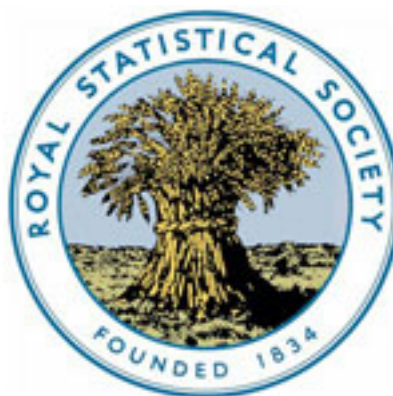


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The Inaugural Address of F. J. Mouat, M.D., F.R.C.S., LL.D., President of the Royal Statistical Society. Session 1890-91. Delivered 18th November, 1890

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# JOURNAL

## OF THE ROYAL STATISTICAL SOCIETY,

### DECEMBER, 1890.

*The INAUGURAL ADDRESS of F. J. MOUAT, M.D., F.R.C.S., LL.D.,  
PRESIDENT of the ROYAL STATISTICAL SOCIETY. Session 1890-91.  
DELIVERED 18th November, 1890.*

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#### I.—Introduction.

HAD I consulted my personal feelings and competency only, when I received at Carlsbad the intelligence of my selection for the honourable office of presiding over your actions and deliberations, I should unhesitatingly have declined the honour and the office of President of this important and eminently useful Society.

But, when it was intimated to me that my humble services could be of use to an Institution with which I have been connected for nearly half a century, and of which I have, in years gone by, occupied most of the executive offices, I felt compelled to accept your nomination cheerfully.

Whilst I shall be happy to assist to the best of my ability in promoting the interests of the Society, I still retain strong misgivings as to my qualification for the duties which your presiding officer has to perform.

The first and not the least difficult of those duties is the delivery of an opening address, as I find in considering those of most of my distinguished predecessors; for in this, as in most

other functions of similar character, there are various ways of dealing with a task that needs special knowledge and experience, so as to speak with the authority naturally attached to the temporary occupancy of this chair.

I cannot lay claim to such special knowledge and experience of any portion of the wide field of Statistical Science, as to entitle me to assume the *rôle* of a guide in the consideration of such questions as may come before you in the present session. I have, therefore, selected the more humble, but probably not less useful part of passing in such review as the limits of an opening address afford, some of the current leading questions of public interest and importance which are within the strict limits of the work expected from this Association.

## II.—*Obituary Note.*

In taking stock of our losses and gains during the past year, which I shall refer to more specifically in my concluding remarks, the first matter usually touched upon is that of the deaths of our members, which, I regret to say, have been unusually heavy during the session, and beyond the average of the previous decade.

A reference has already been made in our proceedings to most of those whose connection with the Society and its work required special mention. The detailed record of those of them who had attained distinction in other walks of life has been made elsewhere, hence the omission of their names on the present occasion.

To the loss, however, must now unfortunately be added that of the most eminent of them all, the late Sir Edwin Chadwick, who died in July last full of years and honour, after an exceptionally lengthened career of usefulness and distinction. He was one of the three survivors of the original members of the Society—the two others being the Earl of Lovelace and Mr. James Heywood—having been elected in 1834. Sir Edwin Chadwick served for some years on our Council, was a very generous donor to our library, and several valuable contributions from his pen are contained in our Transactions, two only of which were, however, first presented to the Society.

In the great work to which his life was chiefly devoted—that of the improvement of public health, and its resultant priceless benefits to mankind—his watchwords were “unity and prevention,” and he preached and practised the doctrines contained in them with an untiring energy, indomitable perseverance, sterling regard for truth, unswerving faith in statistics when honestly collected, as sure and certain guides, united with a singular clearness of exposition, which carried conviction to the minds of those best fitted to appraise them at their real value. To have merited the

universal recognition of those services which his death elicited, and to have been rightly regarded as entitled to a place in the front rank of public benefactors, as well as to be considered the Father of Sanitary Science in his time and country, are distinctions accorded to very few in any age. They fairly belong to him. Full particulars of his busy and useful career are contained in the well known record of his works by his friend and literary biographer Dr. Richardson, himself one of our most esteemed authorities on the subjects considered in them.

### III.—*International Penitentiary Congress of St. Petersburg.*

In June last, the Fourth International Penitentiary Congress was held at St. Petersburg. Delegates were nominated to represent this Society, and the Howard Medal was presented by it to the Congress to mark the approval by the Society of the celebration of the centenary of the death of the great philanthropist, and of the honour and respect paid to his memory by the country in which he died and was buried.

Your delegates were unable to attend in person, but the medal was duly transmitted, presented, and courteously acknowledged by the President of the Congress.

The Report on International Prison Statistics, the chief point of interest to us, was presented by M. Yvernes, and the following resolution on the subject was adopted by the Congress, viz.:—

“That an international penitentiary statistic be prepared for each session of the Congress.

“That this task be confined to the prison administration of the country in which the Congress may meet.

“That the investigation refers to the second year following the preceding Congress.

“That the tables annexed to M. Beltani Scalin's report be considered the basis of this international statistic.

“That the publication be accompanied by an analytical report making known the state of prison statistics in different countries.”

This is substantially the conclusion arrived at in the discussion of International Prison Statistics by this Society, in 1876.

I reserve all remarks upon this resolution and the action of the Congress generally, until the detailed official report has been published.

### IV.—*Congress of Hygiène and Demography.*

You are aware that a Congress of Hygiène and Demography is to be held in this city in 1891, and you have nominated delegates to represent the Society, and to aid in the organisation of the latter branch of the Association.

As this will be the first public occasion in this country in which the term "Demography" has been applied to the collection of facts and figures relating to man in association, a few remarks on the origin of the Association and its exact significance will not be out of place on this occasion. The more especially is it appropriate, as I was your delegate in 1877, and assisted in the creation of the Society.

Of this I submitted a brief report, which is published in our *Journal*,<sup>1</sup> but as very little appears to be known about it, I will explain it as briefly as possible.

The term "demography" is not to be found in any of our dictionaries, even of tolerably recent date, and in France is only contained in the great work of Littré, who denominates it "a didactic expression descriptive of peoples as regards the population in relation to ages, professions, dwellings, &c.;" and he also adopts the definition of Quetelet, that it is "the natural history of society." The appellation appears to have been first employed by M. Galliard in his "Elements of Human Statistics" or Demography," published in 1855.

The first President of the Society, the late Dr. Bertillon, treated it as dealing with the inner life of the social bodies which form a people (births, marriages, deaths, migrations, &c.), but only in their collective influence, of which it measures the powers of the parts or of the whole, without meddling with biological proceedings, which distinguish it from physiology.

The discussions of the first meetings covered a very wide field, including the determination of an exact system of taking a census, and a view of the plans in use in most countries, declaring that of England to be the most widely adopted, that of Germany the most exact but most costly, and that of France as defective in principle and unreliable in execution.

As it was doubtful whether in the beginning it could sustain a separate existence, it was resolved by mutual agreement, in 1878, to add a demographic section to the Congress of Hygiène. The first meeting of the united body, at which I also assisted, was held at Geneva, in 1882, when it was resolved to continue the Union, to which Demography however should be a co-ordinate branch, and not a mere section. This arrangement has continued to the present time.

The late Dr. Bertillon regarded England as the real home of demography, as it surpassed all other nations in the incomparable richness of its demographic inquiries, and in the unbroken continuity of its published returns.

For this reason, and for the undoubted value and interest of the

<sup>1</sup> Vol. xlii, 1879, pp. 23—25.

work which it is intended to accomplish, I consider the approaching Congress to be well deserving of all the support which this influential Society can afford it.

#### V.—*Labour and Wages Disputes.*

The strikes which have occurred in the past year, and of which the end has not yet come, have been so numerous and on so extensive a scale, and so many new elements and motives of action have been introduced into them, which have no necessary connection with their strictly economic relations, that I deem it expedient to say a few words regarding them, with special reference to the work of this Society.

In 1838, a committee of the Society was appointed to collect a statistical account of the various strikes and combinations which had occurred in different parts of the United Kingdom, to alter the rate of wages and introduce new regulations between masters and men. The conditions of the inquiry were laid down, and the inquiry was doubtless instituted, but I have been unable to find in our recorded transactions any formal reports of the results of its action. The papers however of Mr. Boyle, on "Strikes in the "Potteries," of the late Professor Waly, of Mr. Bevan, on "The "Strikes of Ten Years, 1870-79," and a few remarks from the valuable work of M. Von Neumann-Spallart, on the "World's Progress "in Trade and Industry," together with the recent valuable paper of Mr. Price, on "Industrial Conciliation," exhibit the interest taken by the Society in the subject. Our transactions abound in scattered fragments of information on labour and wages, but there is no connected or detailed view of the extent of the disturbing influence exercised by strikes, in particular industries.

Those which have recently occurred indicate a new departure, which is producing serious effects upon the social condition of the people, and upon the trade and commerce of the country. They appear to me to be, in consequence, deserving of the most careful, unbiassed inquiry from the statistical standpoint, lest they should result in disasters of which it is impossible at present to forecast the issue.

The interests of classes, too often regarded as antagonistic, are in reality, as all treatises of authority on Economics teach us, identical. It is only ignorance or designed perversion which prevents their uniting for each other's advantage. To dispel this ignorance in all economic questions which cannot be properly regulated without the strictest interdependence, and to educate public opinion regarding them, is one of the proper functions of statistical science in our time.

It was feared half a century since, when the great educational

movement commenced which is rapidly approaching compulsory and free instruction, that its immediate effect would be attended with the danger of the control of public opinion, which is daily acquiring greater power and influence in this country, falling into the hands of persons imperfectly instructed or of professional agitators, and being directed into wrong channels by the propagation of crude judgments, irrational prejudices, and economic heresies and fallacies.

The old apothegm, "that a little knowledge is a dangerous thing," no longer commands universal assent, and is replaced by the belief, "that a man is more likely to find his way in the faintest twilight, than in absolute darkness." No more appropriate and unimpassioned field for the authoritative scientific consideration of these labour disputes as an instrument of education and a corrector of error where it exists, can be found than in this Society. Hence, I hope, that some of the eminent economists in our ranks who are accepted guides, will take up the question of this new departure, popularise it, and bring conviction to the minds of the many who are at present misled and misguided, from being without safe or trustworthy guidance.

#### VI.—*The Census of 1891.*

As respects the approaching census, it is much to be regretted that some of the useful and practical suggestions of this Society—which has long occupied a distinguished position in relation to the question of the periodical numbering of the people,—and of the report of the special Committee appointed to inquire into certain questions connected with the taking of the census, were not adopted by the Legislature. To whatever causes this may be due, whether to parliamentary indifference, to party exigencies, or to the expensive parsimony of the Treasury, it is manifest that we must rely upon ourselves to supply the missing links as far as may be practicable, without the direct interposition of the State. It is evident that there is no likelihood to be any outcome from the labours of the Statistical Committee of the Treasury appointed in 1877, the proceedings of which are admirably reported in our *Journal*.<sup>2</sup> The system, which was then pronounced on unimpeachable testimony, to be no system at all, still exists, and seems likely to continue to sustain its character.

