted after the period of probation has been passed, and if a house is not provided on the asylum estate the medical officer is allowed to live out. In 104 German asylums with a total medical staff of 636, married quarters are provided for 320 men, and 222 are actually married. Finally the report dwelt on the tendency of routine to kill enthusiasm, since the promotion or advancement of a medical officer depends very little upon his knowledge of psychiatry, and the work assigned to junior medical officers is "in the majority of cases monotonous, uninteresting, and without adequate responsibility." In Germany junior medical officers are expected to take up some particular line of study in addition to their routine work, and special study leave—often with financial assistance—is given. The prospects of promotion are influenced by their energy and success in such work.

The genesis of the report clearly shows that the medical superintendents of lunatic asylums in this country are in sympathy with the aspirations of assistant medical officers, and further evidence of this is afforded by the fact that Dr. Bedford Pierce, medical superintendent of the Retreat, York, who is chairman of the committee, has expressed his satisfaction at learning that meetings of assistant medical officers of public asylums are being held to discuss the problem.

A more severe indictment of the existing system than is contained in this report it would be difficult to frame, for its concluding words are that the existing system "leads to the stunting of ambition and a gradual loss of interest in scientific medicine, and it tends to produce a deteriorating effect upon those who remain long in the service." We can add nothing to this strongly worded condemnation except an expression of agreement with the opinion that the statement of facts submitted demands the earnest attention of public authorities and all interested in the welfare of the insane.

THE SPECIAL REPRESENTATIVE MEETING.

THE business of the Special Representative Meeting which is to meet in London on Thursday next, December 4th, is mainly financial. Before the last reorganization the annual receipts of the British Medical Association showed a very substantial balance over expenditure. The savings accumulated year by year amounted in 1902 to the substantial reserve of £92,000, practically all invested in the valuable freehold site at the corner of Agar Street, in the Strand. In that year the members of the Association decided greatly to increase their political activities. A number of standing committees were called into existence, and a Medical Secretary with a clerical staff appointed. This had a two-fold effect on the financial position of the Association: it added materially to its annual expenditure, and it was found necessary to provide larger office accommodation for the committees and the staff of the new department. This was done at a cost of about £45,000 by pulling down the old premises, which consisted of one large house in the Strand and four small houses adjoining in the side street, and erecting on the site thus cleared an entirely new building, part of which has been let off. It was expected that these increased activities would bring a large accession of members, and this expectation was to a considerable extent fulfilled; but experience proved that expenditure increased still more rapidly. The receipts in 1902 amounted to £45,000, and the expenditure to £40,500, affording a surplus of £4,500. Had a surplus of about this amount been obtained in subsequent years the Association would have been in a position to pay off the whole debt on the new buildings within the next five years or so. But in 1910—that is to say, before the Insurance Bill was introduced—the annual surplus was only £2,000, and, having regard to the debt of £45,000 to the bank, the position even at that time caused anxiety to the Treasurer and to the Council. With the introduction of the Insurance Bill and all that it entailed expenditure went up by leaps and bounds, so that the expenditure of the Association in 1912 was £81,800—more than double what it was in 1902—while the actual income was only £66,000. This deficit of nearly £16,000 was met as to £7,000 by a vote from the Insurance Defence Fund, and as to the remaining £9,000 by trenching on the reserve. It is quite clear that this cannot go on. Something must be done, and the alternatives are a diminution of activities or an increase of income. It had been hoped that the balance might be adjusted by the practice of rigid economies without any diminution of activities. The enthusiastic labour of two industrious special committees appointed for this purpose and the solicitous care of the Treasurer have not been without fruit, but their efforts to attain a satisfactory equipose in this way have been frustrated by political events and by the demands of members expressed in the Divisions and through the Representative Body for yet greater efforts, and more efficient and extensive organization, demands which all necessarily imply expenditure. The Annual Representative Meeting decided by the requisite two-thirds majority that the time had arrived when the annual subscription should be raised, and after some alternative sums had been mentioned, it decided that the annual subscription should be raised to 2 guineas, but that the change should apply only to members resident in the British Isles. In some of the Dominions members already pay a higher subscription than home members. The decision of the Annual Representative Meeting involves an alteration in the by-laws, and the primary reason for calling the Special Representative Meeting next week is to discuss and, if approved, to adopt a new by-law fixing the annual subscription for members residing in the British Islands at two guineas. At the Annual Representative Meeting a report of the State Sickness Insurance

