

THE HISTORY AND DEVELOPMENT OF STATISTICS IN BELGIUM

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CHAPTER I. HISTORICAL SURVEY

A vigorous interest in statistical researches has been both created and facilitated in Belgium by her restricted territory, very dense population, prosperous agriculture, and the variety and vitality of her manufacturing interests. Nor need it surprise us that the successive governments of Belgium have given statistics a prominent place in their affairs. Baron de Reiffenberg, who published a bibliography of the ancient statistics of Belgium,* has given a long list of documents relating to the population, agriculture, industry, commerce, transportation facilities, finance, army, etc. It was, however, chiefly the Austrian government which increased the number of such investigations and reports. The royal archives are filled to overflowing with documents from that period of our history and their very overabundance forms even for the historian a most difficult task.†

With the French domination (1794–1814), the interest for statistics did not diminish. Lucien Bonaparte, Minister of the Interior from 1799–1800, organized in France the first Bureau of Statistics, while his successor, Chaptal, undertook to compile the statistics of the departments. As far as Belgium is concerned, there were published in Paris seven statistical memoirs prepared under the direction of the prefects. An eighth issue was not finished and a ninth one

* *Nouveaux mémoires de l'Académie royale des sciences et belles lettres de Bruxelles*, t. VII.

† The Archives of the kingdom and the catalogue of the van Hulthem library, preserved in the Bibliothèque Royale at Brussels, offer valuable information on this head.

was never printed. Each of these memoirs dealt with a single province of Belgium. Their plan, however, was not uniform; but they generally treated of the principal objects, such as territory, population, agriculture, industry and commerce. These documents contain a mass of information which is even today full of interest and valuable for purposes of comparison with more recent data. Because of the increased cost of their publication, the French government discontinued in 1805 to print these statistical memoirs of the prefects. Nevertheless, these officials continued to compile certain data and to publish them in the form of almanacs.*

After the fall of the French empire, the provinces of Belgium were in 1814 united with Holland. A royal decree of July 3, 1826, appointed a statistical commission attached to the central office in the Hague. The management of this office was entrusted to Ed. Smits, who, at the same time, served as General Secretary of the Statistical Commission.

It is about this time that the name of Quetelet† first appears in the history of Belgian statistics. To be more precise, it was in the month of April, 1825, that Quetelet presented to the Academy his first statistical work entitled: "Mémoire sur les lois des naissances et de la mortalité à Bruxelles." During his stay in Paris in 1823, Quetelet made the acquaintance of Fourier, Poisson, Lacroix and other French savants. It was from this time that he began to interest himself in statistics from a scientific viewpoint. It was not very long after his initiation that the first results of his renowned activity became known.

In 1827 Smits published in Bruxelles, under the auspices of the statistical commission of the Netherlands, the first official collection of documents entitled "Statistique nationale. Développement de trente et un tableaux publiés

* Heuschling. *Aperçu des principales publications statistiques faites sur la Belgique, depuis l'incorporation de ce pays à la France, en 1794, jusqu'à ce jour.* (Bulletin de la Commission Centrale de statistique, tome I, pp. 679 et suiv.)

† Joseph Lottin. *Quetelet, Statisticien et sociologue, Louvain, Institut supérieur de philosophie, 1912.*

par la Commission de statistique.” This work, although of little scientific value, contained researches into the number of births, deaths and marriages in the Netherlands during the period 1815–1824. The second collection of tables published by the general commission of statistics appeared in the Hague in the year 1829 and dealt with the movement of foreign commerce during 1825–1828, sanitation, agriculture, meteorology, fisheries and coal mining.