Is there no way out of this "*impasse*?" I venture to think there is, and that it can be accomplished by any of the great Municipalities which have the courage and wisdom, and possess the power and the pelf, to collect the materials of, and publish a statistical account of their cities, on the lines of those of Paris or

<sup>2</sup> 1881, vol. xlv, pp. 269—367.



Berlin, and preferentially of the latter, as the most complete of the two. The economic value of such information for London, Liverpool, Manchester, Birmingham, Glasgow, and all the great centres of industry, would be difficult to overestimate, and would soon lead to legislative action to harmonise all such labours by centralisation and uniformity of procedure. There are many unsolved problems in demography, for the solution of which the materials would then and thus soon be collected and utilised.

Should they not possess the authority at present to obtain information from any branch which now furnishes reports direct to different departments of the State, and so far are not responsible to them to supply it, there ought to be no special difficulty in getting it from the legislature, for it would be a form of Home Rule upon which no party issue could fairly be raised, and the cost would very soon be repaid by the value of the results.

There is one other matter connected with the census which I should have been glad to have been able to refer to, but I am afraid that my budget is becoming too heavily charged—I mean the Imperial Census of India. This will be taken in February next, a proceeding which will have to deal with an estimated population of 280 millions, to employ a million of enumerators, and to issue some 70 millions of schedules in seventeen different characters printed at the Alipūr Jail Press. It will have to take into account exceptional difficulties and prejudices, moral and material, is the greatest task of the kind ever yet undertaken or performed by any nation, and well deserves to be widely known. I have, therefore, prepared a special memorandum on the subject, and hope that the distinguished Editor of our *Journal* will be able to find a place for it in his *Miscellanea*, which he has rendered an unrivalled storehouse of information on all branches of statistical research and inquiry.

#### VII.—*Food Supply of the United Kingdom.*

Among the matters then deemed of most importance for statistical inquiry, the late Mr. Newmarch in his inaugural address in 1869, placed in the front rank, “The annual consumption per head among different classes, and by the nation as a whole, of the chief articles of food,” which he specified. The need is, if possible, of equal or greater urgency now, than it was then.

The excellent paper of Mr. S. Bourne in 1882,<sup>3</sup> on “Food Products and their International Distribution,” did not deal with the view of the question taken by Mr. Newmarch. Moreover, the whole subject of our food supplies in relation to imports, exports, and sources of production, as well as distribution, has, from economic

<sup>3</sup> *Journal of the Statistical Society*, vol. xlv, pp. 423—60.



and other causes, changed so much in the last few years, that the time appears to me to have arrived for its reconsideration from the statistical standpoint.

An additional reason of considerable cogency has arisen from the place which the question has occupied in the recent discussion on the defence of the country in case of war. The military and naval authorities seem to entertain widely divergent views on the subject. One of our most distinguished soldiers, Lord Wolseley, is reported to have publicly proclaimed the "starvation theory" to be "one vast and complete humbug," as we have a reserve supply of provisions sufficient to feed us for three or eight months, without any external aid. This bold assumption demands careful inquiry, for upon it hinges to a great degree our safety or danger in relying principally upon our first or second line of defence in the event of invasion.

In the Franco-German war, Paris was starved into submission with less than half the population of London, and yet I remember being present when the then new king, Louis Phillippe, laid the foundation stone of the first of the chain of forts surrounding Paris, and M. Thiers, the Prime Minister, in his speech proclaimed that "Paris was for ever protected against foreign invaders!"

This should, I think, be a lesson to us to ascertain how the matter really stands, before the necessity for making the provision arises.

### VIII.—*The Anthropometric Identification of Criminals.*

Among the noteworthy occurrences of the past year having important bearings on statistical methods, is that of the anthropometric identification of criminals as practised now throughout France, as being adopted in principle and being put in practice in Germany, and as having already obtained a firm footing in the United States.

As I persuaded Dr. Bertillon to give us in London some information and practical demonstration of the method introduced by his brother in Paris, and as I had, in years gone by, when in administrative charge of the prisons of Bengal, studied carefully the difficult problem of the best means of identifying criminals on reconviction, I followed his demonstration with great interest, and am satisfied that the anthropometric method is not only the best means yet discovered of securing this desirable end, but that it is also correct in principle, strictly scientific in character, and when properly performed, efficient in practice.

It appears that this view of the matter is not taken by some persons of authority in England, on grounds which do not appear

to me to be conclusive. I deem it right, therefore, to say a few words on the subject, as I think that erroneous impressions on such subjects should not pass unchallenged.

Every student of medical jurisprudence, and most authorities who have been engaged in the solution of questions of personal identity, are aware of the extreme difficulty of obtaining absolute proof, sufficient to carry conviction of such identification.

General Du Cane, in the discussion on a paper of mine, on International Prison Statistics, read before this Society in June, 1876, pointed out the overwhelming confusion of the plans of registration then in use, and advocated the restriction of such records to the narrowest limits, by the elimination of all that was useless or misleading, and the retention only of what could be, and was, in his estimation, absolutely accurate. This latter condition I take to be unattainable, and assuredly the prison statistics of Great Britain are deficient in many particulars necessary to understand rightly their real significance, the figures of which could be collected with little trouble, and without any misleading intended or implied. But, for personal identification the Bertillon plan fulfils General Du Cane's condition, inasmuch as it leaves nothing to conjecture or defects of memory and observation, and is so far better than any other yet tried.

In an article on the subject in one of our leading periodicals, is contained the following statement:—

“There is no reason to suppose that the programme of police reform will embrace the adoption of the French system of the anthropometric measurement of prisoners. There is said to be a prejudice against M. Bertillon's plan of taking note of the height, the size of the head, the facial angle, the size of the hands and feet, and the stretch of the arms. I believe I am correct in saying that the late Commissioner (of Police) regards the measure as a ‘scientific fad’ of no practical use, except in gaols for the correction of registers, copies of which are forwarded to the police. But, even if approved, anthropometric measurement could not be introduced without fresh legislation, for under the English law at present such procedure would render the examining officer liable to an action of assault. As a scientific theory the system is very well, but after all bodily marks are secondary means of identification, which must rest mainly in the features.

In the Bertillon process there is nothing approaching to stripping, and the identification by features alone is found to be so fallacious and fleeting a test, as to constitute the least important factor of the record. A plan which, after years of careful investigation and experiment, is susceptible of such accuracy as to

establish the identification of a person charged with crime from more than 100,000 examples in less than five minutes' examination of the record, cannot rightly be regarded as a mere theory of no practical value. A million of such records could be manipulated with equal facility.

It is to be hoped that wiser counsels will prevail with those charged with the detection of crime and its punishment on re-conviction, and that a plan which has been thoroughly successful elsewhere, after years of use, will not be condemned on grounds which are in no way applicable to it.

### IX.—*The Hospital Question.*

It was originally my intention to have devoted my introductory address exclusively to the whole hospital question, which I regard as one of the most important economic and social matters that press for early solution and legislative action, of which there appears to be some likelihood now. But I found that the field would be too vast to be susceptible of consideration within reasonable limits, and that other cogent reasons forbade it. The need however of a radical change of procedure and practice in the provision of immediate and effective *hospital* aid, without pauperisation of the afflicted in serious and disabling sickness, to those members of the working classes who are unable to pay for it in their own homes, has long been manifest to many of the earnest and devoted members of our community who work among the poor, and endeavour to lighten their lot at all times, and more especially when the shadows of sickness and suffering darken their humble homes.

I think it may not unreasonably be assumed from all that has been said and written on the subject for many years past, that the present hospital system of London is gradually breaking down from sheer physical inability to deal with the unprecedented growth and consequent changed conditions of life in the metropolis.

The funds of the endowed hospitals are, on their own showing, no longer adequate for their wants. The voluntary hospitals, from their incessant appeals for aid, seem to be consuming their capital without replacing it by any reliable or permanent sources of increase to their means of maintenance. The distribution of the institutions other than those connected with the poor laws for the indoor treatment of the sick poor, has not followed or kept pace with the movements of the population. The expropriation and compulsory changes of domicile of the labouring classes who live from hand to mouth, have not been preceded, as they ought always to be, by the provision of proper and effective means of making the removal as little irksome or harmful as possible. Very many if not most of

the deserving classes of the non-pauper sick poor do not, as a rule, obtain the relief they need in serious acute attacks of disease, as quickly and certainly as the successful treatment of such diseases demands. Much of their time, with a serious aggravation of their maladies, is too frequently wasted, too often unsuccessfully, in the attempt to obtain admission to general hospitals, far or near. Their pauperisation solely by the occurrence of disease, for which they cannot rightly be held responsible, is neither just nor equitable. In all these circumstances it is to the interest of the community in general, and the advantage of the temporarily destitute sick poor in particular, that the State should afford its aid in alleviating and removing as far as possible these unavoidable evils, without any direct violation of the sound and established principles which should always regulate the action of the ruling power, in dealing with social defects among a free and self reliant people.

The construction and management of hospitals in their relation primarily to the interests of the sick, and in strict subordination to that, as instruments of instruction and scientific research, first engaged my attention in 1841. In that year the executive and administrative charge of the Medical College of Calcutta, with the addition of an important professorship in the school, were entrusted to me by the Government of India.

That institution, the first and still the greatest of its kind in British India, was then in its infancy, and it at once became my duty to organise it in all its departments, the first Principal having died before he was able to undertake this laborious task. Chief amongst its deficiencies was the absence of an hospital of adequate dimensions for the clinical purposes of a great school of medicine, and for the needs of the dense population in whose midst *it* was placed, and I dwelt for several years.

In my task I was cordially aided by my colleagues, who constituted the College Council, and a source of unfeigned sorrow is it to me to find that I am the sole survivor of that band of earnest and devoted members of our profession, which has done more than any other class to render British rule acceptable to the vast populations under the control of this country.

It occupied seven years of constant exertion to secure the end desired. The foundation stone of the building was laid by the greatest pro-Consul India ever had, in 1848. The history of the institution is contained in the official report on the table.

In 1881, I wrote a series of papers on Hospitals in the "*Lancet*," in the hope that the leading questions regarding them might be discussed by the Medical International Congress held in London in that year. In this I was disappointed.

In 1883, Mr. H. Saxon Snell and I united in producing a joint

work on the subject, and to it I added, with his concurrence, a special section on the organisation of medical relief in the metropolis—to which branch of the question my remarks on the present occasion must be restricted.

A second edition of our work is on the table.

The purely professional relations and arrangements of these very valuable institutions I shall not now discuss or consider, as I am of opinion that in their technical aspects they are better left in professional hands and to professional tribunals to deal with. In their economic and social aspects they are not only well suited to be placed before you, but are more likely to be judged on their merits without any class or professional bias, and solely in the interests of the public who are so deeply concerned in their right regulation.

My first step in my inquiry in 1881 was to ascertain the adequacy of the existing hospital accommodation of the metropolis for the needs of the comparatively overwhelming numbers of the poor, immediately above the permanent pauper class. Here I was met and baffled by the entire absence of reliable statistics of even their approximate numbers, distribution, and means of paying any sum however small, towards their relief in hospitals for sickness of a non-contagious character. In the census of that year the industrial classes were represented to be a million and a quarter strong, and those in domestic service 360,000, but the non-existence of any of the sub-divisions necessary to discriminate and identify those who require eleemosynary aid in hospitals, such as cannot be supplied by benefit societies or dispensaries as such, rendered all estimates of them purely conjectural. In my inquiry into the hospital systems of all civilised nations, I could find no authoritative determination of a unit either of area or numbers of the hospital accommodation required in cities, industrial centres, or the country generally. Had it existed, I doubt however if it would have been of much use, or applicable to the very exceptional conditions existing in London, of which there is no parallel in ancient or modern times.