Committee was presented by the Council recommending the establishment of a fund for the better organization of the medical profession, and for the provision to members of that fund of certain insurance advantages. The meeting decided not to take any decisive action until the scheme had again been submitted to the Divisions; the proposal, and an alternative scheme, were published in the SUPPLEMENT for November 1st, and will also be submitted to the Special Representative Meeting. The third topic for its consideration is a report by the Council on various matters relating to the Insurance Act (SUPPLEMENT, November 1st, p. 367). The main recommendations have reference to medical referees, the unallocated funds, the means to be taken to check the extension of medical aid institutions, and the promotion of the interests of members who have not entered into agreements with Insurance Committees. The Annual Representative Meeting at Brighton instructed the Council to take the steps necessary to obtain an extension of the Memorandum of the present company to include the power of borrowing money on mortgage or otherwise. This is desired because such power would give the Association the means of obtaining money—for instance, by debentures—at a rate of interest much more favourable than through a loan from the bank. The Council has accordingly taken the opportunity of the Special Representative Meeting to hold the first of the two statutory general meetings required to approve the necessary alteration of the Memorandum. The notice convening this meeting was published in the SUPPLEMENT of November 22nd.

LEPROSY IN LONDON.

EVERY now and again there appears in the newspaper the alarming headline "Leprosy in London." Some years ago there was a great scare, and meetings were held and funds collected, all because one leper had been discovered by some enterprising reporter. An article appeared in one of the leading monthly magazines with the blood-curdling title—insisted upon by the editor in spite of the strong remonstrances of the author—"The Dreadful Revival of Leprosy." People know better now, and they bear with equanimity the announcement that there are at the present moment some fifty lepers in England, and that there are generally one or two among the out-patients attending the dermatological departments of the various London hospitals. Dr. Bayon, in the interesting address delivered before the Royal Society of Medicine on November 20th, which is published at page 1420, states that of all these patients only one has contracted the disease in the United Kingdom. But if lepers in this country are a practically negligible quantity, there is a very large number in different parts of the British Empire. In India the last census showed that there had been an increase from 100,000 to 110,000 in ten years. Things are still more serious in Africa. According to Dr. Bayon, twenty-five years ago the principal medical officer counted 300 in Basutoland alone. He foretold that unless segregation was enforced the number would be doubled within twenty years. It may be remembered that some years ago a strong protest against segregation, with special reference to South Africa, was made by a man of deserved eminence, whose mind was in the thrall of a theory as to the origin of leprosy, in which contagion was practically excluded as a factor in its production. His teaching on the subject, which was not accepted by the members of the profession who had the largest opportunities of knowing how the disease spread, naturally commended itself to the official mind, which tends to place considerations of finance before all others. At any rate, the advice of the principal medical officer of Basutoland was not acted upon, and his prophecy was more than fulfilled, the census of last year showing that there were 800 to 900 lepers in that district. This