Quetelet, with his definite bent towards statistics, engaged several experts to undertake the calculation of mortality tables for some of the more important cities of Belgium. He himself continued his researches into the births and deaths in Bruxelles and worked up from the original official documents the number of foundlings, inmates of work-houses and prisons in the kingdom. It is with the aid of these documents that he wrote his memoir: “Recherches sur la population, les naissances, les décès, les prisons, les dépôts de mendicité, etc., dans le royaume des Pays-Bas,” laid before the Academy February 27, 1827. This work, Quetelet stated, had been undertaken for the purpose of inducing the government to take a new census of the population. And indeed, on September 29, 1828, a royal decree ordered a census to be taken on January 1, 1830, the very year in which the revolution broke out which gave Belgium her independence. The Dutch troops were withdrawn after four days’ fighting, continuing from September 23 to 26, 1830. September 26 the provisional government was organized and proclaimed the independence of Belgium to take effect on October 4, and announced the approaching convocation of a Congress.

The taking of the census itself was in no way impeded by these events, but the tabulation of the data was necessarily retarded. The new government, however, showed great interest in statistics in spite of its preoccupation with more urgent government affairs. On February 24, 1831, a few days after the Congress had enacted the constitution, the provisional government organized a general statistical

bureau in the department of the interior. Smits was made its first director. A decree of the regent of Belgium commissioned Smits and Quetelet to publish the results of the Census of 1830.*

The publication appeared in the beginning of the year 1832 under the title: "Recherches sur la reproduction et sur la mortalité de l'homme aux différents âges et sur la population de la Belgique d'après le recensement de 1829 (premier recueil officiel des documents statistiques)." This work contains the first table of the population of Belgium classified according to sex and civil condition, as well as a table of the mortality in urban and rural districts. Furthermore, it contains observations on the influence of age, occupation, economic status, sex and season upon mortality. Although this work was published under the name of Quetelet and Smits, the former was responsible for the greater part of it.

A little over a year later, Smits and Quetelet published a second work, "Statistique des tribunaux de la Belgique pendant les années 1826-1830 (2e recueil officiel)." Quetelet, who already since 1828 had made known his views on social determinism, was intensely interested in moral statistics. We need not be surprised, therefore, that under his influence the question of criminality was, from the very beginning, given prominent place by the Bureau of Statistics. The larger part of this work was due to Quetelet.

The means placed at the disposal of the bureau were not large and even the very existence of the bureau uncertain. More than once the necessary amount proposed in the budget was questioned. We also owe a great debt to Smits, in spite of the imperfections of his works, for having safeguarded the existence of the bureau and succeeded in publishing in succession four volumes on the general statistics of the kingdom. They appeared in 1836, 1838, 1840 and 1841, respectively, the material treated therein being classi-

* Quetelet. *Notice sur M. Edouard Smits.* (*Bulletin de la Commission centrale de statistique*, tome V.)

fied under four principal divisions: the physical, industrial, political and moral state of Belgium.

Quetelet, in his necrological notes dedicated to Smits, after having called attention to the sectional division of the above-mentioned works, adds the following interesting remark: "It is to be regretted that, since then, it has practically been decided to adhere no longer to this form and to decentralize statistics and to assign its branches to the different Ministries; it is evident that it is in the interest of the administration and of science to centralize, at least as regards the publications, and to re-adopt the former methods, if only from the viewpoint of uniformity and economy." *

Smits tendered his resignation in 1841. This is an important year in the history of Belgian statistics, for it marks the entrance of Quetelet on the scene of official statistics upon which his strong personality left an indelible impression.

On the 16th of March, 1841, there was organized in the Ministry of the Interior a statistical central commission.

A report† to the king sets forth in the following terms the way in which this institution came into being:

In creating in the Ministry of the Interior a central bureau of statistics, the provisional government intended to enable the administration to gather and classify in systematic order the available data which are to be made the subject of research by this important branch of governmental science.

But soon this object was lost sight of. Some departments neglected their statistics entirely, while others worked thereon so independently, that they often drew their information from the same source, in this way duplicating and crossing each other in their researches. This lack of coördination was bound to lead to disorganization, double work and incompleteness.

What our statistics most need in order that our government and science may derive the best results to which they are justly entitled after all these efforts is a central management, a clear object and well defined bases of investigation.

There shall be created a statistical central commission for the purpose of bringing together in a central office all the information which has heretofore been collected by the different administrations.

