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SECOND and CONCLUDING REPORT of the NINTH INTERNATIONAL
STATISTICAL CONGRESS, held in BUDA-PESTH, in September, 1876.
By FREDERIC J. MOUAT, M.D., F.R.C.S., *Foreign Secretary,*
Statistical Society of London.

IN my preliminary report of this Congress, read at the opening meeting of the past session, I brought down the proceedings to the commencement of the sectional work, and accompanied my statement with remarks on the organisation and procedure of the Congress as an international institution for the cultivation and advancement of statistical science.

My present and final general report is devoted to a summary of the work done in the various sections, and to recording, as succinctly as possible, the practical results of the deliberations of the Congress, on the numerous questions submitted for examination.

I have experienced considerable difficulty in the selection of the plan of condensing the report of the results of the work of each section, which appears to be the best adapted to convey a clear impression of the questions themselves, and of the resolutions arrived at, with the brevity and clearness necessary for their right understanding. On the whole, I deem it desirable to follow, in this respect, the report and resolutions as drawn up by M. Keleti, the actual president of the Permanent Commission. In this publication, the work of each section is treated separately, and kept distinct throughout.

To the first section, under the joint presidency of MM. Semenow and Hunfalvi, was assigned the consideration of the theory of statistics, population, and the statistics of large cities.

In the first category was placed the question of statistics as a branch of instruction in primary and secondary schools, and in the higher education of colleges and universities. This important subject has received a considerable amount of attention in some countries, more particularly in Germany, where the means of acquiring a knowledge of statistical methods are afforded to the *employés* of some of the statistical bureaux. The object of making it a special branch of education, however, goes considerably beyond this, and is designed to popularise a knowledge of statistical methods from the earliest point at which they can with propriety be introduced in education, to the highest standard of instruction,

when strictly scientific methods can be applied to the study of sociology and political economy.

The result of an animated discussion was, to discard it from primary schools, but to introduce it by cartographic, diagrammatic, and similar methods into all other educational institutions, gradually increasing the philosophic exactness of its treatment, so as ultimately to require a knowledge of statistics in all examinations for administrative services, and for the diploma of Doctor of Political Science—a degree as yet unknown to us.

As all the elements which enter into the constitution of statistics are not yet determined; as there are said to be some two hundred definitions of the word itself; as very many educated persons still decline to regard it as a branch of science; and as neither the men, the books, nor the other instruments of statistical instruction at present exist, or are accessible, much time must, of necessity, elapse, before effect can be given to this resolution.

It appears to me also to be open to question whether we are not already overloading the curriculum of study in nearly every branch of elementary, general, and scientific education, so as to reduce the acquisition of knowledge too much to a mere mechanical proceeding, in which the memory is exercised to the detriment of the reflective faculties, and the reign of Cram is extending its blighting and baneful influence.

The next subject of discussion referred to the basis on which exact tables of mortality should be constructed. Two learned reports were read by Messrs. Becker and Bodio, advocating different methods of treating the question, but each counselling greater minuteness and exactitude in the collection of the data, and greater care in the elimination of disturbing causes. Both methods appear to me to be too fanciful and difficult to carry into effect, and to be too speculative in their nature ever to be adapted to the rapidly fluctuating character of most populations, in this age of constant change and movement. I do not reproduce the exact text of the resolutions, as the question must, after all, be determined by the experienced administrators who are engaged in collecting the statistics of life and death in different countries; and who, even now, find it too difficult to get at the leading facts in the simplest form for analysis, record, and reference, to venture to introduce details and complications which would defeat their primary object.

The papers were somewhat polemical in character, and brought out a little too prominently the views of minorities, who, being defeated in the section, carried their contest to the General Assembly—a body which was quite prepared to accept any views, however speculative and impracticable. Accordingly, every conclusion presented was adopted by the said General Assembly—by

no means an inapt proof of the utter uselessness of submitting questions carefully considered and determined in Committee to a mixed body, of which the great majority know little, and care less for the whole matter.

The statistics of great cities were relegated to a sub-section consisting of a number of communal statisticians and representatives of great cities who were present at the Congress, and whose community of objects and subjects of investigation gave a close interest to their discussions. They hoped that in future Congresses this sub-section would be raised to the dignity of a separate section.

The special points considered by them were the finances of great cities, embracing every head of revenue, receipts (ordinary and extraordinary), and expenditure; periodical returns of the movements of population, including a correct estimate of the death-rate; and the sanitary statistics of towns.

Each of these questions will need a considerable amount of special inquiry, before any definite practical conclusions can be arrived at, as to the best means of collecting and collating the data desired. With respect to the first-named, it will be well nigh impossible to attain any fixed basis of comparison, so long as the relations of different forms of municipal government and taxation are unknown, and the most widely diverse social conditions of the inhabitants exist.

Regarding the second head, the following resolutions were adopted:—

1. The estimation of the mortality rate of great cities must be entirely based on the sum total of deaths, including in it strangers who die in hospitals, hotels, &c., as well as all deaths among the soldiery, which must be included in the mortality of the city whenever the information can be obtained.

2. The whole number of deaths must be brought into relation with the mean population of the year, calculated on the two preceding census returns, and on the arithmetic rate of annual increase.

The third subject embraced the provision of weekly returns of births, deaths, and their causes, the latter in considerable detail, as to the diseases and other sources of mortality, the different sections of the city in which they occurred, &c., &c.

A regular system of quarterly and annual returns, similar to those of the General Registry Office in England, was likewise advocated.

In the second section, presided over by M. Yvernès, the subjects of the relapses of criminals, and the international statistics of the registry of landed property and of mortgages, were considered and discussed.

A return to criminal courses is rightly considered the touchstone or crucial test of the success or failure of penal laws and of prison discipline, and the validity of the test can only be determined by a careful collection of the facts and figures connected with the trial and condemnation of criminals. The distinction between the part to be taken by statistics and that devolving upon Governments and legislatures in dealing with this important branch of judicial inquiry, was rightly drawn in the very practical report submitted by M. de Sterlich. After an animated and exhaustive discussion of the different aspects of relapse in its strictly legal and general relations, and the impossibility at present of attempting an uniform system of international judicial statistics, the following propositions were adopted :—

“ The Congress expresses a hope that criminal statistics will be made to provide the means of studying the movements of relapses, and the influence of different penitentiary systems on the morality of prisoners.