might have been foreseen, for it is a matter of history that the abandonment of segregation which followed the report of the London College of Physicians in 1867, in which the theory of contagion was rejected, was followed by a great increase in the number of lepers in our tropical and subtropical colonies. Although the disease is contagious, however, it does not follow that the existence of a few lepers in a country, or even in a town, is likely to spread the taint through the community. As Dr. Bayon puts it, "The modern medical eye looks upon leprosy as a disease which is definitely contagious, though under proper sanitary conditions to a very slight degree." As such conditions often cannot be enforced, the safety of the people demands segregation of lepers. This is necessary in the interest of the sufferers themselves, for, as Dr. Bayon points out, it is only in properly constructed and conducted asylums that lepers can be cared for in a satisfactory way. When large numbers have to be dealt with, as in India, settlements for the voluntary segregation of the worst cases should be instituted; where the numbers are relatively small, as in some of our colonies and dependencies, universal segregation should be enforced. In a lecture relating chiefly to the work done in the leper settlement on Robben Island, not far from Capetown, delivered at the house of the Hon. Mrs. Franklin on November 19th, Dr. Bayon said the Union Government had voted £150,000 to provide the settlement with laboratories for research work in regard to leprosy. Sir Malcolm Morris, who presided on the occasion, spoke of the pitiable condition of some lepers in London who found it difficult to find a place where to lay their heads. Moved by the unkindness with which they were treated, some benevolent persons proposed to establish a small institution where lepers could be segregated and properly looked after. The scheme, said Sir Malcolm Morris, had to be carried out in secrecy, for if it became known abroad that there was a comfortable home for such cases in London, there would be an influx of lepers from the colonies and from foreign countries. He thought it would be better to provide an institution for the treatment not only of leprosy but of other chronic diseases of a similar kind. In the discussion on Dr. Bayon's paper at the Royal Society of Medicine, Dr. Phineas Abraham agreed with Sir Malcolm Morris as to the danger of lepers from abroad being attracted by such a home as it was proposed to establish. He thought it should be an institution where every disfiguring disease of the skin would be dealt with. It seems to us that, leaving out of consideration the intention of the founders—which must, of course, be taken into account—a mixed institution of the kind suggested would be a standing negation of the idea of contagion on which the case for segregation rests. Disfiguring skin diseases do not cause the same horror as leprosy, which is "a name of fear." In the existing state of public opinion it is doubtful whether sufferers from skin affections, however disfiguring, would accept shelter under the same roof with lepers. And if they did, it cannot be denied that there would, at any rate, be some risk of their acquiring leprosy, and as they could not be compelled to stay in the home, it is conceivable that they might spread the disease outside.

ANTIMONY IN SYPHILIS.

WHILE most investigators in chemotherapy have devoted their attention to compounds of arsenic, the claims of other drugs have perhaps been somewhat neglected. It is, therefore, interesting to notice recent research with antimony, a drug with certain chemical resemblances to arsenic. Not long ago Neisser suggested that it might possibly be of value in syphilis. Tsuzuki¹ conceived the idea of replacing the arsenic of salvarsan by antimony, and the benzol ring by tartaric acid, a substance which is well known to have affinities for certain bacteria, and

¹ *Deut. med. Woch.*, 1913, p. 985.

even to act as a nutrient medium for them. According to Ehrlich, the action of salvarsan on the spirochaete is due to the presence of (OH) groups which combine with the corresponding haptophore groups of the parasites. Tartaric acid also contains (OH) groups which may act in the same way. Hence, according to Tsuzuki, the action of these antimonial compounds may be explained on the basis of Ehrlich's side-chain theory. After experimenting with several compounds on rabbits inoculated with syphilis, Tsuzuki found that the best results were obtained with a combination of antimony oxide with potassium bitartrate and ammonium— $\text{SbO}(\text{C}_2\text{H}_3\text{O}_6)_2\text{K}(\text{NH}_4)_2\text{H}_2\text{O}$ —to which he gave the name of "antilueticin." This substance was then tried in human syphilis with remarkable results. Details of 10 cases are reported, including primary, secondary, gummatous, and cerebral syphilis, in all of which the symptoms were greatly improved or disappeared. In several cases a cure was obtained with antilueticin after energetic treatment with mercury and iodide had failed, and one case of gumma which recurred after salvarsan treatment was treated by antilueticin. In a case of syphilitic optic atrophy the sight was improved. The drug is given by subcutaneous injection between the shoulders. The initial dose is 0.025 gram, soon increased to 0.05 gram, given daily or every other day until a total of 0.15 to 0.3 gram has been reached. If this is well borne, a further series is given. The dose required for *therapia sterilisans magna* is estimated at 0.75 gram. Tsuzuki concludes that antilueticin is a powerful anti-syphilitic remedy, but that the best results are obtained when it is combined with mercury and iodides. Further experience with this new remedy will be awaited with interest, for, since antimony is less toxic than arsenic, it is not impossible that salvarsan may be dethroned by antilueticin.

BOVINE AND HUMAN TUBERCLE BACILLI.