Each department shall continue to publish its own statistics but on a uniform

* Quetelet, *loc cit.*, p. 543.

† The documents analysed hereafter are printed *in extenso* in the front of the first volume of the *Bulletin de la Commission Centrale de Statistique*.

plan, previously decided upon, in this way securing a working coördination and a uniformity of the publications.

On account of its importance we quote the exact text of the royal decree of March 16, 1841:

Pursuant of a decree of the provisional government of Belgium, dated January 24, 1831, commissioning the ministry of the interior with the creation of a general statistical department of the kingdom;

In order to regulate and extend the statistical publications of the different ministerial departments;

On the strength of the reports of our Minister of the Interior and the advice of the chiefs of the other departments;

We have decreed and are decreeing:

ARTICLE 1.—Be it known that there is created in the ministry of the interior a statistical central commission whose members shall be appointed by us and chosen as far as possible from among the officials of the different government departments.

ARTICLE 2.—One third of the commission shall be renewed every two years beginning with the first day of January, 1843. The retirements shall take place in order of seniority in service and, in case of equality, by lot. Retiring members shall be provided for.

ARTICLE 3.—The commission shall submit a complete plan for the statistical publications of the different branches of the administration.

ARTICLE 4.—It shall have to pass upon matters submitted to it by our Minister of the Interior. It shall communicate directly with the Minister.

ARTICLE 5.—The manner in which it is to exercise its functions and the order of its working procedure shall be set forth in a special manual, subject to our approval, drawn up by the Minister of the Interior with the assistance of the chiefs of other departments.

ARTICLE 6.—A certain sum shall be appropriated for attendance, allowances and office expenses.

ARTICLE 7.—Our Minister of the Interior is responsible for the execution of this decree.

BRUXELLES, March 16, 1841.

LEOPOLD.

Quetelet, who was appointed president of the Statistical Central Commission, held this position until his death on February 17, 1874, and Xavier Heuschling, chief of the statistical bureau of the Ministry of the Interior, was made secretary of the commission, in which capacity he served until December 30, 1870.

Immediately after the institution of the Statistical Central Commission, the government endeavored to ascertain and report regularly upon the strength and wealth of the country, the physical condition and the moral and intellectual state

of the nation. With this object in view, official publications were undertaken or continued on the subject of the movement of the population, foreign commerce, mining, metallurgical factories and steam engines. There need as yet to be mentioned the rather important administrative publications of the railroads, the highways and canals, city toll, tariff on bread and meat, conditions of the laboring classes and child labor, work performed in prisons and workhouses, gifts for religious and charitable establishments and public instruction in all grades.*

But it was the preparation for and taking of a complete census to which the efforts of the Statistical Central Commission were chiefly directed. This census, which was taken on the 15th of October, 1846, dealt with the population, with agriculture and with industry. At the time of its issuance it was considered a work of the highest order from the viewpoint of statistical analysis and arrangement of the material and even today gives valuable information on many points.

The data relating to that part of the census dealing with the population are subdivided into the following subjects:—the number of inhabited and empty houses; the number of stories and occupied rooms, classified according to urban and rural districts; pleasure grounds adjoining dwellings; houses insured against fire, and the amount of insurance, furniture and merchandise included; population by house and family; population classified by sex; indigent families or households one or more of whose members are dependent upon public charity; children classified by sex, who are receiving instruction in primary, middle or superior public schools or at home; finally, the population according to residence at the time of the enumeration and classified as to civil status, origin, language, religion, age, occupation or condition.†

* See, *Exposé de la Situation du Royaume, 1841-50*, Introduction. In the Bibliography prepared by Heuschling, and cited above, will be found the exact titles of the publications here mentioned in a general way.

† *Exposé de la Situation du Royaume, 1841-50*, titre II, p. 4.