One fact was however at once apparent, viz., the absolute inadequacy of the number of beds contained in the general and special hospitals for the poor only, even if the whole of them were available for that class. It is well known that a large number must be retained for accidents, and for other claims of various kinds, and we have recently been informed in a public inquiry that nearly 2,000 beds are empty for want of funds to fill them. It is equally well known, that some of them at least are occupied by persons who have no claim to be considered as poor in any accepted interpretation of the word, and who are

probably able if their exact circumstances were known to pay some part of the cost of their treatment in their own homes, or at provident or other dispensaries, a great abuse of charity for which an effective remedy has not yet been found. Lists of the hospitals of London in 1883 arranged in parishes and districts are appended to this paper, as they may prove useful in the grouping and federation of these institutions, should a special and central board of control and supervision be hereafter appointed.

Reliable figures for an approximate determination of the question have now been collected by Mr. Booth, to which I shall refer more particularly further on.

For exact details connected with the extent of the present hospital accommodation of all classes and kinds in London, I must refer to the excellent tables prepared by the Charity Organisation Society, and appended to their petition to the House of Lords. They would occupy too much space to be quoted here.

My next step was to determine the exact position of all the hospitals and infirmaries of every class in the metropolis, with special reference to their accessibility to the sick poor in their time of need. To ascertain this I had a map drawn to scale, and prepared with great care. In it was also contained a specification of the boundaries of the registration districts of London, with their area and population in 1881. An index to this map, which I have deemed it desirable to reproduce now in its original form, is appended to this address. It forms I think an important land mark in the history of the question under consideration, and to be for that reason deserving of permanent record. It will also be of interest to compare the distribution of the inhabitants of the whole of London with the results of the census of 1891, and with the estimate obtained by Mr. Booth in his invaluable researches.

For more complete realisation of the facts disclosed by the map, I had concentric circles drawn upon it to show the distances of the several institutions from a centre, which for obvious reasons I fixed at Charing Cross. A counterpart of this map will be contained in each copy of the December number of the Society's *Journal*. It is now on the table for the examination of those who may wish to see it.

Taking this then as my point of departure, it will be seen that within a radius of half a mile there were 6 hospitals; within a mile, 19 hospitals, and a lunatic asylum; within a mile and a half, 31 hospitals, with a poor law infirmary and a lunatic asylum; within 2 miles, 39 hospitals and 2 lunatic asylums; and within a radius of 3 miles from the centre indicated, were all the principal hospitals of London at that time. In the outer circle are the chief poor law infirmaries and sick asylums, at present devoted

exclusively to those, many of whom are destitute temporarily by sickness only, and termed, I think erroneously, paupers, instead of the temporarily destitute poor.

Careful reflection, based upon long study and familiarity with the question in all its aspects, led me to the conclusion that nothing short of entire reorganisation—or rather organisation, for nothing deserving the name now exists—of the whole hospital system of the metropolis, would meet the extreme difficulty of the position.

The chief points to be considered appeared to me to be, as to how the aid required can be afforded with the least possible disturbance of existing arrangements, and how the framework and control of the system can be so ordered as to subject these essentially public and charitable institutions, with numerous private privileges, to such regulation and control as shall secure their proper management, both as all important agencies for the relief of suffering, and as necessary instruments for the education and training of the medical profession, and the advance of the science and art of medicine.

It would be manifestly impossible, or rather impracticable, to remove some of the older hospitals from their present positions and to reconstruct them elsewhere, as was done in exceptional circumstances with St. Thomas's Hospital. Irrespective of the enormous cost of such a proceeding, and the entire dislocation of a system of which the long continuance has constituted what many of its supporters regard as a prescriptive right, it is not necessary to do so, if proper use be made of the magnificent poor law infirmaries, with an extension of their usefulness, when a radical change in their character is sanctioned by the Legislature, as I shall endeavour to show anon.

It is difficult in treating the question as a whole, dealing as it does with so vast an aggregation of human beings in a restricted area, to consider it in a strictly logical manner. Hence I think a brief reference to the public feeling underlying it, which is at the root of the matter, will not be considered out of place. The question of charity underlies, if it does not cause the failure of, all plans dealing with the time-honoured defects of the present system, to secure to the honest, necessitous, and deserving poor, massed in large numbers, and living in gravely insanitary surroundings, needful and prompt help in severe or disabling sickness, without the intrusion of any moral or social degradation.

Private charity when well and wisely directed may, and for a very long time did, with the aid of religion, cover the whole ground in communities of every member of which the lives, characters, and social circumstances (*état civil*) were known. But,



even in this comparatively limited field, it has become mixed up with such various incompatible matters, and so crushed by the heavy weight it has to bear, as to be no longer in harmony with the spirit of the age or the willingness of any class of the community to submit to the domination of doles in such circumstances.

The first, the most important, and the most difficult step in the organisation of the relief of sickness in hospitals among the deserving poor, is the separation of such relief from the pains and penalties of pauperism, and its treatment as a question of public health.

It is however only an extension of the principle already allowed in the Medical Relief Disqualification Removal Bill, and on far safer ground than that on which this form of medical relief is based.

The objections of the most able and conscientious opponents of the Bill were, that it interfered with the cultivation of thrift, encouraged people to mis-spend upon themselves money which ought to go to benefit societies and sick clubs, and was opposed to the sound principle of the great Poor Act of 1834, of which it was said to alter the character entirely. Professor Fawcett deemed it unwise liberality and injurious laxity.

It is difficult to interpret the debate on the question in any other sense than that the Bill was a skilfully veiled Act for the cultivation of votes, but I am quite unable to accept for it the denomination of its being "ignorant philanthropy."

We now fortunately have authentic figures regarding the poor of East London, Hackney, and the Tower Hamlets, and it is impossible to overestimate the value of the results already obtained in gauging their application to the solution of such questions as are contained in my contention. Of the labours of Mr. Booth in this most desirable direction, no less an authority than Professor Marshall has stated, that every line of his report (in his papers read before this Society) is deserving of careful study.

In the figures since collected for the whole of London, which I have been privileged to see, much additional light, and of a favourable character, is thrown upon the questions involved; but as for my purpose it is not necessary to go behind those figures, as they stand in the *Journal* of our Society (vols. I and II), I shall content myself with reproducing them.

Mr. Booth, in his classification of the poor sinking to want, groups them in four classes:—

A. Loafers .....	50,000
B. Casual earnings .....	300,000
C. Irregular wages .....	250,000
D Regular earnings on low pay .....	400,000

Without indulging in any sensational or mere sentimental view of the matter, it is, I venture to think, appalling to find that in the whole of London to which the estimated figures refer, there are a million of human beings living in a state bordering on want, for the majority of whom eleemosynary aid would doubtless be required in sickness, in the event of their being attacked by illness which could not be safely treated in their own homes, whether they are able to make some provision for it or not. The majority of these are fit objects of charity, public or private, and regarding them Sir John Simon has stated in his recent able work on "English Sanitary Institutions:" "Developed civilisation can provide, and most imperatively ought to provide generous rules "for the relief of its impotent and casually destitute classes."

Now, the cultivation of thrift is a very excellent thing in itself, and the Poor Laws are good and wise laws when properly administered; but there are older laws than the Act of 1834, and the success of all forms of cultivation depends upon soil and surroundings. Where the laws of Nature are in conflict with economic principles, it is not the former which should give way.

The older laws I refer to are the laws of our common humanity, which ought never, in my humble judgment, to be set aside from any motive of expediency, however apparently strong it may be considered.

If it can be shown, as I believe it can, that the withholding of unconditional hospital relief in temporary destitution resulting from acute sickness in any of Mr. Booth's classes is likely to, and does, as a matter of fact, cause grievous hurt, then I cannot but consider that proceeding inequitable, in the working of the poor laws. The cases may possibly be comparatively few, and we have as yet no statistics to show how this is, but the evil is great and ought never to be permitted to arise.

The deserving poor, for whom I specially, but not entirely, plead, naturally shrink from accepting relief in a form repugnant to their feelings of independence and self-reliance, by being classed as paupers if admitted to the separate poor law infirmaries, which they would be at once on a relief order, if they applied for it.

If they are compelled to seek and fail to find at once the required relief elsewhere in the hour of their urgent need, they incur the risk of a serious aggravation of their disease, and of converting a perfectly curable attack when taken in time, into an incurable chronic affection, and occasionally it may prove a sentence of death.

I have been unable to ascertain the working of the Act, which has been long enough in operation to test its evil influence on thriftiness in its various forms, should such evils have occurred.

But, in any case, having admitted the principle in the form most liable to abuse, it is to be hoped that the Legislature will see its way to the extension of the dispauperisation in the direction in which it would be most useful in its medical, and least harmful in its social and economic influence. There are manifest indications in the present state of public feeling on the subject that the time has arrived for the reconsideration of such portion of the poor laws, as press too heavily upon the deserving poor.

At the recent meeting of the British Association, a discussion arose on the policy of discriminating between the deserving and the undeserving poor; but as no moral barometer has yet been constructed to indicate with any approach to accuracy the diagnostic signs of one or the other class, it was determined to let it alone, lest more harm than good should result from the attempt.

The president of the section, Professor Marshall, however, was of opinion that how the poor were best to be treated, or in a different way from the present, is a problem of the time.

Mr. Booth says, I think rightly, regarding his division D, "that 'no class deserves greater sympathy than this one: its members 'live hard lives very patiently, and are schooled by their lot in the 'virtues on which their existence depends.'"

For my part, I presume that to succeed in the struggle for existence, while living on the verge of starvation, without coming upon the rates, is amply sufficient to constitute a claim to be classed among the deserving poor. This class can have no sufficient margin to permit of the practice of such thrift as will enable them to meet and face successfully sickness of a temporary or permanent disabling character. Hence they are compelled, if they cannot find a refuge in any general hospital, to accept the relief in the only way in which it is now procurable in such circumstances, and to submit to the pains and penalties of pauperism, which cannot be deprived of the sense of personal degradation attached to it. Sir John Simon has recently said, in his terse and telling way, that "Sickness, in the case of the poor, is as terrible an "aggravation of the poverty, as the poverty is an aggravation "of the sickness; and the sickness irrespective of what widowhood "and orphanhood it may occasion, is almost a necessary cause of at "least temporary dependence on the poor rates."

All of the foregoing contentions are, in various degrees societarian, medical, and not without a sentimental aspect, yet they do not exhaust the whole question of sickness among the poor. There is likewise an economic view which is seldom regarded, and yet is not without value in determining the right manner of dealing with that sickness. The only person of any authority who has attempted to face it fairly was the late Sir Edwin Chadwick, who, with respect

to Manchester, estimated that the cost of avoidable death and sickness in that city in 1881 amounted to 7*s.* annually for each of the inhabitants, representing an outlay of 51,800*l.* annually, for the population of Manchester at that time.

