

## MISCELLANEA.

## CONTENTS :

	PAGE		PAGE
I.—Economic Science and the British Association .....	468	III.—English Railways in 1876....	485
II.—Russian Financial Statistics .	476	IV.—Notes on Recent Additions to the Library.....	497

I.—*Economic Science and the British Association.*

OUR readers will remember that at the annual meeting of the Society in June, Dr. Farr referred to the subject of a suggestion which had been made to the Council of the British Association for the Advancement of Science, to abolish Section F (Economic Science and Statistics). This strange suggestion very naturally raised a good deal of opposition, but has not yet been formally rejected. As the matter may be of some historical interest, we give below two papers which have been laid before the Council of the British Association, giving the reasons for the suggestion on the one side, and the grounds of the opposition on the other; the first paper (*a*) being by Mr. Galton, and the second (*b*) by Dr. Farr. Mr. Galton has been so well answered by Dr. Farr, that it is unnecessary to add anything here, but we are certainly surprised to find Mr. Galton objecting to the British Association including in its programme a department of science in which so much good scientific work has been done in past times, and where there is hope yet of still greater results from the prosecution of inquiries in a scientific spirit.

“(a). *Considerations adverse to the Maintenance of Section F (Economic Science and Statistics), submitted by Mr. Francis Galton to the Committee appointed by the Council to consider and report on the possibility of excluding unscientific or otherwise unsuitable papers and discussions from the sectional proceedings of the Association.*

“The following considerations are submitted by the writer to serve as a basis of discussion and to elicit arguments on the other side. The subject has many aspects and touches many interests, and has not as yet been sufficiently ventilated to justify a final judgment upon it. On these grounds, although his remarks will be found to be adverse to the continuance of the Section, the author reserves full freedom as to his own final opinion.

“The chief reasons which appear to have prompted the establishment of the Section of Economic Science and Statistics, and which may still be alleged in favour of its maintenance, may be briefly stated as follows:—

“ 1. The principles on which Statistics are founded are derived from the theory of probabilities, and have exercised, and will still exercise, the ingenuity of many generations of the ablest mathematicians.

“ 2. The Section concerns itself with an important part of human knowledge, which ought not to be ignored in a general association of scientific men.

“ 3. Its subject matter is less removed from the general interests of the public than that of any other of the Sections; consequently it attracts large audiences of both sexes who desire to take part in the Association, but who have not the special knowledge that would enable them to appreciate the technical memoirs read in other Sections.

“ 4. It affords an opportunity of enlisting into the service of the Association, as Presidents or Vice-Presidents of a Section, persons of local influence and of political importance.

“ A just idea of the character of the subjects now discussed in the Section may be obtained by collecting the titles of the memoirs read before it in three recent consecutive years, and sorting them, in so far as their great diversity admits, into cognate groups. The following is the result, the longer titles being in a few cases abbreviated:—

“ *Papers Read before Section F, Economic Science and Statistics, in the Years 1873-75.*

“ Economic Law of Strikes.

“ Commercial Panics.

“ Science of Capital and Money.

“ Capital and Labour.

“ Laws affecting Prices of Commodities and Labour; and on Strikes and Lockouts.

“ Free Trade in Labour.

“ Poor Law and its Effect on Thrift.

“ Cause of Insolvency in Life Insurance Companies.

“ Relation of Banking Reserve of Bank of England to Current Rate of Interest.

“ Increase of Price of certain Necessaries and its Relation to Rates of Wages, &c.

“ Income Tax Question.

“ Income Fallacies and some of their consequences.

“ The future of the United States.

“ The privileges over Land wrongly called Property.

“ Agricultural Statistics and Waste Lands.

“ Ulster Tenant Right.

“ Progress of the Coal Question.

“ Statistics and observations of the National Debt from 1680.

“ Compilation of Statistics, illustrated by the Irish Census Returns.

“ Government Accounts, with further Suggestions for establishing a Domesday Book.

“ Indian Railways and Indian Finance.

“ Railways Amalgamated in Competing Groups.