“ It considers that to obtain this in a practical form it is necessary :

“ 1. To adopt an exact and simple system of inquiry and record of relapse. To this end the Congress again calls the attention of Governments to the adoption of judicial rolls or registers (*casiers judiciaires*) such as exist in France, in Italy, and in Portugal, or of periodical registers such as are found in Russia. It is believed that an interchange of conviction returns would add to the protection of society.

“ 2. To record by means of summaries of these registers annual statements in an alphabetical form of all relapsed or reconvicted criminals, their names, surnames, age, civil status, profession, origin, domicile, degree of instruction, all antecedent sentences (their nature and duration), the place in which they were undergone, the period, and the freedom from further pursuit.

“ 3. To cause to be drawn up by the directors of prisons annual and alphabetical lists of all discharges from prisons, containing, in addition to facts relating to the individual released and the sentence suffered :

“ a. The length of time passed in the prison.

“ b. The occupation followed during imprisonment.

“ c. That learnt or exercised during detention.

“ d. The state of education on entering and on leaving the prison.

“ e. Whether discharged by fulfilment of sentence or pardon.

“ f. The amount of earnings given on release.

“ g. The assistance given by prisoners' aid societies, before or after release.

“ 4. To establish a certain conformity in the state of the re-

“ convicted as detailed in the lists of the liberated, and to endorse the sentences passed upon them since liberation.

“ 5. To restrict inquiries regarding relapses to those who have been punished with more than a year of loss of liberty, and to those who have been set free in the year of observation, or in the two preceding years.

“ As to the heads of information which should be found in criminal statistics, for the reconvicted, the principal are:—

“ 6. Sex, civil status, degree of education, profession, domicile —town or country—age at first and last conviction, and first and last offence.

“ 7. For penitentiary establishments.

“ *a.* Whether cellular or in community, industrial or agricultural.

“ *b.* The character of the establishment, public or private.

“ *c.* Sex and age—men and women above 20 years: boys and girls under 20 years.

“ As respects each establishment, it would be useful to know the total population on the 31st of December, and the number of liberated. For these the duration of punishment undergone, the amount of earnings made over on release, and lastly, for the reconvicted, the number of times they have been caught and condemned since their liberation, and during the time indicated in section five, the nature of the new offences committed, and the result of the trials.

“ 8. A similar record for adults and children, aided by discharge societies, and for those who have had the benefit of tickets of leave. The record of relapse in all that concerns these is of the greatest importance.

“ 9. As often desired by the Congress, criminal statistics relating to relapse and prison discipline should be preceded by judicial notices to render them more exact and readily intelligible.

“ 10. The statistics of military tribunals should be added to those of civil courts, in all cases relating to offences against the common weal.”

Having had considerable experience of prisons, prison registers, and criminals, during and after imprisonment, I am afraid that I cannot concur with the section in considering these resolutions to be either simple in character, easy to procure, or, when obtained, to apply to useful purposes.

I submitted to the section the far more simple and efficient system in use in Great Britain, which I was charged to present by Colonel Du Cane, but, as it is not even referred to, I presume it was either not understood, or not considered. I was unable to

remain in the section to explain it myself, hence probably the omission.

In some important particulars Great Britain is in advance of the rest of the world in matters connected with convicts and their management, and with the repression of crime, and we assuredly have little, if anything, to learn from France, Italy, Portugal, or Russia regarding them. Where personal liberty is so carefully guarded as it is amongst us, and none of the strange forms of judicial procedure which obtain in some of the countries referred to would be tolerated for a moment, it is surely worth the while of continental statisticians to study our forms, procedure, and records, more than they appear at present to do.

I was surprised to find in the corresponding section at St. Petersburg even eminent jurists unacquainted with the existence of the Indian criminal code, probably the most complete and scientific body of criminal law in existence. The code of criminal procedure of that country is likewise deserving of careful study, if our Congress ever hopes to be able to devise an international system of nomenclature of crime and of criminal statistics.

The report on the subject of international statistics of land tenure and mortgages points out clearly why it is impossible, at present, to deal with the question in more than a very general manner, so diverse are the systems prevailing in different countries in regard to the published records on the subject. It might have gone further and shown that a careful and exhaustive study of the laws regulating the tenure, transfer, and other conditions of landed property, in all countries, is absolutely necessary before anything like agreement as to the best means of obtaining and recording the facts relating to it can be hoped for. The subject is one, however, which should never be lost sight of in these international congresses, for there are few questions more intimately associated with the politico-economic condition of a country than that of land tenure. Instead, however, of dealing with so great and complicated a question in a full and comprehensive manner, embracing all particulars regarding it, I cannot help thinking that it would be better to treat it in a strictly analytic fashion, by separating it as far as possible into its component parts, and considering each separately. It will take several congresses to exhaust these in detail, and when this has been done it will be time enough to take it up synthetically, to bind up all in one comprehensive whole, and then lay down with some degree of authority the procedure best calculated to secure uniformity of record for international purposes.

As respects mortgages, the difficulty seems to me to be equally great, for until the laws and practices regulating them in different countries are clearly ascertained and placed on record, any figures

collected would have little real significance in an international sense. For these reasons I refrain from reproducing the resolutions of the Congress, as they will need much greater elaboration and discussion than they have yet received, before they can be accepted as guides.

The second and fifth sections were united to consider the question of the statistics of commercial and industrial joint stock companies, it having important judicial, as well as industrial and commercial bearings.

The vast development of joint stock enterprises in recent times, and the extraordinary frauds to which they are liable, as the records of our own criminal courts too painfully testify, invest this subject with exceptional interest. With it again is intimately associated the question of limited liability, which has given a fresh impulse and a new aspect to most commercial and industrial enterprises, but which is not without its dangers to the unwary and inexperienced. As the question was submitted for consideration by a master mind, and was treated by him in a memoir of remarkable clearness and close and logical reasoning, you will perhaps concur with me in considering that it would be as well to place on our records the detailed report and resolution of the combined section.