Without entering upon the question of the death-rate as influenced by the insanitary conditions of occupations, dwellings, and surroundings generally, as causes of sickness, we must specially note the part played by hospitals in this great drama. It is a standing reproach to us that we have not the figures necessary to determine this. As it is, the death-rate in hospitals, so far as it has at present been ascertained, is not a safe or satisfactory test, as shown in the tables of Drs. Guy and Steele, published in the *Journal* of this Society, as stated by Mr. Lawson Tait in his work on "Hospital Mortality," published in 1877, and as dwelt upon by M. Husson, in his "*Étude sur les Hôpitaux de Paris.*"

The question is too wide to be discussed here, but I may state that some of the general and special hospitals discharge patients after a certain period of detention prior to cure, in order to empty the beds, doubtless for what they consider good reasons. These cases find their way into the poor law infirmaries, where they remain until cure or death results. I need scarcely point out how much and how seriously this practice must affect the returns of these hospitals in relation to their cost, the result of plans of treatment adopted, and the mortality of the institutions. The subject therefore is one which, I think, ought not to be disregarded or lost sight of in considering this question.

I have dwelt thus long, but I hope not unnecessarily, upon this part of the hospital system, both because of the blighting sickness, due to numberless causes beyond the control of the poor, which carries so many of them to an early grave, and because it is at the root of many of the most important shortcomings charged against the existing hospital system.

Should then the new condition of dispauperisation which I advocate be adopted, the next step will be to provide hospital accommodation for all acute cases among the *real* poor, which need an amount of skilled care and attention procurable only in public institutions.

Fortunately, thanks to the admirable and prescient care with which the local government system has been worked, these hospitals already exist in the sick asylums and poor law infirmaries of London, and need not the expenditure of a single shilling to render them the best general hospitals in the kingdom with respect to their structural arrangements, and means of classifying and treating the sick of all kinds, medical and surgical. All they would require would be such increase to their establishments as may be

found necessary to fit them for their extended use, not on the extravagant scale of those of our general hospitals to which schools are attached, and to which they are said to be somewhat sacrificed, but on the very much more modest requirements of the sick only, a matter which can be safely left to the future central board, which I hope will be created, to regulate the entire hospital system of the metropolis.

The infirmaries to which I refer above, are now encumbered with large numbers of the incurable, the aged, and infirm, and cases discharged from the general hospitals, possibly when they are no longer of sufficient interest to be retained in them, a matter on which exact information will probably be called for from the medical officers in charge of them. The necessary restraints and inelastic regulations of all hospitals are not only unsuited for, but a sore affliction to most of such cases, to whom a certain extent of freedom of movement are sources of great comfort. These cases, as a rule, require little or no medical treatment, and do not demand the expensive nursing and other agencies of a general hospital.

The whole of these institutions should, I am of opinion, remain under the charge of the poor law authorities, who *do* take great care to prevent the abuses of charity, which seem to be more or less inseparable from every uncontrolled institution. Upon this point again we have the views of one of the most able administrators ever connected with the local government department, Sir John Simon. He says: "Among the most flagrant illustrations of the 'general case' (abuses of medical charity) 'are the facts regarding 'the very numerous medical charities of London: . . . all of them 'more or less mendicant or expectant as to charitable gifts from 'the public, and most of them loud in professing financial difficulties, yet none of them under any sort of exterior audit or control: 'all of them independent of each other: all of them free from any 'relation to the admirable system of asylums, infirmaries, and dispensaries which the poor law has at work within the same area: 'all, or nearly all of them—except so far as subscribers' tickets 'may be required, and the individual subscribers may choose to 'investigate—ready to give gratuitous medical treatment without 'any sort of inquiry whether the recipient is really so poor as to 'need that form of alms; and the chief of them giving out-patient 'treatment in this indiscriminate way, on so immense a scale as to 'raise doubts against the value of what they give.'"<sup>4</sup>

Attempts have recently been made to diminish some of the evils pointed out, but they do not appear to me to be so conducted as to secure satisfactorily the end intended. I myself, many years ago,

<sup>4</sup> The general thesis (of which this is a particular illustration) refers to abuse of *private* charity.

worked an out-patient's department, both as an instrument of medical relief, and a source of supply of cases of clinical interest for the hospital and school to which I was attached, and I concur in very much which has been urged for some years past in London, against not the *use*, but the *abuse* of the system still in existence.

### X.—*A Hospital Board for London.*

With the exception of the poor law institutions above referred to, the hospitals of London are under no other control or supervision than those of their own establishments and supporters. They represent an order of things which in every other class of public institutions of like character has passed away. As a body, or even individually, they render no connected account<sup>5</sup> of their

<sup>5</sup> Since I delivered my address, my attention has been directed to a passage in the report of Sir John Simon in 1863, respecting the non-medical aspects of a proper system of hospital returns and reports, which I had overlooked, but which bears out so completely my contention, that I deem it advisable to reproduce it at the present time, as showing how accurately he had spotted the defects pointed out by him, and foretold how the evil could best be remedied in the interests alike of the institutions and of the charitable public by whom they are supported.

In it he said: "In a preceding passage of this report I have suggested that it is, for various reasons, incumbent on the managers of hospitals to cause such records to be kept as may show what work is done in each hospital, and what is the successfulness of the work. And now, in conclusion, I will venture to submit my opinion, that it would conduce very considerably to an improved administration of funds given for purposes of medical charity, if some department of the Government were annually to collect all such records, and to publish from them information which would enable just comparisons to be made between the doings of different institutions, and the proportions which such doings bear to the requirements of the respective neighbourhoods. Indeed, not only with reference to the general hospitals to which my previous remarks have always referred, but with reference to all medical charities, it seems to me that something of that kind is greatly wanted. In saying this, I do not only refer to that very wholesome emulation and progress in the art of healing, which it would be the tendency of such a publication to develop among the different institutions of the country, but refer also and emphatically to a non-medical aspect of the question. At present, when the public is appealed to, as incessantly it is, to give money to this or that new undertaking for professed purposes of medical charity, it is almost wholly without means of judging how far the particular purposes are already accomplished. It has only *ex parte* statements before it. Nor can it well judge of the needs and merits of established charities, excepting by such statements as the directors of some charities put forth,—statements which for the most part are framed solely with the view of moving public sympathy, and which, in order to gain this object, are often highly coloured and partial. The want of something like method in matters of medical charity leads to an infinite waste of charitable resources, and doubtless this waste (after the manner of all wastes) implies privation in one place as against superfluity in others,—here an overlapping and duplication of well intended charity, and there comparative bareness and destitution. A perfectly harmonious organisation of these matters (such an organisation as there is in Paris under the Bureau de l'Assistance Publique) is of course not to be expected under that system of voluntary co-operation which distinguishes the charities of this country. But, at least, an approximation to it might be made—and an



proceedings in finance, medical statistics, and similar matters of general and scientific interest, to enable the public or the profession, to form a correct estimate of the worth of their work.

All medical establishments of the character of hospitals are public institutions, and essentially charities in their chief aim and purpose, the treatment of the sick poor, which should not be subordinated to any other use. From their very nature they need the most careful regulation, and to be dealt with as all other charities are. No one has ever questioned the value of the work performed within the walls of those of established character. They are in this respect monuments of science, skill, and philanthropy of the purest and most elevated type. But the isolated and independent action of the different institutions robs them of much of their usefulness, and tends to impair the higher ends expected from them.

We live in a time when combined action and organisation are the watchwords of the age, and it is no reproach to the older institutions that, in this respect, they are not in harmony with them.

Their removal from strict public scrutiny is, in my belief, one of the reasons of the withholding of the pecuniary support which they formerly received, added to the phenomenal growth of the population of London, which has outstripped the ordinary means of dealing with difficulties.

The remedy for the present evil, so forcibly represented in the memorandum of the Charity Organisation Society, will, I think, be found in the creation of a Central Board of Supervision, in which all the interests concerned should be fairly represented; which should, for the present, leave untouched the usual procedure of all authorities connected with existing institutions; should have power of control and supervision similar to those now possessed and exercised by such a body as the Metropolitan Asylums Board, and armed with authority to call for detailed returns, upon an uniform plan, of finance and statistics, with a view to their digest and publication annually, in such manner as may be deemed most useful.

To enable such a body to be created so as to exercise effective control over the hospitals of the metropolis, hospital London should, I think, be divided into five sections, corresponding to the five

approximation which would not involve the smallest sacrifice of any one institution's independence, if the public could have before it such authentic materials as I propose, for forming a judgment on the distribution and efficiency of all means of medical relief.

"It would be essential to the usefulness of any such publication that the records which it would purport to compare should be records kept on an uniform plan."

Sixth Report of Medical Officer of the Privy Council, 1863, pp. 74 and 75.



registration districts, of which the population, as ascertained in 1881, is noted below :—

Districts.	Area in Acres.	Population in 1881.	Number of Persons per Acre.	Number of Hospitals in each District.	Number of Hospitals to the Square Mile.	Number of Beds.	Ratio of Beds to the Population, 1 to
West District	10,399	669,633	64	27	1·7	4,497	149
North „	13,468	905,947	67	29	1·4	4,289	211
Central „	2,132	282,238	132	17	5·2	1,979	142
East „	5,500	692,738	126	15	1·7	5,717	121
South „	43,835	1,265,927	29	23	0·3	7,555	168
Total.....	75,334	3,816,483	51	111	0·9	24,037	159

The Central Board should contain representatives from all the great hospitals of the five districts; should be distinctly elective in character; should consist of the lay and medical elements in equal proportions; and should comprise a sufficient number of members to admit of the formation of an executive committee for each district. It should perform in addition such of the functions of the Bureau d'Assistance Publique in Paris as can fairly be engrafted upon our manner of managing matters, with no further assistance from the State than the bestowal of legislative sanction to so much of the plan as requires parliamentary authority.

To attempt in an opening address to work out this, or any other scheme that may be suggested for so exceptional a city as London is manifestly impossible; I must therefore content myself with its mere mention. In any case it will need much and careful inquiry to determine what ought ultimately to be done, and what is immediately practicable.

Having referred to the Metropolitan Asylums Board as an institution of similar character, I deem it right to bring to your notice its manner of performance of a most important part of its work—that which has immediate relation to the functions of this Society—the collection of statistics to illustrate the nature and results of its labours.

The special duties of this board are to superintend the fever hospitals and pauper lunatic asylums of the metropolis, in the interests of public health and the prevention of the extension of infectious diseases. To this have been added the regulation of the ambulance system, and the management of a training ship.

The effective control of the spread of infectious fevers is a far more difficult task than the management of ordinary diseases and accidents, inasmuch as the one only affects the individual, whilst the other, if unchecked, may become disastrous to whole communities.

The report of the statistical committee of the Asylums Board for 1889 is on the table, and I recommend all interested in this hospital question to study it carefully, for the information contained in it is certainly the best yet afforded by any official body, in the branch of statistics to which it refers.

It is emphatically a move in the right direction, and its diagrams, maps, and the other methods of illustration employed, are well deserving of imitation when the collective statistics of our general hospitals are obtained, which I hope and believe are now fairly within the range of practical politics.

The regulation of the ambulance system of the board is also excellent.