- “ Postal Reform (two memoirs).
- “ Reform in the Work of the Medical Profession.
- “ Confederated Homes and Co-operative Housekeeping.
- “ East Morley and Bradford Savings Bank.
- “ Savings Bank in Schools.
- “ Principles of Penal Legislation.
- “ Reformatory and Industrial School System: its Evils and Dangers.
- “ Study of Education as a Science.
- “ Standard of National Education.
- “ Scheme for the Technical Education of those interested in Land.
- “ Teaching of Hygiène in Government Schools.
- “ Practical Difficulties in working the Elementary Education Act (1870).
- “ Industrial Schools.
- “ Educational Statistics of Bradford.
- “ Prevailing Mode of Preparation for Competitive Examinations.
- “ Economical Aspects of Endowments of Education and Original Research.
- “ Economic Use of Endowments.
- “ Sanitary Legislation and Organisation.
- “ A new Method of Promoting the Sanification of our Cities.
- “ Purity and Impurity in the Use and Abuse of Water.
- “ Reclamation and Sanification of the Pontine Marshes.
- “ Mortality of Adolescence.
- “ Value of European Life in India in its Social, Political, and Economic Aspects.
- “ Death-rates of some Health Resorts, and specially of Clifton.
- “ Comparative Mortality of Abstainers and Non-Abstainers from Alcoholic Liquors.
- “ Increase of Drunkenness among the Working Classes, and the Cause of it.
- “ Workmen’s Dwellings from a Commercial Standpoint.
- “ Benefit Building Societies.
- “ Building Societies and the Act of 1874.
- “ Working of the Building Societies’ Act (1874).
- “ Dwellings for the Industrial Classes.
- “ Workmen’s Dwellings.
- “ Statistics of Free Public Libraries.
- “ Sericulture.
- “ Acclimatisation of the Silkworm.
- “ Peat.
- “ Use and Abuse of Peat.
- “ Shoddy Trade.
- “ Bradford Building Trade.
- “ Tanning of Sole Leather in Bristol.
- “ Rise and Progress of the Sugar Trade in Bristol.
- “ Trade and Commerce of the City and Port of Bristol.
- “ Industrial Position of Women as Affected by their Exclusion from the Suffrage.
- “ Domestic Service for Gentlewomen.

“ Cost and Propriety of removing to England the Fallen Obelisk of Alexandria.

“ Memoirs that might properly have been read in other Sections:—

“ Influence of the Sun-spot Period upon the Price of Corn (in A).

“ Legislative Protection to the Birds of Europe (in D).

“ Influence of large Centres of Population on Intellectual Manifestation (in D, Anthropological Department).

“ Need of Systematic Observations on Physical Characteristics of Man in Britain (in D, Anthropological Department).

“ It will be observed that not a single memoir treats of the mathematical theory of Statistics, and it can hardly be doubted that if any such paper should be communicated to the Association, the proper place for it would be in Section A.

“ It must be freely conceded that Section F deals with numerous and important matters of human knowledge; but this is not of itself a title to the existence of the Section, because many other equally important matters, such as history, are by common consent inappropriate subjects for the British Association. Usage has drawn a strong distinction between knowledge in its generality and science, confining the latter in its strictest sense to precise measurements and definite laws, which lead by such exact processes of reasoning to their results, that all minds are obliged to accept the latter as true. It is not to be expected that these stringent conditions should be rigorously observed in every memoir submitted to a scientific meeting, but they must not be too largely violated; and we have to consider whether the subjects actually discussed in Section F do not depart so widely from the scientific ideal as to make them unsuitable for the British Association.

“ It would be a tedious and an ungrateful task to criticise in detail the multifarious topics embraced in the list we have given. But it is not necessary to undertake it, as it will be easy for men of science to judge for themselves by simply glancing over the list. It is believed that the general verdict of scientific men would be that few of the subjects treated of fall within the meaning of the word ‘scientific,’ and that the few of them that do would be wholly insufficient to occupy the time of the Section during the meeting. Even of these few, some, as shown in the last paragraph of the list, might have been communicated with equal or even greater propriety to other Sections. It would therefore seem impossible to continue the Section, owing to the experienced difficulty of finding suitable materials, if all the unscientific papers were excluded.