PROFESSOR LYDIA RABINOWITSCH and Dr. Carl Dammann have published a report on recent work in continuation of the researches in which the former has been engaged for many years.¹ They collected specimens of sputum in 33 cases of adult tuberculosis, lung material from 5 further cases of adult tuberculosis, glands from 2 cases of tuberculosis in children, scrofulous glands from 18 other children, and material from one case of tuberculous peritonitis, and one case of primary intestinal tuberculosis. In each case the bacilli were cultivated on various media, and also injected into guinea-pigs, rabbits, and calves, and the strains carefully studied. All those derived from the sputum in the adult cases of pulmonary tuberculosis proved to be of human origin, and material obtained *post mortem* from pulmonary cavities yielded the same result. On the other hand, of the 18 bacilli from glands 12 proved to be human in origin, 5 bovine, and 1 was not typical of either form. The bacilli derived from the case of tuberculous peritonitis proved to be bovine, as did those from the case of primary intestinal tuberculosis. It thus appears that 11.66 per cent. of the sixty strains were bovine, while if the cases of children alone were taken into account the percentage was 29. The extraordinary care and accuracy which have always characterized the work of Professor Rabinowitsch are obvious again in this article, and even if the results did not coincide with those obtained by many British and Continental observers, including the Royal Commission on Tuberculosis, the facts as presented by these two capable research students would have to be accepted. As it is, few will be found to quarrel either with the way in which experimental results are stated, or with the important deduction that bovine bacilli are a real danger to children. In the prophylaxis of tuberculosis among the young, measures to prevent infection through cow's milk must therefore be given a prominent place. The two authors appear to

consider it necessary to pasteurize children's milk or to kill the bacilli which it may contain by heat in some other way, but they do not discuss the wider question of the detection of infected milk and its exclusion from the market altogether, although, in the concluding sentence of their report, they say that the facts recorded show the imperative necessity of taking every means to prevent the infection of human beings with bovine bacilli.

EUTHANASIA.

Is it ever right to release one hopelessly stricken by disease or injury from his suffering by what has been called "merciful murder"? From time to time we are told that this is a duty which a doctor owes a patient in agony which cannot be relieved by art. The question has often been discussed in the BRITISH MEDICAL JOURNAL,¹ and the view has consistently been maintained that the doctor must act in the spirit of the Hippocratic oath, and must in no circumstances give "deadly medicine to any one, even if asked, nor suggest any such counsel." Only the other day an unfortunate lady was pinned under the wreckage of the Marseilles express at Melun for eight hours before death—for which she asked—brought her relief. The case has again brought up the subject of euthanasia. The views expressed in reply to a question by the *Daily Mirror* showed a remarkable difference of opinion between medical men and others. Sir Frederick Treves declared that the idea of destroying human life in order to end suffering is monstrous and unjustifiable. Sir James Crichton-Browne's reply was to the same effect. The reply of a surgeon whose name is not mentioned goes to the root of the matter, and we therefore quote it: "It is a problem in which a very strong line must be drawn. Directly you waver in the least and admit justification, even in the most harrowing cases, you are on the way to creating an abuse which would be intolerable to a Christian world." On the other hand, it is remarkable that clergymen seem to hold human life less sacred than doctors. In reply to the same question, Archdeacon Sinclair telegraphed, "Anaesthetics quite legitimate." Bishop Welldon said, "There are circumstances that may excuse the violation of this rule" (of not abandoning life). The Rev. Percy Dearmer, D.D., speaks with a somewhat uncertain sound. He thinks it "a pity that in many hopeless cases, where much pain is endured by a patient, doctors should do their utmost to prolong the patient's existence, although of course it is their first duty to prolong life." His wife has a more decided opinion on the subject. She holds that "if the poor woman could not possibly have lived it would have been best for a doctor to have helped her out of her pain instead of letting her slowly die in torture." The Rev. C. H. Grundy, vicar of St. Peter's, Brockley, said: "If two doctors agreed that the case was hopeless, and that the poor woman was suffering indescribable pain, then merciful release should have been given to her and death might be hastened." Mr. William Archer thinks the medical man should be given the power to grant a patient's request for painless death if it is practically certain that he has no chance of recovery or being rescued. Mr. Sydney Holland would wish to be put to death if he were in such a position. Preferably he would ask a doctor to end his sufferings, stipulating that an anaesthetic should be used. He does not consider that his act would be morally wrong. But, we ask, has the doctor no moral responsibility in the matter? That is the question. It may be added that a bill making euthanasia with proper safeguards legal was before the German Reichstag some months ago. As far as we know it has been relegated to the limbo of proposals which never succeed in breaking through the *fatu aspera* of legislative parturition.