The agricultural census is even today considered by scientists a work of the first order. It comprised an enumeration in each community of the agricultural population from the age of 12 and upwards, separating the members of the family permanently occupied in agricultural pursuits, the farm hands and day laborers, with the number of days spent in work during the year, the number of domestic animals, the area under cultivation, the subdivisions of this area, the nature and extent of the products, the production and quantity per hectare and the total quantity, also information on the rotation of crops, the mean weight of grain and seed per hectolitre, the wages of the day laborers, the average price of the ground and the leases per hectare and the seeds used per hectare.

The industrial census contained information for each industry of the country as to the number of factories, manufacturers or artisans, the number of workers by sex and age (including the foremen and members of the family employed as workmen); a classification of the workers according to daily wages; the number and amount of horse power of the engines; the number of furnaces, forges and ovens; the number of looms, machines and principal utensils employed in the industry.

It had not been considered advisable to extend the census any further for fear that the accuracy of the declaration might suffer and that, in asking for too many details, the whole success of the enterprise might be jeopardized.

The statistical tables are arranged according to a general technological grouping and according to the alphabetical order of the industries. The data of those localities entitled to the name of towns are published separately, while those of other communities are treated together. Furthermore, the results are classified by provinces, and a second part of the census entitled "Récapitulation générale" groups all the former data and summarizes them. The industrial classification comprises 275 rubrics or divisions.

The Census of 1846 does not concern itself with industries carried on in the home.

According to the authors of the census, "this restriction was necessary in order to prevent double entries which would otherwise have occurred frequently as many house-workers work for more than one concern."

Nor was the population following commercial pursuits considered in this census. The transportation industry was also omitted in the enumeration.

From the view point of accuracy of the declarations made, the most stringent precautions were taken to insure the return of the bulletins, which were subjected to a most rigid examination on the part of the central administration, and whenever the slightest doubt existed, supplementary information was asked for.

As regards the number of workers occupied in various industries (314,842), it must be considered firstly, that the census was taken in October of 1846, that is to say, right after a very severe economic crisis, and that it is therefore safe to say that the declarations made by the employers have in many cases been incorrect; and secondly, that the employers rarely return the exact number of workmen employed in order to escape part of the license fee. The figures given in the statistics have, therefore, more than once been taken from the number of licenses issued annually. The number of 314,842 workmen must thus be regarded as very low.

The official statistics were thus based upon this threefold Census of 1846.

With these vast operations the organization period of Belgian statistics is brought to a close.

CHAPTER II. ORGANIZATION AND REPORTS OF STATISTICAL SERVICES

I. Legislation

In Belgium there is no general legislation on the organization and functional purposes of statistics.

The enumerations of the population were soon taken at regular intervals. After the first census of this kind had been taken in conformity with an Order in Council of June 30, 1846, a law of June 2, 1856, prescribed that a general census of the population should be taken every ten years in all of the communes of the kingdom, the first of which was to take place December 31, of the same year. Later, in order to bring the Belgian census date into agreement with that generally selected in other countries, the law of May 25, 1880, modified the period of the general enumeration. The first clause states that the enumeration of the population should take place henceforth on dates corresponding to a decimal date. The next census was fixed for December 31, 1880. It was to include a census of agriculture and industry.

The keeping of registers of population is closely bound up with the carrying out of general enumerations. The Order in Council of June 30, 1846, had already made this obligatory in each of the communes of the kingdom; the law of June 2, 1856, renewed this requirement and ordained that the registers of population should be corrected and completed after each census.

A census of industry was taken in 1846, in 1866 (not published), in 1880, in 1896 and in 1910. The first three were taken by virtue of the law and Orders in Council prescribing the census of the population. That of 1896 was taken under the law of June 29, 1896; articles 3 and 4 of this law provided penalties for persons who refused to fulfil the requirements of the census and declared that the facts might be gathered officially at the expense of the delinquents.

The law of December 14, 1910, made provision for the taking of a census of industry at regular intervals: "There shall be taken every ten years," states the first clause of that law, "conjointly with the general census of the population, a census of industry and of commerce."