“ It must be remarked that hardly any of the subjects in the above list, besides the few last named, would gain by being discussed by representatives of the special branches of science who are assembled at the British Association. This Section therefore occupies a peculiar position of isolation, being neither sufficiently scientific in itself, nor receiving help from the other Sections. In the first respect it may be alleged that the Anthropological Depart-

ment and the Geographical Section are open to the same charge; but in the latter respect the case is very different. The leading anthropologists are physiologists, geologists, or geographers, and the proceedings of the department are largely indebted to their special knowledge. Geography is apt to receive light from every department of science, and to give no less than it receives. This is not the case with Section F: it stands detached from all the other Sections, except in regard to a few subjects which might severally be handed over to one or other of them.

“ A notable evidence that its work is alien to that of the Association generally is to be gathered from the fact that in the 112 lectures that have been given since the system of two annual lectures to the Association generally was first established in 1842, not a single one has been on either a statistical or an economic subject. Other evidence to the same effect is the small number of reports on statistical or economic subjects that have proceeded from Committees appointed by the General Committee to make investigations, and who receive grants of money to defray the cost of making them. It appears that in the nine years 1867-75 inclusive\* there have been upwards of 250 reports, referring to perhaps 220 different subjects. Only four of these appear to be strictly appropriate to Section F, namely:—Pressure of Taxation on Real Property; Sewage; on Arrangements connected with the approaching Census; and on combinations of Capital and Labour.†

“ It would appear from all this that the subjects commonly brought before Section F cannot be considered scientific in the sense of the word that is sanctioned by the usages of the British Association. Also that as the Section is isolated and avowedly attracts much more than its share of persons of both sexes who have had no scientific training, its discussions are apt to become even less scientific than they would otherwise have been. On the other hand, any public discredit which may be the result of its unscientific proceedings has to be borne by the whole Association.

“ Stress must also be laid on the fact that it is important to keep the number of Sections as small as possible; for difficulties have arisen in almost every place of meeting in finding accommodation for the number that exist, while, owing to the rapid extension of science, pressing claims arise from time to time for new Sections.

“ In conclusion, it must be recollected that the suppression of Section F would be little, if any, sensible hindrance to the progress of Economic Science and Statistics, because those subjects now find a more congenial and appropriate home in the Social Science Congress. The diversified topics included in the list of subjects already given can be distributed among its sections, each to one most competent to discuss it. There will always be a larger gathering of experts in these subjects at the Social Science Congress than can ever be assembled at the British Association; and

\* “ The year 1876 is omitted, because the Report for that year had not been issued at the time when these remarks were written.

† “ The Metric Committee is excluded, as being quite within the functions of Sections A, B, or G, and indeed of other Sections.

the discussions in the former are in consequence more likely to be instructive and useful.

“ Under these circumstances the question of the discontinuance of Section F appears to deserve the serious consideration of the Council.

“ FRANCIS GALTON.

“ *June, 1877.*

“ (b). *Considerations, in the form of a Draft Report, submitted to Committee, favourable to the maintenance of Section F. By Dr. W. Farr.*

“ The Committee has further inquired into the action of Section F, which has been for so many years an integral part of the British Association.

“ They have before them a complete list of the Presidents of the Section and of every paper read.

“ They find among the names of the Presidents—Babbage, Sandon (Earl of Harrowby), Sykes, Hallam, Wood (Lord Halifax), Earl Fitzwilliam, G. R. Porter, Lyttleton, Boileau, Whately, Heywood, Tooke, Houghton, Lord Stanley, Nassau Senior, Newmarch, Chadwick, Farr, Professor Rogers, Brown, Sir Stafford Northcote, Stanley Jevons, Lord Neaves, Professor Fawcett, W. E. Forster, M.P., and Sir George Campbell, many of whom delivered addresses of great interest and ability. Among the contributors of papers were, besides the presidents, many well-known statisticians and economists.