¹ See particularly BRITISH MEDICAL JOURNAL, June 11th, 1904; March 17th, 1906; and November 4th, 1911.

¹ *Zeitschrift für Tuberkulose*, vol. xxi, Parts 1 and 2, 1913.

MEDICAL REMUNERATION AND THE SPECIAL
PARLIAMENTARY GRANT.

IN the address delivered at Glasgow by Dr. Cox, the Medical Secretary, which is reported in the SUPPLEMENT for this week, he mentions the fact that the amount of the special parliamentary grant for medical benefit arranged about a year ago was only fixed for three years. The Chancellor of the Exchequer, in his address to the Advisory Committee on October 23rd, 1912, said that he considered a year's experiment would be useless, and that, therefore, the financial arrangements would be made for three years; at the end of that period the whole position would, he said, be reconsidered. When in 1915 the matter comes up again two distinct but closely allied considerations will undoubtedly weigh with Parliament, and may influence the Government and the Commissioners even before then: First, is the present medical service of the insured worth the money spent on it, looked at from the general standpoint, or could a better service be provided for the same amount? and, secondly, are the panel practitioners receiving too much or too little for the work which they actually do for the insured? Leaving aside the first question for the present, it must be obvious that the answer to the second question will depend very largely on the statistics furnished by the doctors themselves. It would be grossly unfair to take instances in which panel practitioners are said to be making as much as £1,500 a year from fees received for the insured, and to argue from such cases that the doctors are making fortunes out of the insurance, and are in fact too highly paid. Such instances, if they occur, are exceptional, and taking Mr. Churchill's figures (SUPPLEMENT, November 22nd, 1913, p. 453) it would appear that the average number of insured persons to each panel doctor is 685, and that the average annual payment to each panel doctor must be a little over £200. In this connexion an average has some value, though it is not possible to fix a uniform number of patients and to say that no practitioner can give adequate medical and surgical attention to any greater number, for much depends on the personal equation of the doctor, the character of the district in which the patients reside, and numerous other factors. Taking instances in which a practitioner has only as many patients as he can attend to properly and efficiently, or fewer, which must be the most general case, the question which the Government and the Commissioners will have to decide in 1915 will be, Is the present medical remuneration adequate to ensure good work, taking into account the altered conditions under the Insurance Act? The reply to this question will depend largely on statistics founded on the records kept by the panel practitioners themselves, showing the average number of attendances required by each insured person on the list. It has been urged as an objection to the capitation system that when a doctor receives an annual fee for every person on his list, whether well or ill, he is tempted to give as few attendances as possible to each patient that applies for treatment. The customs and traditions of the profession safeguard the individual practitioner from yielding to any such temptation; and, as a matter of experience, the smallness of the number of cases in which charges of neglect have been proved is evidence that the work is being done conscientiously. But we have a right to accept the objection so far as it lends support to the presumption that under a capitation system, at any rate, no unnecessary attendances are likely to be given or recorded. There are indeed, as we have pointed out more than once, grounds to fear that the records may seriously understate the work done. From various sources the statement comes that the panel practitioners are not very careful to enter up every attendance actually rendered. The impolicy and folly of such carelessness are evident. It is futile to chafe