“ Dr. Engel, the author of the memoir contained in the programme, having explained the leading idea which had guided him in his work, proposed to the Congress to vote the resolutions necessary for the detailed treatment of the statistics of industrial and commercial associations, which would also permit of a deeper study of the question, and make better known the true nature of the things considered, than was at present the case. As mentioned in his memoir, joint stock and limited liability companies have, in the last ten years, attained truly prodigious extension. As no member of the two sections doubted the great benefits resulting from collective enterprises, founded on the principle of the limited liability of the individuals engaged in them, so no one of them protested, when mention was made of the destructive loss occasioned by the increase of fictitious enterprises, or the ill success of a great proportion of joint stock undertakings.

“ Considering the short time the joint section could give to the discussion, Dr. Engel proposed to eliminate from the question all associations or collective enterprises which were not joint stock or limited, so as to concentrate attention upon these exclusively. This manner of dealing with it was objected to. It was urged that co-operative and credit associations played an equally important part in the economic life of nations; but in reply to this attention was directed to the resolutions of the Berlin Congress in 1863, when this question was considered in an exhaustive manner

“ by the men most competent to deal with it, such as M. Schultze-Delitsch.

“ Many members, who thought that detailed statistics of joint stock and limited liability companies ought in the first instance to be brought to bear upon the prevention of a renewal of the financial disasters from which we are still suffering fatal consequences, endeavoured to deduce as a corollary from that point of view, the idea that statistics as a preventive measure, would not only appear too late, but that, in a time of general panic, they would be of little use. They also thought that if undertaken by the State or by statistical bureaux, Governments, in the eyes of ignorant persons, would be exposed to the risk of sharing the responsibility of the acts of Societies, which it must include in the category of official statistics.

“ In reply to these fears, it was alleged that the statistics of joint stock companies, would have no necessary connection with police or justice, but would be of the greatest importance as well for the public administration, as for the rest of the world, in showing how much of private fortunes, embarked in those enterprises, acted and reacted on the economic condition of the people, aiding in that way the public good. One competent member went so far as to express a belief that the Congress would injure its reputation if it passed a negative resolution, to the effect that the statistics of joint stock societies were superfluous or unnecessary.

“ Several members proposed to adjourn the question, and to refer it back to the permanent commission to prepare a fresh report regarding it for the next Congress. But Dr. Engel energetically opposed this on the ground that it came from the permanent commission of 1873, and to refer it back to what was practically the same body would be a mild form of rejection. The majority adopted this view, when the following propositions were adopted, Dr. Engel being the reporter. These propositions were substantially those of the memoir, with a few modifications adopted in consequence of the restriction of the discussion.”

1. There is urgent need in every State for statistics of joint stock and limited liability associations.
2. Statistical reporters shall endeavour to obtain for each company or association the data indicated in Dr. Engel's formulary.
3. The data obtained shall be concentrated according to the groups and classes of the industrial census. A recapitulatory table, proposed according to a fixed formulary, shall present, with reference to the societies grouped together, the details of the individual bulletins.

4. The inquiry into these societies shall be renewed every five years.
5. In order that the statistical bureaux may be kept constantly informed of the creation of new or the dissolution of old companies, and that they may keep count of all important events relating to them, those societies shall be required by law to transmit, as quickly as possible, to the said bureaux, two printed copies of every printed notification issued by them.
6. The statistical bureaux shall take note of the value of the shares and other deeds issued by those societies. They shall publish annually the minimum and maximum value of the shares of each, with the dates, as well as the rate on the 31st of December of all shares, obligations, and other claims issued by them.
7. Statistical bureaux shall compare the results of the returns of joint stock and limited liability companies, with the corresponding results of industrial and commercial returns, so as to throw light upon the question of the increasing transformation of individual into collective enterprises.

The resolutions were adopted by a great majority of the members present, and were followed by the questionnaire form of returns required, which I am unable to bring within the limits of this brief review. It is very complete, and drawn up with Dr. Engel's usual care and judgment.

Much of what is here required is already done in England, either under or without legislative compulsion. It is by no means certain, however, that the published balance sheets and accounts of a large number of our joint stock and limited liability companies are so constructed as to render the detection of fraud or fiction easy, except probably in relation to insurance companies or benefit societies, if the latter come fairly within the designation.

The third section was devoted to public health, under the presidency of Dr. Rupp. It considered and discussed the question of epidemic diseases generally, and of cholera in particular, from a statistical and international stand-point. In these days of rapid movement and intimate international communication, it would be difficult to exaggerate the importance of an early knowledge of the origin of epidemic diseases with a view to prevent their extension. I have in another place, and before a society specially devoted to the study of epidemics, analysed the work done in this section. It will be remembered that at the St. Petersburg Congress these questions were relegated to a sub-section, and the Russian physicians promised to subject the resolutions adopted to careful

inquiry and application in their own country, and to report the result to the ensuing congress. Few, if any, Russian medical men put in an appearance at Buda-Pesth, and no report was submitted, which is, I think, much to be regretted.

The defect of the resolutions arrived at in the capital of Hungary, is their impracticability. While it is undoubted that details are the life of statistics, and that they cannot be collected with too great regard to accuracy; it is equally true that it is useless to overload any inquiry with a multitude of microscopic minutiae, which are of little or no practical value, and which give even more trouble to analyse, than they do to gather together.

Moreover, in times of epidemics, and I can speak from experience, having passed through three or four of the most severe which ever occurred in the capital of British India, medical men are far too much harrassed with the heavy personal responsibility resting on them, to be able to make notes of all sorts of minute circumstances, necessary to a full understanding of such questions. They themselves are peculiarly exposed to the cause of epidemics from their constant contact with the sick and dying, and need a certain amount of rest and relief from the wearing exhaustion entailed by the making of minute records, after a hard day's work at the bedside, to enable them to go through the exertion required from them.