“ The papers may be classed under the head of *Vital Statistics* (so named first by Laplace) and of *Economic Science*, the first including papers on population, the laws of population, the laws of mortality, of disease, of crime, under different conditions—the laws of birth and of marriage; admitting of many direct practical applications to the public health and to the public weal. The facts with which this section deals are of so much importance that they are observed and registered at great cost by every civilised Government in the world; and the relations of the different orders of facts admitting of admeasurement have been discussed by Halley, Simpson, Price, Morgan, Milne, Bailey, Gompertz, Deparcieux, Brown, Duvillard, Laplace, Fourier, Quetelet, Poisson and other men of science. In the year 1856 it was designated the Section of Economic Science and Statistics; and this brought within it the whole range of political economy as it was taught from the days of Adam Smith to Mill and Fawcett, Macleod and Rogers; but it is understood that the section deals especially with the facts of property, produce, and values, admitting of scientific determination and numerical expression.

“ The section is popular and well attended, as Mr. Babbage foresaw.

“ It no doubt attracts many who would not otherwise become members of the Association. The Association, in advance of some other scientific bodies, admits members of both sexes, and the number of ladies has latterly ranged from 600 to 1,058. Among

the 856 papers read in this section since its origin, 21 have been by ladies, amongst others by Florence Nightingale, Mrs. Grey, and Mary Carpenter. A paper was read by Miss Becker on Difficulties in working the Elementary Education Act, 1870. A paper was also read at Bristol, by Mrs. Crawshay, of South Wales, on Domestic Service for Gentlewomen, a question which she started, and in which she took much interest; but which it was supposed by many eminent members of the Association did not admit of scientific treatment.

“ There is no doubt that into this section papers of little interest and relevance have occasionally found their way. The same, it could be easily shown, is unfortunately the case with other sections; and in all should be guarded against, as they will be, by the rules the Council has now established.

“ A member of this committee requested one of the Secretaries of the Statistical Society to bring the matter before the Council of that Society, and to favour him with their views as to the desirability of maintaining statistics in its present connection with the British Association. The following is their reply :—

“ ‘ STATISTICAL SOCIETY,

“ ‘ Sir,

“ ‘ 13th July, 1877.

“ ‘ At the meeting of the Council of the Statistical Society held yesterday, your letter addressed to one of the secretaries, respecting the suggestion made in a Committee of the Council of the British Association to discontinue the Section of Economic Science and Statistics, and inviting the opinion of this Council thereon, was duly submitted for consideration.

“ ‘ In reply, we are directed to state, with reference to the first question, ‘ Do they think it desirable to maintain the Section F of the British Association ?’

“ ‘ That this Council is firmly of opinion that it would be undesirable in the interests of science generally, as well as of the particular sciences dealt with in Section F, to discontinue the section. According to the wording of the recommendation made to the Council of the British Association, those who made it would seem to be under the impression that the subjects of Section F are less ‘ purely scientific ’ than those treated in the other branches of the Association. But this impression is evidently most unscientific; and that it exists goes to show the expediency of retaining, if possible, ‘ Economic Science and Statistics ’ among the branches of the British Association. While so retained, Section F is a conspicuous advertisement to men of different sciences, and especially to those concerned with the various physical sciences, that other subjects of a far more complex and difficult character than those which are the subject matter of these physical sciences, but regarding which scientific knowledge is equally indispensable to mankind, ought to be included in a general scientific programme. Were the subjects of Section F excluded, the domain of science, in the view of those assembling at the British Association, would appear far more restricted than it really is; and there would, in fact, be excluded from it a department of knowledge where the scientific

method has already gained many of its most signal triumphs. It would seem to be a degradation of the British Association that the subjects of Section F—the whole subject of the life of man in communities—although there is a scientific order traceable in that life, should be excluded from notice.