If equally skilled care and attention are bestowed in the more extended control of the hospital system of London, by a properly organised and authoritative central board, the various faults found with the existing uncontrolled system, can be dealt with in the only manner likely to be attended with success. The absence of a proper system of independent inspection; the irregularities of the out-patients' departments; the regulation of the relations of the schools to the hospitals; the discipline, duty, and training of nurses; the suppression of all useless or mischievous special hospitals, and the prevention of the creation of others of similar character; the adoption, audit, and publication of an uniform system of accounts; a scientific, but simple collection and annual publication of the medical statistics of all hospitals on a uniform plan; the extension of institutions for the reception of convalescents, and the various side issues which are constantly arising, are all many sided questions which require patient investigation by a skilled agency, armed with authority to deal with them decisively, before any change is attempted. All this is a question of time, for the radical reform of old institutions to be permanent as well as to find acceptance, must be of slow growth. Structures which from time to time need removal or renewal, should be built up again, as much as possible on pre-existing foundations.

The reform in this instance has been forced by pressure from without, but must be effected by careful consideration from within. Probably no fitter occasion could have been found to make such changes as may be required in the whole hospital system, than the present, when both the art and science of medicine itself are undergoing such rapid and radical changes, as already to have revolutionised some of their procedure and practice in very important directions, and to indicate still greater changes in the immediate future, all tending to the saving of life, the increase of the standard of health, and the general wellbeing of mankind. More substantial advances have been made in therapeutics and surgical procedure in

the present century, than in the whole anterior history of medicine, at all events since the immortal discovery of Harvey. Preventive has become the twin sister of curative medicine, under the leading of Jenner, and has taken its place in the forefront of Biology. But, based as it is upon the advances of physiology and pathology, and the application of the methods of organic chemistry and physics, its conduct must be entrusted to professional hands, and not confided to benevolent empiricism of any kind or complexion. The age of the discovery of anæsthetics, antiseptics, and bacteriology, which have immortalised the Simpsons, Listers, Pasteurs, and Kochs of England, France, and Germany, sheds an undying lustre upon our noble profession. In the general advance hospitals must share, and should submit to do so with a good grace—for, as said by an eminent French physician a short while since, “*La médecine entière est à refaire.*”

It would be a grave and abiding subject of regret if public confidence were shaken in the conduct of the valuable institutions devoted to the highest purposes of charity and benevolence. The veil which at present screens the occurrences of sick wards should not be lifted lightly.

There is a season, said Cardinal Newman metaphorically in his “*Apologia*,” “when doors are closed and curtains drawn, and when the sick man neither cares nor is able to record the stages of his malady.”

The practice which has arisen of late years of admitting the outside world to the sanctuary of the sick room of public and other men of mark, and thus of pandering, however unintentionally, to the depraved craving for news, which is an unhealthy characteristic of our time, is, I think, much to be deprecated. Rich and poor alike ought to be beyond its reach.

Let us not then in dealing with this hospital question, do harm where nothing but good is intended, by indiscreet revelations or ill-timed reproaches. They will not assist us in arriving at a right judgment on any procedure which demands change or amendment, and in this matter the interests of the rich and poor are identical, for “there is little difference in serious sickness between Cæsar and “a sick child,” the sickness itself being no respecter of persons, whilst we all know that “*Pallida mors æquo pulsat pede pauperum tabernas, regum que turres.*”

## XI.—*Conclusion.*

In conclusion, I think I may fairly congratulate you on the continued prosperity of the Society, as shown by the Report of the Council in June last, reviewing the work of the past session

of 1889-90. In that important and satisfactory statement,<sup>6</sup> are contained the particulars of the roll of Fellows in 1889, with the average for the previous ten years, as follows :—

	1889.	Average of the previous Ten Years.
Number of Fellows on 31st December .....	1,060	886
Life Members included in the above .....	175	146
Numbers lost by death, withdrawal, or default .....	69	55
New Fellows elected (and four resignations cancelled)...	70	86

Since the 1st of January last, 59 new Fellows have been elected, making the present number 1,063.

In the same report are contained tabular statements of the finances of the Society for the four years previous to 1889, as well as for the whole of that year, with a comparison of the condition of the Society at intervals of ten years, from 1839, and the particulars of each year of the decade ending 31st of December last. All these returns, which I need not reproduce, are equally favourable. They show that we are liable to the fluctuations incidental to all associations as they grow older, but exhibit no real falling off in public estimation.

The great merit of some, and the usefulness of all the papers read and discussed, deserved and received fitting acknowledgment.

But, I venture to think, as recommended by the Council in the report referred to, that more energetic action, and greater publicity of our proceedings are very desirable, and indeed almost a necessity of our future usefulness and progress.

There has probably never, in the history of our country during the century now drawing to a close, been a time when fads, fallacies, and economic heresies have been more numerous and mischievous than they are at present.

Those which are merely foolish may safely be disregarded, for if left alone, although they may cause some harm during their brief existence, they speedily perish from inanition. But, those which are founded on the honest belief of earnest, well meaning advocates, who only need light and leading to set them right, and who are open to conviction when shown to be wrong, should be treated with respectful consideration, and no effort should be spared to place before them the facts and figures applicable to their several contentions, to procure the desired result.

It is the privilege and province of Statistical Science to assist in guiding the public opinion of the country in all social and

<sup>6</sup> *Journal of the Royal Statistical Society*, vol. liii, part i, p. 111; part iii, pp. 358—76.

economic questions, by the rigorous application of its methods of dispelling error and establishing truth, whenever and wherever they admit of treatment by the numerical method.

We are now in a transition state, and passing through a complete and somewhat noisy revolution, in which old landmarks are fast disappearing, and new conditions of life in association arising, which need new methods of treatment to prevent their becoming instruments of evil, instead of agencies of good. The complex conditions of modern life in its social and economic relations, appear to be no longer susceptible of regulation by the wisdom of the ancients. *Laissez passer* and *laissez faire*, in their conventional, not their historical meaning, are no longer in accord with the temper of the times. "Why can't you leave it alone?" is no longer a Delphic oracle, and "why can't I do as I like with my "own?" would not now be tolerated. Those who are unable, or unwilling to march in the van of progress, must be content to be left behind or to stagnate, which in the moral as in the material world is to die and be forgotten.

The *Nouvelles Couches Sociales*, which are coming—indeed, some of them have already come—to the front, will not allow us to "rest "and be thankful." They are the heirs presumptive of the present, and will be the masters of the future in some of the most important relations of life in association.

Hence, as ours is not a political or party association, owes no allegiance to any sect, is subject to no State control, and is fettered by no traditions to limit its action in matters which come fairly within its province or scope, we can afford to hold the scales with the strictest impartiality, to apply to all social, scientific, and economic questions the "lynx-eyed scrutiny of dispassionate "analysis," and to afford to all searchers after truth, in matters which admit of the application of numbers to determine the laws which regulate them, the materials of their several contentions, in their simple integrity, without any of the alloys which unhappily too frequently debase their currency.

## APPENDIX.

*Note on the Medical Statistics of Hospitals.*

As I could not find room in my address for more than a mere mention of the importance and necessity of information on the subject of the medical statistics of hospitals, I have deemed it expedient to place a few remarks in the appendix, to draw more special attention to it, for its value cannot be over-rated.

By no one has this value and the need of figures as exponents of facts in relation to the work of hospitals, been more powerfully stated than by Sir John Simon, in his review of the reports of Messrs. Bristow and Holmes on the hospitals of the United Kingdom, in 1863. In it he says, after speaking of the need of detailed returns of deaths from all causes, medical and surgical, to enable a judgment to be formed of the work and healthiness or otherwise, of hospitals, that—

“It is very much to be regretted that no such returns exist. And advertng again to the point at which I took up this particular illustration of the mode in which special death-rates have to be discussed, I must express my very strong feeling that these are matters on which doubt ought not to be suffered to continue. For, whether a particular hospital or group of hospitals has a disproportionate quantity of unsuccess in the treatment of disease, is not a question of sterile statistical curiosity. The consideration that, where such unsuccess exists, two out of the three solutions which can be suggested for its existence, are solutions which would criminate the hospital or group of hospitals to which they refer, is surely argument enough to show how very greatly it is the interest of properly conducted hospitals to cause full and truthful records of their respective experiences in such matters to be kept. And if it is the interest of such hospitals also, I will venture to say it is their duty, and the duty of all. Indeed I beg leave to extend this expression of opinion to the entire matter of hospital experience. The doings of hospitals and the relative successfulness of such doings, are of great public importance; and all questions concerning them ought to admit of being answered quite unambiguously to the public. For while hospitals claim to be exempt from taxation on the ground that they render service for which otherwise the community must be taxed, the community may surely require to be satisfied by precise information as to the value of the service which is rendered. In none but the largest hospitals could the task of keeping such records be of anything like troublesome amount. And in these particular cases, there exists an additional and special reason why even a really troublesome duty ought not on any account to be declined. Such hospitals are, always or generally, our great schools of professional study. And assuredly no hospital school of medicine and surgery is doing its full duty, unless it takes all possible means for recording the hospital experience in forms which shall test the efficiency of present practice, and ensure the promptest possible recognition of progress. No school of medicine deserves its name unless it be the scene of constant labour for improvement in professional science; and scientific medicine cannot be supposed to rest its belief on vague oral traditions of experience.

“Let not however the preceding observations be misunderstood. My point is, that during the present grievous imperfectness of hospital statistics, we cannot by

such statistics accurately compare even in part (much less in entirety), the success of one hospital with the success of other hospitals, nor, *à fortiori*, the healthiness of one hospital with the healthiness of others. And I deem this to be a public wrong, and a bar to scientific progress.”<sup>7</sup>

In its early history this Society appointed a special Committee to collect hospital statistics, and it presented two reports, which were of necessity incomplete from the imperfect records available, and the indisposition of some hospital authorities to furnish any information at all.

Valuable communications from Dr. Guy, and two papers of great interest from Dr. Steele on the subject, are also contained in our transactions, as well as occasional stray notices on partial and particular points, all more or less to the purpose; but no connected view of the whole subject as a special and important branch of vital statistics has ever been brought under our notice. This I cannot help regarding as a serious reproach, to whatever cause it may be due. Upon the subject I hope I may be pardoned for quoting from a paper which I read before the Epidemiological Society in May, 1877.<sup>8</sup>

In it I stated that “it cannot be contested that questions concerning the life, health, growth, development, decline, and decay of man in his mental and physical relations are of at least equal importance with matters concerning his social and political state. The movements of commerce, the administration of justice, legislative measures generally, and all that concerns the wellbeing of society as a civilised community, are constant objects of statistical inquiry, of which it would be difficult to overestimate the importance.

“And yet does every one of them, or do they all together, touch more closely the happiness and wellbeing of man as an individual entity, than those which affect each of us personally from the cradle to the grave?

“In the public discussions on almost all practical questions bearing on health and disease, such as hospital construction and management, the disposal of sewage in its hygienic relations, the causes of epidemic outbreaks of disease, and many similar matters, it is painful to witness the groping in the dark, and the widely divergent conclusions at which even observers of eminence arrive, from the absence of any thoroughly reliable foundation of fact on which to construct sound measures of prevention or removal. Statistics alone cannot solve such questions, but they can clear the way for their scientific consideration, and by determining the exact cause of an evil, lead by strictly inductive processes to the measures likely to be efficacious in removing it or mitigating its effects.