From such returns should, therefore, be excluded all that cannot be shown to offer some reasonable prospect of throwing light upon the origin, progress, and treatment of the disease. More than this it is idle to attempt, and visionary to hope to obtain.

The statistics of baths and mineral waters were also considered in the same section. The question is one of limited interest, and the therapeutical value of these agencies appears to me to be considerably over-rated on the continent of Europe. They are more often pleasant than profitable places of health resort, and the information regarding them which is contained in some of the special works devoted to balneology, seems to me to be quite sufficient for all present practical purposes.

It was scarcely deserving of the dignity of a special subject of discussion in the health section, which would be better occupied in the far more important, extended, and difficult field of therapeutical statistics generally, upon which there is little reliable information in existence.

Indeed, if the health section is not more carefully regulated in future, and its labours devoted to questions of pressing importance, and they are not treated in a plain, practical manner, without the introduction of microscopic details of which it is difficult to see the purport, or to estimate the value, it had better be suppressed.

Medicine is essentially a science of observation, and requires more rigorous exactness in the collection and examination of its facts than almost any other branch of art or science. Some of the greatest of its own cultivators, have stated that it contains more false facts than erroneous theories; and it is by no means creditable to us that we do not, even at the present moment, possess a thoroughly reliable body of hospital statistics, to determine whether the aggregation of the sick in large numbers and in great buildings, is a blessing or the reverse.

To the fourth section was assigned the question of agriculture, sylviculture and agricultural meteorology, all subjects of considerable importance and permanent interest. The information regarding crops and agricultural products generally is at present extremely vague, and difficult to condense and utilise for practical purposes. Uniformity of practice in the collection of the data, and the intervention of the State in exacting all that ought fairly to be required from farmers, landlords, and others engaged in the food supply of nations, is clearly legitimate. Our own returns contain a great deal of valuable information, but I am not sufficiently familiar with the question to be able to express an opinion as to whether they might not be improved, or in what direction change is required.

The periodical recurrence of famines in India invests the question of agricultural meteorology with exceptional interest to us. Great Britain herself being at all times dependent for a considerable portion of her food supplies upon other nations, a wet or a dry season, and a rich or a poor crop, simply means cheapness or dearness of food, and greater or less local distress, or the reverse; but, in India it signifies life or death, in the appalling measure exhibited in the famine now drawing to a close in Southern India, and on no less than three previous occasions within my personal knowledge.

The resolutions of the Congress, simple and practical, were as follows:—

- “ 1. The Congress recommends to the Governments of all countries, to cause the collection of special meteorological observations in connection with agriculture, to be submitted to a central authority, elaborated and published regularly by the State, or by scientific associations.
- “ 2. The Congress requests Governments to have regular monthly reports submitted by special agents (crop reporters) on the state of the cereal vegetation of their districts.
- “ 3. The Congress recommends Governments to take steps to secure observations regarding the influence of destruction of forests and replanting, on climate.

- “ 4. The Congress hope that observations regarding storms, hail, and periodic phenomena relating to plants and animals, should be gathered at as many points as possible in each country, and that the result of these observations should be centralised, co-ordinated, and published.
- “ 5. The Congress likewise trusts that a certain number of meteorological observatories should be in telegraphic communication internationally, to transmit weather prognostics, useful alike to agriculture and commerce. Those observations should be immediately made known to the crop reporters, and a knowledge of them spread abroad, to prevent the effects of frosts, inundations, &c.
- “ 6. The Congress charges the permanent commission to communicate their proposals to the Meteorological Congress to be held at Rome in 1877, and in the event of agreement between the permanent commissions of the two Congresses, to submit the definitive wishes of this Congress relative to agricultural meteorology, to the Governments of different countries.”

Much, indeed the greater part, of this is already done. In India there are special meteorological, forest, and agricultural departments, and crop reports are regularly submitted to the central authorities by the collectors of districts, and published in the official gazettes. I doubt, however, if the latter are collected by sufficiently skilled and accurate subordinate native agents to be of much use, as when I was in India, the revenue returns and market values were certainly not characterised by remarkable accuracy in Lower Bengal.

With respect to agriculture, I suspect that the Indian forest returns already contain a larger amount of information than is required by the Congress on the subject, but I have not had time to compare them.

The fifth section, devoted to Industry, was under the presidency of MM. Bouschen and Engel, and discussed the questions of house, home, or family industry; the statistics of institutions created in the larger industries for the benefit of the labouring classes; and of deaths and accidents in factories, resulting from the nature of the work, with assurance against these accidents.

It would be vain to attempt to condense the work done in this section, in the necessarily restricted limits of my report, for it was well and thoroughly done; indeed, I venture to recommend that it be translated *in extenso* and placed in the Miscellanea of a future number of our *Journal*, if room can be found for it. Now that questions regarding capital and labour are so thoroughly and unhappily to the front, and so many economic fallacies are sown

broadcast among the people, it becomes almost of national importance to collect correct and detailed data of all the facts and circumstances connected with the working classes, which have a direct bearing on their well-being and social relations, for their own information and guidance, and to direct legislation regarding them into sound and healthy channels.

When I mention that the chief reporters are Drs. Mayr and Engel, their names alone are guarantees of the value of their work. Among the questions are the mode of payment of salaries, savings banks, mutual aid (benefit and friendly) societies; diseases, disability, and deaths, among workmen; statistics of accidents, and insurance against them, and inability to work, which shows strikingly the extent of the field covered, and the importance of the interests involved in this branch of international statistics.

The last or sixth section was that of commerce and transport, in which was discussed the question of the best method of drawing up a general schedule and table of external commerce, and the statistics of railways and movement of internal commerce.

The former question was advanced a step beyond that reached in previous discussion of the subject, and a more complete list of articles of trade than had yet been published was produced.

But, without pretending to possess any special knowledge of trade returns, the system recommended appears to me to be much too complicated for general adoption, and to be difficult of adaptation to the mercantile transactions of different countries.