“ ‘ Although to all appearance there has been some want of consideration in the suggestion to the British Association, the origin of it has no doubt been a natural one, and to a certain extent the Council can sympathise with the motives of it. Many unscientific papers have been brought before Section F, and these have been reported and discussed to the neglect of really scientific papers on other subjects. Section F is probably exposed more than any other section to the invasion of people interested in its subjects who have no scientific knowledge or training. Its subjects are also those of practical politics and philanthropy, and this brings to the discussion people who are politicians and philanthropists, but who are not men of science. For the same reason, the discussions on such subjects, whether scientific or not, are likely to be better reported than purely scientific discussions. Hence the irritation, which this Council can understand, among the members of a scientific body. But a sufficient remedy for what is evil in these tendencies would seem to be provided in the other recommendations of the Committee of the British Association, viz., to devise and apply rigorously most stringent rules against the admission of unscientific papers. In this work the Statistical Society would be disposed to co-operate, as it has co-operated in past times. There would probably still remain a proclivity to unscientific discussion, and the excessive reporting of unscientific discussions which could not be wholly removed; but in exchange for this evil, it must always be remembered, scientific men have a better opportunity in this section than in any other of communicating some notion of scientific method and its value, and of the conclusions of scientific study, to the unscientific multitude. If the British Association is to exist for the ‘ advancement of science,’ it cannot but fulfil its end in making politicians and philanthropists generally aware of the necessity of scientific method and knowledge in their favourite subjects.

“ ‘ With regard to your second question, ‘ Do they see their way to suggest any practical means for maintaining the scientific position of statistical and economic science?’ the Council of the Statistical Society has not thought it necessary to come to any resolution. It is practically answered by the answer to the first question. The more the Statistical Society does to effect the object for which it was founded, the better it will maintain the position of statistical and economic science, and the continuance of Section F in the discharge of its proper functions will answer the same end.

“ ‘ We are, Sir,

“ ‘ Your obedient Servants,

“ ‘ R. GIFFEN,

“ ‘ HAMMOND CHUBB, } *Secretaries.*

“ ‘ Dr. Farr, F.R.S.



“ It has not been deemed right to consult all, but a letter from Mr. Chadwick, one of the past presidents of Section F, is annexed. He points out the importance of joining to the sections of abstract science, which few can take part in, sections which open questions for discussion of local and popular interests, in order to realise the required funds at the provincial meetings, on which the success of the Association to some extent depends.

“ It has been brought under the notice of the committee that no reports on the progress of statistics have been published, and that no statist or economist has ever been elected president, or been called upon to deliver addresses. That is true; but several of our leading statesmen have been presidents of the Association, and it was quite right that the physical sciences, which as they involve simpler elements, have attained greater perfection, and have been cultivated by men of the highest order of scientific mind, should have the precedence; but the day will probably come when some distinguished statist, sociologist, or professor of political economy, may be called upon by the Council to occupy the post of president. No one will probably deny that an address by John Stuart Mill, by Herbert Spencer, or by others that could be named in their day, would have been as interesting as some of the eloquent orations the Association has listened to.

“ There is one peculiarity about Section F apparent on the face of a table that has been submitted to us. While Section F has by its popularity brought in many members, it has taken out very little from the funds of the Association; for instance, the grants for statistical investigations have in the whole term of years been 1,855*l.*, while 1,500*l.* have been expended on the explorations of Kent's Cavern alone. There is another peculiarity of the section, that its inquiries touch nearly the interests and feelings of the working classes, which the Association has ever considered. At Belfast the papers and discussions in Section F were so fortunate as to put a stop to a disastrous strike; and on this ground the fame of the British Association rang through all Ireland. There is besides the peculiarity about Section F, that it deals with positive, observed, important facts; in other sections this is not always so; and, finally, it never in any way offends the religious prejudices of the nation. The services of Section F in Ireland were a very striking set-off against the excitement produced by the bold utterances of the physical and biological sections.

“ At this stage the committee submits the facts, and leaves the Council to decide whether it is not desirable to watch the operation of the new regulations they have made for the conduct of the sectional business, before they take any further steps affecting Section F or any of the other sections.”

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## II.—*Russian Financial Statistics.*

WE extract from the *Times* of the 22nd August, the following review of the *Annuaire*, issued by the Russian Ministry of Finance