“Among the questions which press most urgently for solution is that, for example, of a proper system of hospital record to determine a number of questions which demand the scientific application of large numbers for their solution. The statistics heretofore collected are constructed on far too narrow a basis to afford more than a very rough idea of the risks to life from treatment in public institutions.”

The same view was taken by M. Husson in 1862 in his great work, “*Étude sur les Hôpitaux de Paris*,” of which, in the eleventh

<sup>7</sup> Sixth Report of the Medical Officer of the Privy Council, 1863, p. 51—an invaluable record.

<sup>8</sup> “Transactions of the Epidemiological Society,” vol. iv, part 1.



section, under the head of the medical statistics of hospitals, he remarked :—

“After an attentive study of all the material ameliorations which the administration has introduced into the service of the hospitals, it remains to examine the results attained by so many efforts and so much solicitude for the care of the sick.

“Figures, rigorously exact, can alone enlighten us upon this point; but it is unfortunately only too certain that beyond the tables of mortality published annually, and which present in an abstract form the relation of the numbers of admissions to that of deaths, the hospitals of Paris have never possessed the essential and indispensable elements of a rational and conclusive system of statistics.

“It is true that since 1837, the administration has gathered together from each hospital an account of their great surgical operations and their results. But this is only a special side of the question, and with regard to it we shall see anon how defective these statements, the object of a special examination of a particular subject, really are.

“It should be then with the greatest reserve that the tables published by the administration since 1804 must be studied, to ascertain the death-rate in the hospitals and the average duration of the treatment.

“These documents can be studied with profit only on the understanding that they contain general facts and summaries from which the light of circumstantial details is absent.”<sup>9</sup>

It is singular that so long ago as 1788, in the most remarkable work ever written on hospitals considering the time of its production, that of the celebrated M. Tenon, he makes the same complaint of the absence of all information, and even of the principles necessary to form a judgment of the perfections or imperfections of hospitals: “il fallait donc commencer par se les procurer.”

This subject has occupied my attention for many years past. When I landed in Madras in 1840, I stayed with the Inspector-General of Hospitals while the ship in which I left England was in the Roads, and he placed in my hands the returns for ten years of the European army in that Presidency to overrun for him. These I reduced to order and tabulated, and they were published in the “*Calcutta Journal of Natural History*.”

As the resident Professor of the Medical College, I collected and published, as I have already mentioned, the statistics of the hospital attached to it for the first seven years of my incumbency.

During my long connection with the Prison Department of Bengal, I published annually very detailed statistics of the diseases and mortality of the prisoners under my charge, in the form kindly furnished to me by the late Dr. Farr, long before I was personally acquainted with him.

In the three papers on the subject of prisons which I read before this Society, will be found an abstract of the principal facts relating to them contained in my official reports.

<sup>9</sup> “*Étude sur les Hôpitaux.*” Par Armand Husson. 4to. Paris, 1862, pp. 247—48.

I venture, therefore, again, to place within the reach of a wider circle of readers what I wrote on the subject in 1874, which was published in a professional publication of limited circulation.

In my communication to the Epidemiological Society on medical statistics in 1874, I stated that:—

“There is, probably, no branch of human knowledge to which the application of the numerical method is better fitted, and from which it is calculated to yield a richer harvest of valuable truth, than to the logical interpretation of the facts of medical science.

“There is, at the same time, certainly none other in which it is more necessary to guard against the fallacies incidental to, and, in some degree inseparable from, this method of inquiry; in which more rigorous accuracy is necessary in the collection of the facts themselves, and in which greater caution is demanded to avoid hasty or dogmatic deductions from mere numerical results.

“If it be true that the medical art is entirely one of observation, it is equally true that these observations should, from time to time, be subjected to the strict scrutiny that mathematical science alone is capable of supplying. By this means only can we hope to eliminate from them the sources of error to which all human observations are liable, and to deduce from them the general laws by which the phenomena to which they relate are explained, and from which the practical experience is to be derived that, in the eloquent language of Andral, ‘formulates the past, renders the present fruitful, and prepares the future.’

“At the same time it cannot be denied that the facts of medical science are so complex in their nature, so liable to be influenced by an infinite number of collateral and minor considerations, which it is well-nigh impossible to take into account with the minute detail necessary to absolute accuracy, as to render the application of numbers to their solution, much more difficult than to the interpretation of the facts of physical science, or even to those of social economy, which form the only sound basis of modern legislation.

“The careful collection of the statistics of population in the admirable returns of the Registrar-General of England, together with the periodical census now taken in all civilised countries, leave little to desire in making us acquainted with the logic of the facts to which they refer.

“But there is a logic underlying the facts which they do not, and probably are not intended to explain. They illustrate the cardinal conditions in which we live and die, increase and multiply, and toil and moil in the great struggle imposed upon us by modern society and civilisation. They likewise show us the weak points in our armour of defence against the thousand agencies constantly at work to deteriorate or destroy the fair fabric which has been created in God’s own image, and to abridge the natural span of existence accorded to it by the Divine Creator.

“The very valuable records of the late Health Department of the Privy Council, those of the Local Government Board, and the numerous sanitary reports perpetually issuing in never-ending streams at home and abroad, deal more or less completely with the weak points above referred to, endeavour to ascertain their causes, and to suggest remedies for their removal.

“But the very abundance of the materials at our command is itself a cause of confusion in dealing with the facts themselves, and so long as they are not subjected to rigorous analysis, in the only manner by which we can trace back the effects or incidence of particular diseases to their exact cause or causes, so long shall we be unable to deal with them efficiently in the measures necessary for their mitigation or removal.

“It would be out of place at the present time to consider or discuss the principles which should regulate the collection of medical statistics; yet it would not be without interest to ascertain why those principles are so little understood or applied now-a-days, when we are probably in a better position to use them with

effect than were our predecessors at any period since the discovery of printing, or since the more exact methods of inquiry and observation, now in general use, have been taught in our schools.

“Our national habits, and the reliance on individual exertion, to which we owe so much of our advanced position among nations, is probably some, if not a great hindrance to the conduct of scientific inquiry in such manner as to utilise the observations and experience of the many, by the skilled labour of a few. It is only by a central authority, armed with the power of compelling the collection of the facts in a proper manner, and possessing the knowledge and skill necessary to utilise them, that this desirable result can be obtained. Hence, I sometimes hear with regret, expressions indicative of what I cannot but consider a misapprehension of the real uses of a central authority.

“If rightly and judiciously directed, I regard such central authority as a fly-wheel to equalise and regulate the action of local self-governing bodies, and in no way to perform their functions or to interfere with their full and legitimate liberty of action, within the limits of the laws by which we are all bound.”

My apology for reproducing the above remarks is that in all the discussions on hospital reform the subject of their medical statistics appears to be almost completely ignored, an omission which I have endeavoured in some measure to supply.

TABLE A.—Hospitals of London arranged in Parishes.

Parish.	Area of Parish in Acres.	Population in 1881.	Number of Persons per Acre	Number of Hospitals in each Parish.	Number of Hospitals to the Square Mile.	Number of Beds.	Ratio of Beds to the Population, 1 to
Battersea .....	2,170	107,262	49	1	1 to 3'4	380	282
Bethnal Green .....	755	126,961	168	2	1 ,, 0'59	574	221
Bow .....	563	37,074	66	1	1 ,, 0'9	1,641	23
Camberwell .....	4,450	186,593	42	3	1 ,, 2'3	873	213
Chelsea .....	796	88,128	111	7	1 ,, 0'2	1,511	58
Clapham .....	1,137	36,380	32	1	1 ,, 1'8	56	649
Deptford .....	1,680	84,653	50	1	1 ,, 2'6	330	256
Fulham .....	1,716	42,900	25	1	1 ,, 2'7	240	179
Greenwich .....	1,741	46,580	27	1	1 ,, 2'7	247	188
Hackney .....	3,297	163,681	50	4	1 ,, 1'3	864	182
Hammersmith .....	2,287	71,939	31	1	1 ,, 3'6	44	1,635
Hampstead .....	2,248	45,452	20	2	1 ,, 1'8	342	133
Islington .....	3,107	282,865	91	6	1 ,, 0'8	1,492	189
Kensington .....	2,190	163,151	74	3	1 ,, 1'1	1,667	98
Kingston .....	7,229	35,829	5	1	1 ,, 11'3	150	239
Lambeth .....	3,942	253,699	64	5	1 ,, 1'2	2,185	116
Lewisham .....	5,774	53,065	9	1	1 ,, 9'0	33	1,608
Mile End Old Town .....	679	105,613	156	1 & 1 partly	—	453	—
Newington .....	631	107,850	171	1	1 to 1'0	572	188
Paddington .....	1,251	107,218	86	3	1 ,, 0'6	221	485
Plumstead .....	3,388	33,250	10	1	1 ,, 5'3	213	156
Rotherhithe .....	754	36,024	48	1	1 ,, 1'2	388	93
Saffron Hill .....	30	3,980	133	1	1 ,, 0'05	24	166
St. Andrew, Holborn .....	112	28,874	258	6	1 ,, 0'03	100	28
St. Anne, Soho .....	54	16,608	307	5	5 ,, 0'08	148	112
St. Bartholomew-the-Less .....	4	819	205	1	1 ,, 0'006	710	1
St. Clement's Danes .....	53	10,280	194	1	1 ,, 0'08	200	51
St. George, Hanover Square .....	1,119	89,573	80	3	1 ,, 0'56	418	214
„ Southwark .....	284	58,652	207	3	1 ,, 0'14	386	152
„ in-the-East .....	243	47,157	194	1	1 ,, 0'4	453	104
St. Giles-in-the-Fields .....	123	28,701	233	1	1 ,, 0'2	25	1,148
St. James, Westminster .....	162	29,941	184	1	1 ,, 0'3	21	1,426
St. John, „ .....	211	35,496	168	1	1 ,, 0'3	12	2,958
St. Leonard, Bromley .....	608	64,359	106	2 & 1 partly	—	Included in Bow	—
St. Luke .....	239	46,849	196	4	1 to 0'09	260	—
St. Margaret, Westminster .....	604	24,430	40	1	1 ,, 0'25	215	113
St. Martin-in-the-Fields .....	286	17,508	63	2	1 ,, 0'2	430	41
St. Marylebone .....	1,506	154,910	103	9	1 ,, 0'27	575	269
St. Olave .....	48	2,274	47	1 partly	1 ,, 0'1	690	4
St. Pancras .....	2,672	236,258	88	6	1 ,, 0'7	988	239
St. Saviour, Christchurch .....	77	13,663	177	1	1 ,, 0'1	12	1,139
St. Stephen .....	27	1,799	67	1	1 ,, 0'04	100	18
Shadwell .....	68	8,170	120	1	1 ,, 0'1	90	91
Shoreditch .....	648	126,591	195	3	1 ,, 0'3	987	128
Spitalfields .....	73	21,340	292	1	1 ,, 0'11	30	711
Stoke Newington .....	638	22,781	36	1	1 ,, 1'0	28	813
St. Saviour, Surrey .....	127	14,999	118	1 partly	1 ,, 0'4	—	43
Wandsworth .....	2,433	28,004	12	2	1 ,, 1'9	1,190	24
Whitechapel .....	170	30,709	181	2	1 ,, 0'1	1,489	21
Total .....	64,404	3,380,892	52	110	1 to 1'1	24,037	1 to 14

TABLE B.—Hospitals arranged in Districts.