The subject of the statistics of railways and the movement of internal commerce, was relegated to a strong sub-committee for future consideration and future report. The tables contained in the memoir on the subject of railway statistics, separated from the movement of merchandise, by Mr. Giffen, were specially commended on account of their brevity and conciseness—qualities so seldom exhibited in any section of the Statistical Congress, as to merit the exceptional notice they received.

As this ends the proper business of the sections, and of the *compte rendu* of their reports and conclusions, I shall here close my brief review, without specific mention of the extraneous matters submitted to the General Assembly, and not contained in the programme of the Congress. The business of the International Congress should, I submit, be strictly confined to the questions agreed to be discussed, and not permit of the introduction of any extraneous matter whatever.

Two of the papers contained in this appendix do not, however, come within this category. The report of M. Yvernès on the progress made in the collection of international statistics, as settled by the Congress held at the Hague; and the reports of MM. Levasseur,

Mayr, and Ficker on the graphic exhibition—are documents deserving of careful study by all interested in the progress of statistical inquiry and research.

It is, I think, matter of much regret that room was not found at this Congress for the consideration of the statistics of treaties of commerce, as proposed by Professor Leone Levi. Some of these treaties were on the eve of expiry, and in regard to several there were such evident signs of a retrograde policy, as to have rendered it exceptionally interesting and important to obtain the views of the eminent statisticians of all countries assembled at Buda-Pesth, on the true principles of a sound and wise commercial policy, based on the results of the returns already obtained. The eminently injurious manner in which restrictive measures are applied, even to the smallest transactions of life, is so utterly opposed to progress and its resultant prosperity, that the most elementary principles of commercial enterprise and social success are evidently as little understood in some countries, as are the true relations of capital and labour by most of our trade unions.

The net result of the last congress may, I think, without any disparagement of the pains taken, of the earnestness exhibited, and of the intelligence displayed, be summed up in a very brief formula, viz.: that by undertaking too much, comparatively little was accomplished. It was a matter of somewhat plaintive regret in some sections, that the time allowed was quite insufficient for the discussion of the questions submitted; and one section actually begged, as a favour, from the organising committee, that the formularies submitted for its consideration should be put into the official language of the Congress in the *Compte Rendu*. This request was submitted by and through the reporter—one of the most distinguished members of the Congress, who was himself the offender in the matter.

Several matters which occurred at this Congress are calculated to call into question the usefulness of these international assemblies, and to make it desirable to inquire why the immediate and visible influence of the Congress in the advancement of statistics, is so small as to be almost imperceptible. The question is too large to discuss at the far end of my report. My own belief is that it is mainly due to the Congress undertaking too much at each of its meetings; to the eminently impractical and impracticable form in which many of its resolutions are submitted; to some errors of procedure; to the necessity of carefully digesting all existing statistics in each branch of inquiry, so as to know what we actually possess before we attempt to obtain more; and to determining what really constitutes Statistics, of which Dr. Engel states that no less than one hundred and eighty definitions exist.

The example of the illustrious Quetelet in the treatment of

statistical questions, may safely be recommended for imitation to all statisticians, for it is but another illustration of the soundness of the inductive philosophy which has caused all branches of physical inquiry to make such rapid advances in our own time, and which is now being applied with similar success to the solution of social and economic problems.

Concluding Remarks.

Having thus very briefly brought before you the heads of the work accomplished by the last International Statistical Congress, I again submit for your consideration my proposals for a change in its practice and procedure, with a few remarks on each. I see nothing to alter or modify in them. You will have gathered from my present report, that I consider the programme of the Congress to be too ambitious; that it attempts to accomplish too much, and that it would be better to restrict its attention for some time to come to such subjects as are of pressing and primary importance, and to digest and utilise the vast amount of crude but valuable material now in existence, which is practically lost from its scattered form and absence of arrangement.

My proposals are as follows:—

Proposition 1.—The programme of each Congress shall be prepared by the organising committee, in consultation with the leading statistical authorities of the place selected for the ensuing meeting. This programme, when finally settled, shall be printed and circulated to all statisticians and statistical bodies likely to take part in the congress, at least six months before the appointed time of meeting.

No change shall afterwards be permitted in the subjects selected for discussion, or in the sections into which they shall be divided for consideration.

It seems to me to be very desirable that the programme of each congress should be prepared by the permanent commission for the following reasons:—

The permanent commission has charge of all the interests of the congress during the intervals of their sittings. They will of necessity in the discharge of their important functions be well acquainted with the progress of statistical research and inquiry in all the countries represented by them. They will know in what exact direction further inquiry is necessary, and will in consequence submit to each congress only such questions as are of pressing importance, or need early solution. Much of the time of every congress seems to me to be devoted to the consideration of questions which are of limited interest and importance, and have no strictly

international bearings. The more limited and well defined the work attempted by each congress, the better and more thoroughly it will be done.

When all the great leading lines of inquiry have been exhausted, and an agreement has been come to for their international treatment on a uniform basis, it will be time enough to consider the detailed elements into which each may profitably be subdivided. That time is still far distant, and until it has arrived I am strongly of opinion that the strength of the congress should be applied to such subjects only as are of primary and immediate importance. The world generally is not yet sufficiently instructed to estimate statistical research at its true value, and until its results are presented to statesmen and those who direct and control legislation in all countries in such a form as to be readily mastered, it is vain to expect that much progress will be made in their practical application to the well-being of civilised communities.

The chief officers of the organising committee should, if possible, I think, be associated with the permanent commission in the preparation of this programme, in order that local questions of special interest and importance may be introduced into it. It is undoubtedly desirable to secure the active and intelligent co-operation of the statisticians of each country in which the congress is held, and I know of no better means of attaining this object than that suggested above. By this means, the resources and various other matters of national importance of each country will become better known to all, and assuredly they can no where be studied with greater benefit, than in their respective countries. The relation of its institutions to the social state of a country is direct and immediate, and there is no nation so far in advance of the rest of mankind in the age in which we live, as not to be able to profit and derive lessons of wisdom and tolerance from its neighbours. Apart from all this, is the feeling of amity and good will that is the invariable result of free and friendly intercommunion in such common objects of scientific interest.