against the trouble of keeping records as if they were only for the benefit of statisticians. It is most directly to the personal interest of every practitioner that his records of work done should be full and accurate, and that every attendance should be marked on the record card. In no other way is it possible for the Government and the Commissioners to judge whether the profession is properly paid, and Dr. Cox's remarks on this point deserve most careful attention. It must not be forgotten, also, that the approved societies have a voice in the matter of medical remuneration. At the beginning of every year each approved society in a district has to enter into an agreement with the Insurance Committee as to the amount which shall be contributed to the committee out of the society's credit with the Commissioners for the medical benefit of its members, though if the Committee and the society cannot agree, the Commissioners may decide the amount. In order that every Committee and every society should not be compelled to draw up a separate agreement, the Commissioners issued a model. But the agreements are only for one year, and may be altered any year. The amount was fixed partly, no doubt, because of the insistent demands of the British Medical Association, but partly because it was believed that the societies would be able reasonably to afford the sum if the sickness claims did not greatly exceed the actuarial expectations. But many of the societies are now complaining that up to the present the sickness claims have shown a great increase, for which they are inclined to attach some blame to the doctors. The Friendly Societies Act, 1896, requires an annual audit of the accounts of the societies, and under the Insurance Act a complete valuation must be made every three years from the commencement of the Act so far as the State insurance section of the society is concerned; for the purpose of this valuation the Commissioners have to draw up tables from which the average sickness expectation can be calculated. It may be only a coincidence, but it is to be observed that the first valuation of the societies will take place at about the same time as the special parliamentary grant for medical benefit comes up for reconsideration. Already a large number of societies are anticipating the result of the first annual audit, depending on the experience of the first six months' working of the Act, and are asserting freely that with the present sickness rate they cannot afford to continue to pay the full amount towards the doctors' capitation fees, and that if they were left to administer medical benefit themselves they could do it for considerably less. They are, in fact, already working up their case, in view of the first triennial valuation and the revision of the parliamentary grant. If by any chance a society shows a surplus on valuation, the demand will probably be for medical attendance on dependants as an additional benefit, the cost of which, unless a special State grant is obtained, would fall entirely on the private funds of the societies. On the other hand, if the valuation shows a deficit, there will have to be either a levy on the members, or an increase of contributions, or a reduction of sickness benefit, or some other method of economizing approved by the Commissioners must be found. Among these methods will undoubtedly be an attempt to reduce the amount now contributed by the societies to the doctors. It will be said that increased sickness claims do not mean increased work done by the doctors, but only a greater readiness to grant sickness certificates. It might indeed happen that though the present parliamentary grant of 2s. 6d. was retained or even increased, yet the increase might be more than counterbalanced if the societies on their side succeeded in lessening their contribution. The whole attention of Parliament, the Government, the Commissioners, the societies, and the public generally, will be focussed on the records of work done as recorded by the doctors themselves. If the records are imperfectly kept, and actual attendances

omitted through carelessness, the profession will be throwing away its own case. So important is this matter that every Local Medical Committee and Paeel Committee ought to make it its business to see that every panel practitioner keeps his records fully and properly, as the whole profession may suffer through the carelessness of a minority.

TUBERCULOSIS IN AN AMERICAN ARMY HOSPITAL

STATISTICS of the results of treatment of tuberculosis in civil hospitals and sanatoriums have been lavishly supplied of late years, and a certain uniformity is to be noticed amongst them, generally showing a very high percentage of recovery among incipient cases, but not as a rule affording much evidence of the duration of freedom from relapse. Attempts have been made to record "completed cases" by the medical authorities of the United States Army, and we gather, from the reports for 1911 and 1912, issued by the medical officer in charge of the General Hospital at Fort Bayard, in New Mexico,¹ that a large number of consumptive soldiers are treated in that institution, and that the results are by no means so encouraging as they would appear to be in the civil hospitals to which we have referred. Although classed as "completed," such cases can hardly be regarded as permanently cured. By far the larger number of the patients were young adults under 30, and in many instances the disease was complicated by other than pulmonary manifestations. The hospital itself is an extensive establishment, standing in 40 acres of ground, and providing its own farm and vegetable needs. The latitude of New Mexico corresponds roughly with that of Cairo. Some light is thrown upon the difficulties with which the United States army medical officers have to contend in dealing with early tuberculosis. It would appear that discharge on account of early tuberculous disease entitles the young soldier to a pension, and this often leads to abuse, calling for more than ordinary care in the preliminary diagnosis. Furthermore, there is no power of compulsory detention, so that the careless patient is free to undo all the good that he has received at the hands of the State officials; and when hopelessly broken down by his own want of caution, he becomes entitled to admission to another department of the hospital—the Soldiers' Home—where in many instances he remains, until his case is indeed "completed."

THE INSURANCE DIFFICULTY IN GERMANY.