Registration Districts.	Area in Acres.	Population in 1881.	Number of Persons per Acre.	Number of Hospitals in each District.	Number of Hospitals to the Square Mile, 1 to	Number of Beds.	Ratio of Beds to the Population, 1 to
<b>WEST DISTRICT.</b>							
Kensington .....	3,441	270,469	79	6	1'2	1,888	143
Fulham .....	4,003	114,839	29	3	0'5	556	207
Chelsea .....	796	88,128	111	7	5'8	1,239	71
St. George, Hanover Square	1,943	149,748	77	5	1'6	645	232
Westminster .....	216	46,549	215	6	17'1	169	275
<b>NORTH DISTRICT.</b>							
Marylebone .....	1,506	154,910	103	10	4'3	856	181
Hampstead .....	2,248	45,452	20	2	0'6	342	133
St. Pancras .....	2,672	236,258	88	6	1'5	707	334
Islington .....	3,107	282,865	91	6	1'25	1,492	189
Hackney .....	3,935	186,462	47	5	0'8	892	209
<b>CENTRAL DISTRICT.</b>							
St. Giles .....	245	45,382	185	1	2'6	25	1,815
Strand .....	403	33,582	83	3	4'7	430	78
Holborn .....	816	151,835	186	11	9'1	714	212
London, City .....	668	51,439	77	2	2'0	810	63
<b>EAST DISTRICT.</b>							
Shoreditch .....	648	126,591	195	3	3'0	987	128
Bethnal Green .....	755	126,961	168	2	1'8	574	221
Whitechapel .....	378	71,363	189	3	5'1	1,519	47
St. George-in-the-East ....	243	47,157	194	1	2'6	453	104
Stepney .....	462	58,543	127	1	1'4	90	650
Mile End Old Town .....	678	105,613	155	1	1'0	453	233
Poplar .....	2,335	156,510	67	4	1'1	1,641	95
<b>SOUTH DISTRICT.</b>							
St. Saviour, Southwark ....	1,119	195,164	174	5	3'0	970	201
St. Olave .....	1,506	134,632	89	2	0'85	1,078	125
Lambeth .....	3,942	253,699	64	5	0'8	2,185	116
Wandsworth .....	11,455	210,434	18	4	0'2	1,626	129
Camberwell .....	4,450	186,593	42	3	0'4	873	214
Greenwich .....	3,427	131,233	38	2	0'38	577	227
Lewisham .....	11,436	73,327	6	1	0'056	33	2,222
Woolwich .....	6,500	80,845	12	1	0'1	213	379
<b>Total .....</b>	<b>75,334</b>	<b>3,816,483</b>	<b>51</b>	<b>111</b>	<b>0'9</b>	<b>24,037</b>	<b>1 to 159</b>

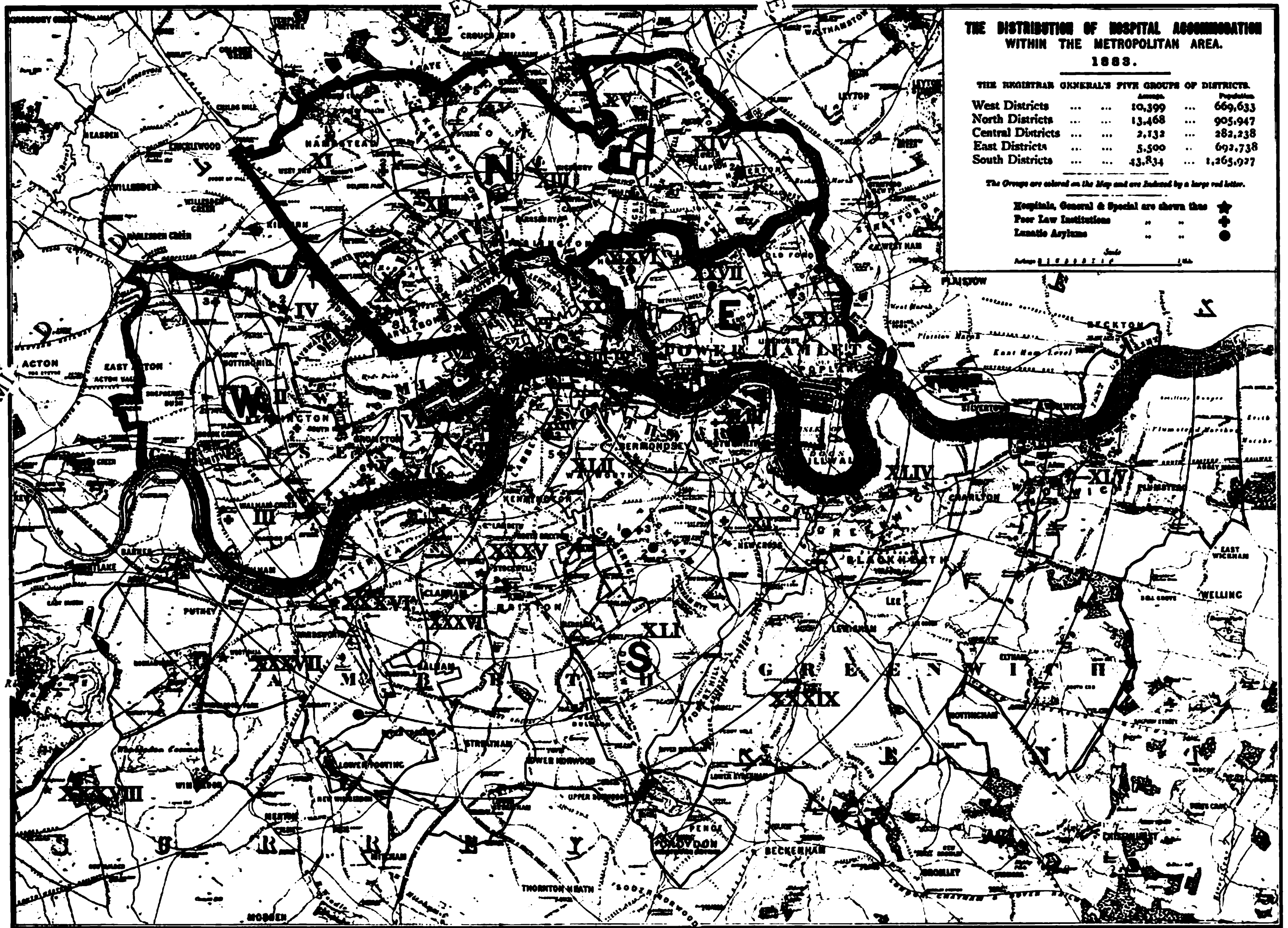
TABLE C.—*Index to Map. Alphabetical List of the Metropolitan Hospitals in the WESTERN DISTRICT.*

Hospital.	Parish.	Number of Parish on the Map.	Number of Hospital on the Map.
Belgrave Hospital for Children .....	St. George, Hanover Square	VI	1
Cancer Hospital, Brompton .....	Chelsea	V	1
Chelsea Infirmary, Cale Street, Chelsea.....	"	V	6
Cheyne Hospital for Children .....	"	V	2
Epidemic Hospital (Small Pox) .....	Fulham	III	—
Fulham Union Infirmary.....	Chelsea	V	—
French Hospital, Leicester Square .....	St. Anne, Soho	XIX	1
Hospital for Children, Maida Vale .....	Paddington	IV	3
" Consumption, Fulham Road .....	Kensington	II	1
" Women, King's Road .....	Chelsea	V	5
" " Soho Square .....	St. Anne, Soho	XIX	2
" " and Children .....	St. John, Westminster	VIII	—
Kensington Infirmary, Marloes Road.....	Kensington	II	2
Lock Hospital for Men.....	St. Anne, Soho	XIX	3
" Women .....	Paddington	IV	2
Marylebone Infirmary .....	Kensington	II	3
National Hospital for Heart Disease .....	St. Anne, Soho	XIX	4
Royal Orthopædic Hospital .....	St. George, Hanover Square	VI	2
St. George's Hospital, Hyde Park Corner .....	"	VI	3
" Infirmary, Fulham Road .....	Chelsea	V	7
St. John's Hospital for Skin Disease .....	St. Anne, Soho	XIX	5
St. Mary's Hospital .....	Paddington	IV	3
St. Raphael's Hospital for Men .....	Chelsea	V	3
Throat Hospital.....	St. James, Westminster	VII	—
Victoria Hospital for Children .....	Chelsea	V	4
West London Hospital.....	Hammersmith	I	—
Westminster Hospital .....	St. Margaret, Westminster	IX	—

TABLE C *Contd.*—*Index to Map. List of Metropolitan Hospitals in the CENTRAL DISTRICT.*

Hospital.	Parish.	Number of Parish on the Map.	Number of Hospital on the Map.
Chest Disease, Hospital for .....	St. Luke's .....	XXII	2
Children with Hip Disease, Hospital for .....	St. Andrew, Holborn .....	XX	1
Fistula, St. Mark's Hospital for .....	St. Luke's .....	XXII	3
Homœopathic Hospital, the London .....	St. Andrew, Holborn .....	XX	4
Incurable Women, Home for .....	" .....	XX	2
Lying-in Hospital, the City of London .....	St. Luke's .....	XXII	1
Ophthalmic Hospital .....	St. Stephen .....	{ XXIII and XXIV }	1
Orthopædic Hospital, the City .....	Saffron Hill .....	XXI	1
Paralysed and Epileptic, the National Hospital for .....	St. Andrew, Holborn .....	XX	5
St. Bartholomew's Hospital.....	St. Bartholomew-the-Less	{ XXIII and XXIV }	2
St. John's and St. Elizabeth's Hospital .....	St. Andrew, Holborn .....	XX	6
St. Luke's Hospital for Lunatics .....	St. Luke's .....	XXII	4
Sick Children, Hospital for .....	St. Andrew, Holborn .....	XX	3





THE DISTRIBUTION OF HOSPITAL ACCOMMODATION  
WITHIN THE METROPOLITAN AREA.

1883.

THE REGISTRAR GENERAL'S FIVE GROUPS OF DISTRICTS.

	Average	Population
West Districts ... ..	10,399	669,633
North Districts ... ..	13,468	905,947
Central Districts ... ..	2,132	282,238
East Districts ... ..	5,500	693,738
South Districts ... ..	43,834	1,265,927

The Groups are colored on the Map and are Indicated by a large red letter.

Hospitals, General & Special are shown thus ★  
Poor Law Institutions " " +  
Lunatic Asylums " " ●

Scale 1:100,000  
Author J. C. B. & Co. Ltd.