Proposition 2.—All purely local arrangements for the Congress shall be made by the organising committee, to whom shall be entrusted the duty of giving effect to the programme already settled. The president and secretaries of the permanent commission shall be, *ex-officio*, members of the organising committee.

The object of this proposal is to keep the work of local organisation and arrangement entirely distinct from that of the permanent commission, and thus to prevent the confusion and uncertainty inseparable from the procedure of the present *avant-*

congrès. The local work is itself sufficiently heavy to occupy the whole time and attention of the local committee, and it would be considerably facilitated by the removal of the matters which have occupied the attention of the permanent commission during the preceding two or three years, and which demand more careful study and consideration than can be possibly given to them on the first assembling of the members of the congress.

The duty of carrying into effect the programme detailed by the permanent commission, would naturally devolve upon the local or organising committee, as it would be a strictly executive function. The presence of the president and secretaries of the permanent commission as *ex-officio* members of the organising committee, would secure the right understanding of the programme itself, and prevent the delay and confusion caused by the rediscussion of questions already definitely determined. The permanent commission would thus practically be in abeyance during the sitting of the congress, except as a consultative body in case of need, and would only resume its functional activity on the termination of the congress, when it would be reconstituted in accordance with the resolution adopted at St. Petersburg. Some such division of duties and responsibilities seems to me to be absolutely necessary in the altered constitution of the congress, to secure its harmonious and effective working.

Proposition 3.—All printed papers, discourses, and other documents intended for submission to the congress and for general distribution, shall be made over to the local secretaries, who shall be charged with their distribution, and shall prepare a printed form of receipt for signature by each person to whom the said papers are made over.

To those who witnessed the waste and the absence of order and method in the distribution of books and pamphlets at Buda-Pesth, the necessity of some such rule will be obvious. Many of the documents submitted to each congress are of permanent interest and value, and have cost considerable sums of money to print. It is not right or decorous that the members of the congress should have to scramble for them, and it is worse than wanton waste that they should fall into hands which *can* make no proper use of them.

A complete series should be collected for each member of the permanent commission, and for the acknowledged delegates of every statistical society represented at the congress. All surplus copies should be distributed among the remaining members of the congress in the order of their personal applications in writing, addressed to the secretaries of the organising commission. The formality of a

receipt would be a sufficient guarantee that the documents had really reached those for whom they were intended.

Proposition 4.—Official delegates shall consist of all statisticians accredited by their respective Governments, and of such members of statistical and other known societies, as may appoint them to be their representatives. The latter shall enjoy all the rights and privileges now accorded to the former.

The question of official delegates, their status, functions, and privileges, has been discussed in great detail at several of the congresses, and they have not been placed in their present position without much anxious thought and care. I venture, therefore, to re-open the question with much diffidence. Still the present practice appears to me to be liable to so many objections, and to fetter the action of congress so greatly, as to require reconsideration.

Considering the exceptional position occupied by official delegates, and the subordinate place assigned to all other members of the congress, I am of opinion, either that the number of official delegates should be limited to the representatives of sovereign States, or that their privileges should be extended to the accredited representatives of all recognised statistical societies as well.

Whatever may be the practice of continental States, official delegates from England in no way represent the Government of that country, inasmuch as no action can be taken on any matters submitted by them, except through the legislature of the country.

Again, the accredited members of statistical societies are entitled to more consideration than is at present shown to them, inasmuch as they pay their own expenses to the congress, and on their return to their homes can exercise a much wider influence on the opinion and action of their respective countries, than any other members of the congress, through the publications and discussions of the several societies which they represent.

I know of no valid reason why they should be excluded, as they are practically at present, from the various offices in the different sections, in which some at least of them could do good and efficient service.

So strong was the feeling on these points entertained by many of the English members at the last congress, that I feel sure that few of them will attend again, if some concession be not made in this direction.

The formation of the permanent commission has really changed the relations of the congress to the whole question of international statistics, and it would be well if the constitution of the congress

were now carefully re-considered, with special reference to this great and important change.

Proposition 5.—Previous to the assembly of the sections each day, a discourse on some branch of international statistics shall be furnished by some eminent statistician, selected by the permanent commission. This discourse shall be written in the official language of the congress, and shall be printed for general distribution, in the same manner as now obtains in the British Association for the Advancement of Science.

This is a new, and I venture to think by no means an unimportant feature of congressional work. Every scientific man in Europe is so well acquainted with the practical working of all scientific congresses, that the nature of the proposal needs no detailed exposition. For statistics, an authoritative view of each section of inquiry by a statist of eminence, will become one of the most important landmarks in the science, and in the entire absence of text books on statistical inquiry generally, as a branch of political economy and sociology, will give an impulse to the study which is much needed. It will greatly increase the interest of the congress itself, and tend more than anything I know of to advance the scientific study, practical application, and popularisation of statistics as a branch of science. Until in fact it has been shaped into something of a scientific form, this will be the best of all schools for the teaching of statistical methods.

Proposition 6.—The rules regarding the languages to be used, the length of speeches, and similar matters, shall be strictly enforced by the presidents of sections.

This rule is, I also think, very necessary, for unless exactness and regularity are observed particularly in the use of the languages allowed, confusion is certain to occur. The official reporters should be only for the languages sanctioned, and those who wish their speeches or communications to be incorporated in the transactions of the congress, should have them translated into those languages. At the Buda-Pesth Congress, while the resolutions communicated to the general assembly were in French, long discourses in other languages explaining their purport were allowed. This I hold to be a grave irregularity, which should not be permitted to recur, for obvious reasons. Indeed in some of the most important sections nearly everything was done in German, and one section had to beg of the organising committee to turn its proceedings into French.

Proposition 7.—All notices of deceased members shall be pronounced orally, and shall be in the official language of

the congress. This shall not prevent the distribution of written memoirs, should such be prepared by any member of the congress. These memoirs may be in any of the leading European languages preferred by the writer.