Compared with previous laws relating to the censuses of industry, the law of December 14, 1910, presents various distinctive features: First, the regular periodicity of the census is established, whereas previously the census had been taken at irregular intervals of from twenty to fourteen and sixteen years between former censuses; second, the census is combined with the enumeration of the population and is taken conjointly with it. This was the case in 1846, in 1866 and in 1880, but the Census of 1896 was based upon the population registers drawn up as a result of the general census of December 31, 1890. A summary of the methods of the Census of 1896 gives all the details resulting from the choice of this statistical basis; third, the census is extended to include industry and commerce. Those of 1846, 1880 and 1896 include only industry; that of 1866 was extended to commercial establishments but it was not published. As in 1896, penalties are provided for those who refuse to comply with the official requirements.

There were censuses of agriculture in 1846, in 1856, in 1866 and 1880, carried out simultaneously with the censuses of the population. The law of September 11, 1895, provided for a general census of agriculture to be taken that year. Clause two of the same law states: that beginning with the year 1896 a partial census of agriculture should be taken annually, relating particularly to crops and the number of the principal animals utilized in agriculture.

These partial enumerations were carried out for some years. They were finally discontinued, their utility not being proportionate to their expense. A general census was taken on December 31, 1910.

The legislative measures which have just been enumerated had in view certain special statistical operations, such

as the enumerations of the population, of industry and of agriculture, or keeping the registers of the population. They do not exactly constitute a government statute whose character is determined by a definite statistical purpose. We must turn to the Bureau of Labor in order to see an instance of general statistics regulated by a public act of authority. The Bureau of Labor was created by an Order in Council of November 12, 1894, and was organized by virtue of a second Order in Council bearing the date of April 12, 1895. According to the terms of article 2 of this Order, "the Bureau of Labor has for its function to make inquiry, wherever necessary, and at the instance of competent authorities, as to the outlook of industrial and agricultural labor, and also as to the condition of the wage earners in industry, trades, commerce, agriculture and transportation; to investigate the effects of the laws and regulations regarding them, and in general to collect all such information as may contribute to their material, intellectual and moral well-being."

There may also be cited among the measures taken in Belgium by the central authority, the Orders in Council by virtue of which the Statistical Central Commission has been charged with publishing an account of the condition of the kingdom. The purpose of these publications is to state authoritatively and set forth in regular order the physical, moral and intellectual condition of the nation, the power, the strength, and the wealth of the country. Statistical accounts have appeared relating to the periods 1841-1850, 1851-1860, 1861-1875, 1876 to 1900. The compilation of the last summary statement which has just been published was the outcome of an Order in Council of May 29, 1902. A new summary statement for the period 1901-1910 is in preparation (Order in Council, November 20, 1913).

Aside from the cases which have just been noted, the statistical publications by the different ministerial departments do not find their basis in an act of legislative power

or of executive power, in the form of an Order in Council; they originate by virtue of an administrative decision and are based on a tradition more or less ancient. A complete list of them is given at the end of this article.

II. Subject Matter of the Principal Statistical Publications in Belgium

A. Demographic Statistics.—The principal demographical investigation is the census of the population, the basic legislation for which we have pointed out above.

The census* aims to ascertain the number of inhabitants either according to the population of customary residence or according to the population *de facto*; also according to sex, age, place of birth, nationality, language, degree of education, civil condition, occupations or positions of the inhabitants, number of households and the number of houses. The census is preceded by a verification of the numbering of all the houses and places which serve as habitations, and of a list of these houses and places.

Agents are appointed by the communal administrations under the control of the provincial governor in the proportion of at least one to every one thousand inhabitants, to distribute and gather up from the houses the blank forms provided for the declarations of the inhabitants. The distribution of the blank forms is made from the 20th to the 25th of December. These forms are of three kinds: the household form, the special personal form and the special collective form.

On the household form, the only form used previous to 1876, is written the names of every person composing the household, having their customary residence in the enumerated house, whether they are present or not at the time of the taking of the census.

The special personal form is used for the names of persons who do not have their customary residence in the house but

* From the *Report on the Condition of the Kingdom, 1876-1910*. Vol. II, p. 68.

find themselves there accidentally at the time of the taking of the census.