A VERY disagreeable impression has been produced in Berlin by an incident which came to light at a meeting of the *Aerztekammer* for the province of Brandenburg and the city of Berlin on November 15th. The business of the meeting included the presentation of a draft embodying certain principles which the chairman, Dr. Moll, hoped would prevent, or at all events minimize, conflicts between the advisory doctors to the insurance societies and the doctors who would take service for the societies after January 1st. It was proposed that all contracts should be submitted to the Contract Committee for approval before being signed by the doctors, and it was stated that this committee would not approve the contracts with the General Insurance Society of Berlin (*Allgemeinen Ortskrankenkasse der Stadt Berlin*) unless at least 200 new doctors were admitted to service. Before a resolution to ratify the principles was put to the meeting, the chairman said that, though the conditions of service were not ideal, they represented an improvement as compared with past conditions. In the discussion on the subject Dr. Kuthe asked two questions which caused a great deal of excitement. He asked, first, whether the very low capitation fee of

5s. had been fixed at private negotiations between a prominent member of the executive committee of the Berlin doctors' central union and the representatives of the General Insurance Society of Berlin, without the knowledge or sanction of the delegates; and, secondly, whether this same individual communicated the results of these negotiations to the chief insurance office without informing the executive of the doctors' union. He did not attempt to hide the identity of the person in question. Other speakers angrily protested that they had been betrayed by one of their leaders. The fee of 5s. it was said was much too low, and had been accepted only because the conditions affecting the freedom of the profession were fairly satisfactory and the other conditions of service could be regarded as a reasonable compromise, and they were told that this was the most they could expect to get at present. The members were highly indignant on learning that a member of their own body, who was also a member of the Contract Committee and Chairman of the Federation of Insurance Doctors of Berlin, was stated to have accepted the low fee without remonstrance. The temper of the meeting rendered it clear that an official reply to Dr. Kuthe's questions must be forthcoming. The chairman admitted that Herr von Gostkowski, the official representative of the chief insurance office, had informed him that a doctor with whom he had discussed matters had agreed that 5s. was a reasonable capitation fee, and had proposed a contract of long duration at this rate. On being asked whether the doctor was Geheimer Sanitätsrat Dr. Köppel, Herr von Gostkowski had not denied this. The chairman added that the delegates of the Central Union of doctors of Berlin had not been officially informed of this contract, and that Dr. Köppel, who had pledged himself in writing to submit all contracts for approval to the Contract Committee, had threatened that he would send copies of this contract to doctors for signature without the consent of the Contract Committee, should the latter withhold its consent. The Executive Committee of the Berlin Medical Ethical Society, the Executive Committee of the Federation of the Berlin Medical Societies, and the Hansa District Medical Union, have issued a notice calling upon Dr. Köppel to explain his conduct. The notice describes this conduct as a "breach of faith." Dr. Köppel, who has already resigned his position in the *Aerztekammer*, is further called upon not to exercise any of the functions of his other offices, in so far as they deal with matters affecting the welfare of the profession. This notice is printed in large type on the front page of the *Berliner Aerzte-Correspondenz* of November 22nd, 1913.

"COMMITTEE FOR THE CARE OF DEFECTIVES."

At the present time local authorities under the Mental Deficiency Act are discussing the way in which the Committee for the Care of Defectives should be constituted under the Mental Deficiency Act, 1913. The Medico-Psychological Association of Great Britain and Ireland on November 25th expressed the view that the committee in each area should be based upon the existing Asylums Committee, with such additions as are required by the Act, and that the Asylums Committee should still exist as a separate committee for dealing with asylums under the Lunacy Acts. Under the Mental Deficiency Act the local authority—that is, the council of a county or county borough—can either constitute the committee for the care of defectives in this way or appoint an entirely new committee. The Act requires that the committee for the care of the mentally defective shall consist partly of members of the county council appointed by it, and partly of persons not members of the council, but either poor law guardians or those having special knowledge and experience with respect to the care, control, and treatment of defectives.

¹ Record of Completed Cases of Tuberculosis at the United States Army General Hospital, Fort Bayard, New Mexico. 1911-1912. Washington: Government Printing Office. 1913.