This, I think, is a necessary rule. The time of the congress is very precious, and will not permit of the reading of long written discourses with advantage. Oral addresses are always more animated and interesting than didactic discourses, and there are very few men of whom and their works an accurate outline cannot be given *vivâ voce* in a quarter of an hour. For permanent record, a more detailed analytical biography is no doubt desirable and requisite, and this is duly provided for in the second portion of the proposition.

Proposition 8.—The reports to the general assembly of the results of the deliberations of the sections, shall be strictly confined to the resolutions adopted by those sections after discussion, and shall be in the official language of the congress.

If the proceedings of the congress are properly reported from day to day, explanatory remarks on the resolutions adopted will be unnecessary. The great disadvantage of the present procedure is that it allows a reporter to introduce controversial matters into his remarks, which are altogether out of place in the general assembly, and occupy time and attention unprofitably.

It is most important that the resolutions of the congress should be correctly apprehended before the congress breaks up, and this, it seems to me, will be best accomplished by keeping them free from all extraneous matters.

Proposition 9.—The *procès verbal* of these resolutions shall be prepared, and, after being reported to the general assembly, be published at once by the secretaries of the congress for general distribution, in the same manner as the daily bulletins. These resolutions shall not be discussed by, nor submitted for the votes of the general assembly.

Very great practical inconvenience is at present caused by the unavoidable delay incurred in preparing the *procès verbal* of the final resolutions of the congress. By the adoption of the above proposal it can be prepared at once, and each delegate can carry it away with him, and consider it while all his impressions are fresh. The advantage of this course is so obvious as to need no further exposition.

The detailed *compte rendu* of the whole proceedings of the

congress can then be prepared with the care and deliberation necessary in that which will become matter of history and permanent record.

Proposition 10.—At the conclusion of the congress, the resolutions adopted shall be dealt with by the permanent commission, in such manner as the members of that commission may deem to be best fitted to advance the cause of statistical science and research in their international relations.

This is the most important consideration of all, for upon the careful working of the permanent commission will depend the future success of the international congress itself. Much of the past labour of that body has been without practical result, simply from the absence of an authoritative analysis and continuance of its work by a competent tribunal. This link is now supplied, and ought in the future to secure the presentation to every country represented at the congress, of the result of its deliberations in a plain and practical form.

In no other manner are its labours likely to find acceptance in Great Britain and her vast dependencies, where the people to a great extent govern themselves, and all legislative measures are subjected to careful public scrutiny and examination before they are submitted to the governing bodies, with whom they are not likely to find acceptance unless they are approved by the public voice.

DISCUSSION *on* DR. MOUAT'S REPORT.

PROFESSOR LEONE LEVI said, that having had the honour of attending nearly every session of the International Statistical Congress, he should like to make a few remarks on the report which had been presented by Dr. Mouat. He thought that the world had been greatly benefited by the organisation of such a congress. He believed it had given great impetus to statistical science, and had considerably enlarged the field of observation, as well as rendered that observation more reliable, the facts being more carefully collated. So far as England is concerned, the publication of our judicial statistics in their present complete manner, is decidedly a result of the International Statistical Congress. He would further say, that to the organising commission of the Congress at Buda-Pesth, as well as to the organising commission of St. Petersburg, Florence, and other places, they were greatly indebted. He believed they had taken all along enormous pains, not only to prepare the programmes as carefully as possible, but also to provide for a reception worthy of the occasion and of the learned statisticians from all parts of the world. The criticism which Dr. Mouat had given of the proceedings of that congress was, to a certain extent, true; at the same time, he did not concur in the statement that such congresses, and especially the last session at Buda-Pesth, had done nothing. The labours of any one session of the congress must be taken in connection with the labours of all preceding sessions; and he thought the Buda-Pesth Congress could not fail to exercise a considerable influence upon the further elucidation of many difficult matters. The programme as stated by Dr. Mouat, was far too voluminous, and was distributed at too late a period. At the last Congress at Buda-Pesth, some part of the programme was only received during the sectional meeting. This, of course, was a very great want, because the field of research being so vast, members who were expected to contribute, could not be expected to come provided with the necessary amount of information, unless the programme came to their hand in sufficient time to study the subjects carefully before they went to the meetings. He thought the suggestion that the preparation of the programme should be entrusted to the permanent commission, a valuable one. As it was, the Statistical Commission of Buda-Pesth had to resort to Germany and other places for the preparation of parts of the programme. The last programme was partly in German and partly in French. There were two or three papers on each subject, and there was evidently a want of unity in the whole. If the permanent commission undertook the preparation of the programme, this inconvenience, to a certain extent, would be removed. Dr. Mouat suggested that the unofficial members of the congress should be placed on the same footing as the official members. This had been

a great difficulty at all the meetings, and it arose, he believed, from the very structure of the congress. If he understood it rightly, the International Statistical Congress was primarily a congress of official members only acting with the co-operation of unofficial ones—statisticians of all countries—thus combining the actual labourers of the statistical bureaux with private students of statistical and economic science. Unofficial members had reason to complain that in some instances, especially of official receptions, they found themselves excluded, but that arose from no other account whatever, except from the strictly constitutional character of the congress, and also probably from the limited power in some cases of extending the largess of hospitality. It was, however, desirable that this anomaly should be, as far as possible, removed, and that official and non-official members should be placed upon an equal footing. He was afraid that the proposal of having discourses delivered every day on some branch of statistical science, would not be acceptable or practicable, because they would take up so much time. They would consume an hour and a-half of each day of the few hours that were at their disposal. The congress did not profess to teach the theory of statistics. Its object was to develop the science of exposing statistical facts. If general discourses were prepared, they might be printed and distributed, but not delivered, because there would be no time for the purpose. The matter of language was certainly a great difficulty at such congresses. When it was considered that in dealing with scientific questions we must use scientific and technical terms, it would be seen that to understand well the real import of each word was of the greatest value. When, therefore, languages were spoken which were but imperfectly understood, or altogether unknown, it was perfectly absurd to vote upon the insertion of a statistical word which might have a perfectly different meaning in the mind of different members. The question of language was a *sine quâ non* for the success of the congress, and never did he see the difficulty more conspicuously illustrated than at Buda-Pesth. In other places French was much more spoken, and was, to a great extent, the official language; but at Buda-Pesth the large proportion of Germans present at every section monopolised the whole, and those who were not well acquainted with German were shut out altogether from taking any practical part in the discussion. Dr. Mouat had suggested that the reporter from the sections to the general meetings should confine himself to the resolutions. Professor Levi felt that could not be, because it was needful that the resolutions passed by the section should be explained to the congress. He did not think that the mere reading of the resolutions would be sufficient for the congress. He thought, however, that it would be very desirable that the resolutions should be printed in the bulletin of the congress, at least, on the morning before they were put to the congress. Unless such resolutions were printed beforehand, no one could give an intelligent opinion on their merit. As it was, the proceedings of the general congress were of little value, indeed, the real value of the congress consisted in the labour of the sections. The carrying out of these resolutions did not rest with the congress,