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Poor Law Institutions	+
Lunatic Asylums	●

Scale  
Furlongs 8 7 6 5 4 3 2 1 0 1 Mile

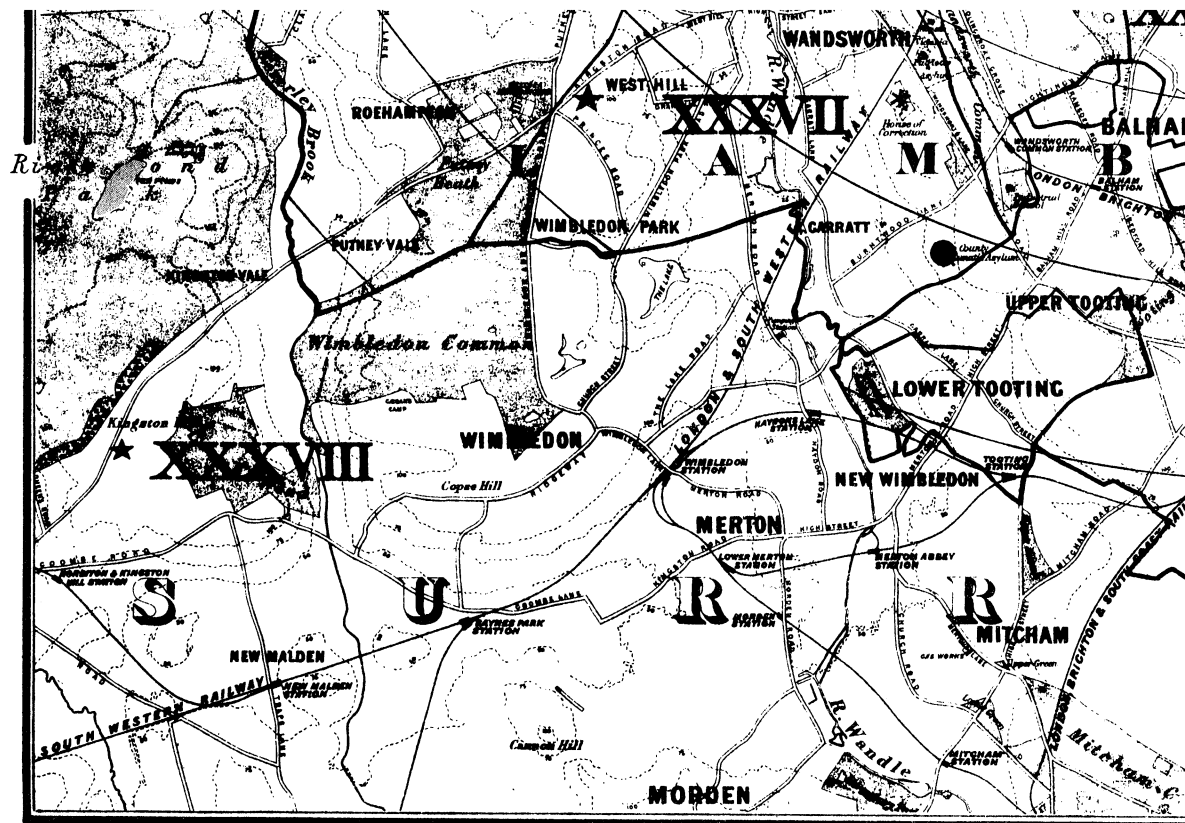


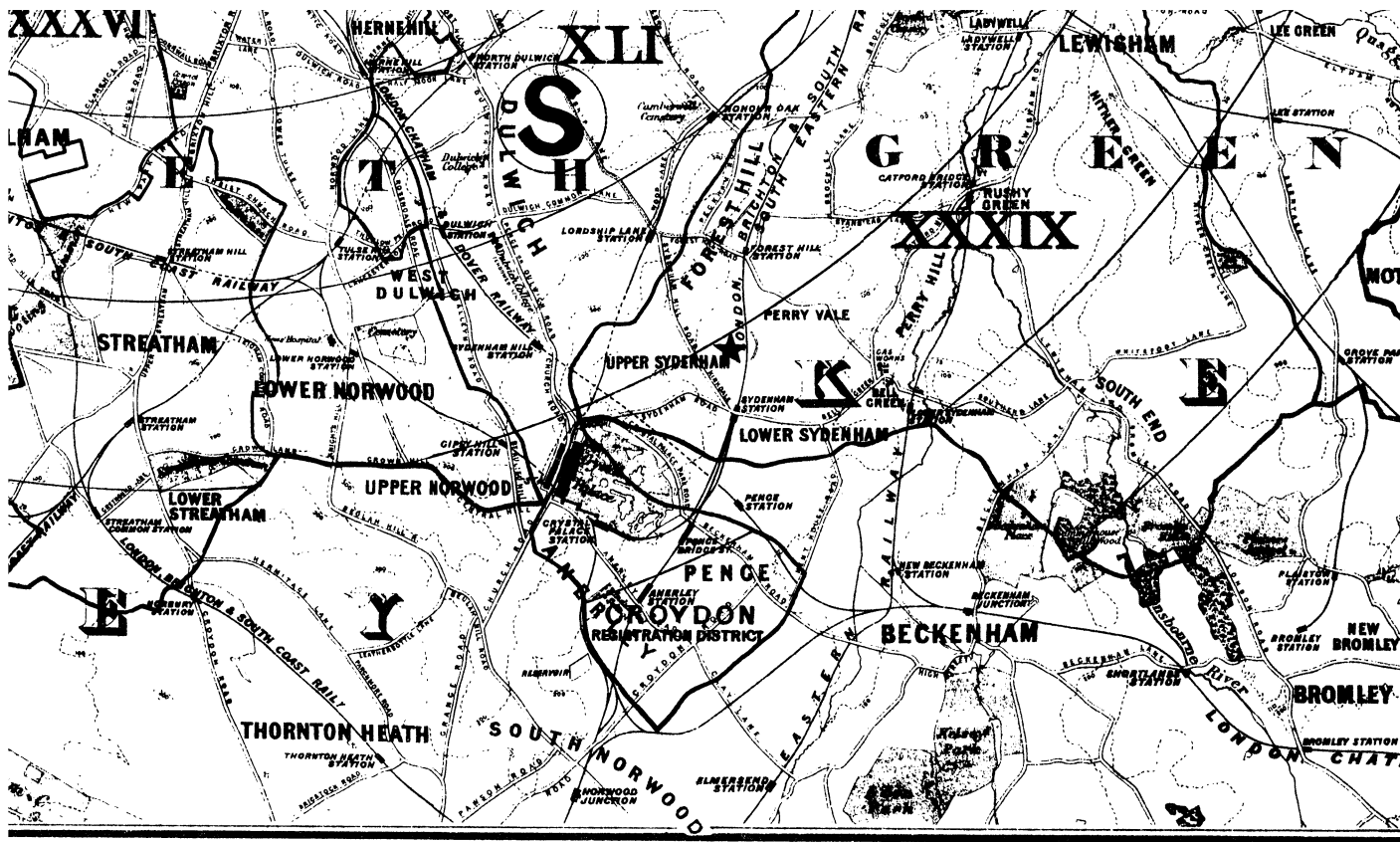


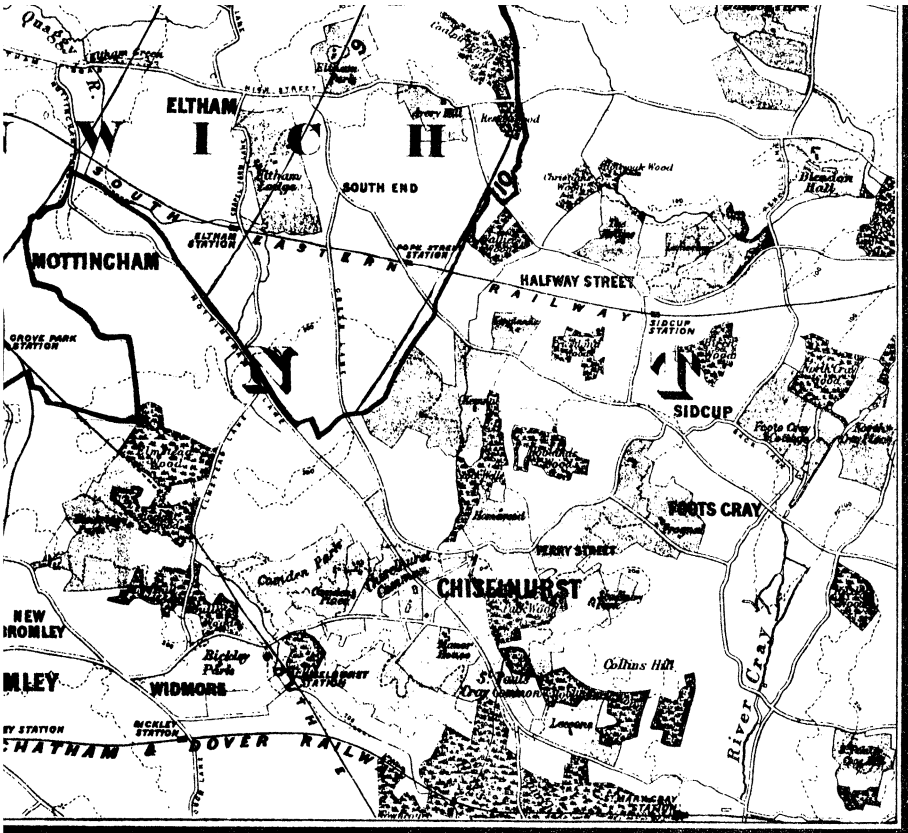


TABLE C *Contd.*—Index to Map. List of Metropolitan Hospitals in the NORTHERN DISTRICT.

Hospital.	Parish.	Number of Parish on the Map.	Number of Hospital on the Map.
Cancer, St. Saviour's Hospital for .....	St. Pancras .....	V	1
Consumption Hospital, North London .....	Hampstead .....	XI	1
Epilepsy, Hospital for .....	St. Marylebone .....	X	1
Eye Hospital, Western .....	" .....	X	8
Fever Hospital, Hackney .....	Hackney .....	XIV	2
German Hospital .....	" .....	XIV	1
Great Northern Hospital .....	Islington .....	XIII	1
Hackney Infirmary .....	Hackney .....	XIV	4
Holborn Infirmary .....	Islington .....	XIII	5
Invalid Asylum, Stoke Newington .....	Stoke Newington .....	XV	—
Islington Infirmary .....	Islington .....	XIII	6
London Fever Hospital .....	" .....	XIII	2
Lying-in Hospital, Queen Charlotte's .....	St. Marylebone .....	X	5
" St. Saviour's .....	Islington .....	XIII	3
Middlesex Hospital, the .....	St. Marylebone .....	X	2
Ophthalmic Hospital, Western .....	" .....	X	9
Orthopædic Hospital, National .....	" .....	X	3
Royal Free Hospital .....	St. Pancras .....	XII	3
Samaritan Hospital, Lower Seymour Street, W. ....	St. Marylebone .....	X	7
Sick Asylum, Central London, Cleveland Street ..	St. Pancras .....	XII	7
" Highgate, N. ....	" .....	XII	5
Small Pox Vaccination Hospital, Upper } Holloway .....	Islington .....	XIII	4
Small Pox Hospital, Hackney .....	Hackney .....	XIV	3
" Hampstead .....	St. Pancras .....	XI	2
Stone, St. Peter's Hospital for .....	St. Marylebone .....	X	6
Temperance Hospital, London, Hampstead } Road .....	St. Pancras .....	XII	2
Throat Hospital, Central London .....	" .....	XII	1
University College Hospital .....	" .....	XII	4
Women, New Hospital for .....	St. Marylebone .....	X	4







*London. Stanford's Geog. Estab.*