but with the Governments to which the resolutions were communicated; and it was to be hoped that the permanent commission would exercise considerable influence upon such Governments in that direction, and that it should see that they were carried out. It was much to be regretted that a large number of the recommendations of the congress passed unnoticed by any Government—the English Government included—and in that manner a great deal of labour was lost; but if the permanent commission were more vigilant in pressing them on the attention of the different Governments, much more benefit would accrue from the congress to the nations generally. Dr. Mouat regretted that his suggestions that the congress should appoint a commission to report on the statistics illustrative of the operation of the recent treaties of commerce had not been acted upon. From a letter received from M. Keleti, he hoped the permanent commission would deal with it at its first meeting. When the Allied Powers met in congress for the negotiation of the Treaty of Vienna in 1814-15, a committee of statisticians was appointed to report on the statistics of population and area of the countries to be dealt with in the new political arrangement, and he did not see why, in the negotiation of treaties of commerce and other economic questions, statisticians should not be asked to give the facts of the case in a plain, scientific manner. He thought such a suggestion might be of advantage to all States. He was sure they all felt much indebted to Dr. Mouat for the valuable paper with which he had favoured the Society.

Mr. NEWMARCH considered that Dr. Mouat had done the Society a great service, and the modern invention of statistical congresses a greater service still. He jocularly described Dr. Mouat's propositions as a new "ten commandments," and a fitting addition to the decalogue, and said that they ought to be made equally obligatory. He was glad that there was any gentleman at Buda-Pesth who had his wits so much about him as to be able to criticise the elaborate machinery that these statistical congresses represented. He had no animosity to these assemblies; he had assisted in a very subordinate capacity at two of them, as one of that branch of unofficial members who had been referred to, therefore he had some personal knowledge of what took place. He wished to know, after the lapse of twenty years, what was the net result of these conferences. He could not see that any large amount of practical good had resulted from them. Dr. Mouat had said that the great defect of these congresses was the enormous amount and the torturing degree of detail into which they entered. That was exactly the impression made on his own mind from what he had seen and read of them, and that was the reason why they broke down. As for any civilised or sensible Government carrying out the extravagant conditions and preposterous recommendations of these congresses, it was perfectly impossible. It was beyond the province of a Government, which simply existed for practical purposes, to become a mere machine for settling questions. There ought to be good resulting from these congresses, if statistics were to accomplish anything like the benevolent purposes which the president had

sketched out. He conceived it to be a matter of deep regret that these congresses had been going on for twenty years, and that so little had come out of them; and for his own part he had no hesitation in saying that they had failed in their object, because they had gone beyond all reasonable bounds, and had not hit upon the right machinery; the actual arrangements being exceedingly ill adapted to accomplish the purpose intended. Nothing could be plainer, for example, than that the programmes of these meetings should be carefully prepared beforehand; that they should be rigidly confined to a few subjects; and that the whole purpose of the congress should be directed to work out this particular purpose. Instead of that, the programmes were only distributed close upon the assembling of the congress, and at Buda-Pesth the programme, it appeared, could not be had until it had almost ceased to be of value. He thought, also, that a great deal of time was wasted in passing eulogies on departed members. The business of the congress was not with people who were dead, but with people who were living. He characterised the congresses as international picnics, and hoped that more good would result from them in the future than had come out of them in the past. As regarded the subject of treaties of commerce, to which his friend Professor Leone Levi attached much importance, he begged to say, with all deference to his friend, that the most fitting way of disposing of treaties of commerce, would be to bury them at the most conspicuous cross roads, and drive a stake through the whole corpus of them. He begged pardon for dealing with the subject in a jocular spirit, but the time had come when a little good natured ridicule would be wholesome after twenty years of solemn trifling.

Mr. CORNELIUS WALFORD, while concurring in a great deal that had been said by Dr. Mouat and Mr. Newmarch, pointed out that there was another side to the question. The official programmes which were prepared for these congresses, however late they might appear, contained a vast amount of information of the utmost value, and were useful to statisticians and heads of departments for reference in after years. He had found this in his own experience. They might do more good, however, if they were compiled with more precision, and issued with greater punctuality.

Dr. FARR, after referring to the origin of the congress, made a few remarks on the paper, which it was impossible to discuss adequately after the president's exhaustive address, on account of the lateness of the hour. He had not been at the last meeting at Stockholm of the permanent commission, but he had attended the congresses since their commencement, and he differed entirely from what Mr. Newmarch had said as to their usefulness. Nothing was easier than to question the usefulness of any one of our institutions. A small committee of the British Association had actually questioned the use of the statistical section. They all knew, however, that some Englishmen could always be found to call anything into question; but the president, in his address, had defended the utility of statistics in the strongest manner possible. If those who

were engaged in compiling official statistics throughout Europe, were asked to endeavour to agree to make their returns uniform, was it unlikely that they would be useful ?

On the motion of the President, seconded by Dr. Farr, a vote of thanks was accorded to Dr. Mouat for his report, and the proceedings terminated.