The special collective form, established in 1890, includes the list of persons segregated in boarding schools, barracks, charitable institutions, etc. The facts concerning each of the persons inscribed in the collective form are finally copied on individual slips which are addressed, like the special personal forms, to the commune in which the various persons have declared that they have their customary residence. These forms, then, only serve to avoid duplications and to check the names on the household form. The household form is the basis of the census. Every Belgian or foreigner, whether present or not at the time of the taking of the census in the house where he customarily resides, ought to be inscribed on the household form sent into that house. The total of the persons whose names appear on the household form constitute the population *de jure*. *Household* must not be confused with *family*. The instructions of 1900 precisely define these terms, stating that "the household (*ménage*) is a small or collective unit made up either of one person living alone or by a combination of two or more persons who, whether united or not by family bonds, customarily reside in the same habitation and there have a common life."

The household form and eventually the special form must be completed by the head of the household, who must give the facts corresponding to the situation as of midnight, December 31.

The taking of the returns at the houses of the inhabitants is begun January 2, by census agents. It is the duty of these agents to check the accuracy of the declarations. The following are the steps successively taken: first, the filling in of a special return of the number of houses and households; second, transcribing on individual cards the facts mentioned for each person in the household form; third, calculation, from the number of these cards, of the number of inhabitants, by classes, and the writing of this number

in the special returns. The counting of the individual cards has replaced the checking system used prior to 1876 in making the abstracts from the household forms.

The communal administration transcribes the numbers from these returns into recapitulation tables, and sends them to the Minister of the Interior. A specially created census bureau there verifies and coördinates the tables drawn up by the communal administrations, and proceeds to the work of recapitulation by administrative arrondissements, by provinces and for the kingdom. The infant population was classified in 1890 according to the language customarily used in the household of which they formed a part; in 1900, as in 1880, they have been considered as not speaking any language.

The statistics of changes in the civil condition of the population are published by the Statistical Central Commission; these may perhaps be considered as a supplement to the population census, and for that reason assume a real importance. These statistics were first published in 1857.* They were at first included in a collection entitled "Documents Statistiques." These documents were discontinued in 1869, when they were replaced by the "Annuaire Statistique" of the kingdom, the first volume of which contained documents relating to the year 1870. It was thought that the statistics of the changes in the civil condition and of the population would be duplicated by the data published in the statistical annual, and so the former was discontinued. Later, however, it was seen that the synthetic figures published in the statistical annual did not permit of the more or less thorough study of those statistics—one of the most essential requirements for general statistics.

The statistics of the changes in the civil condition of the population were then resumed, beginning with the year 1867; the first of the new publications covered the period 1867 to 1881; it was published in 1883; since that time the publication has appeared regularly. It contains twelve

* Compare *Bulletin of the Central Commission of Statistics*. Vol. XV, p. 423.

parts: movement of the population; immigration and emigration; changes in the civil condition of the population; number of marriages, births, and deaths, as well as still-born and other infants born dead; age of decedents; respective ages of brides and grooms at time of marriage; special statistics of twins and other multiple births; civil condition of brides and grooms; civil condition of married decedents; causes of deaths; special statistics of deaths by violence; special statistics of deaths from suicide.

The annual observation of the movement of the population is, like the general census of the population, decentralized; it is established by communal administrations which utilize for the purpose the civil registers and the registers of the population. These lists are transmitted to the central administration where the office of general statistics verifies them, transcribes them in special registers and makes a recapitulation according to the administrative territorial divisions. The central bureau of the Minister of the Interior has only to transcribe and add the tables. This method is abandoned in nearly all European countries. The advantages of centralization are evident; it has just been proposed that the communal administrations limit themselves to amplifying the tables, the elements of which would then be abstracted and combined by the Bureau of General Statistics of the Minister of the Interior. The Statistical Central Commission, pleased with the proposition, has just pronounced itself in favor of this reform.

We have spoken above of the population registers, the regular keeping of which, dating from 1846, was sanctioned by the law of June 2, 1856. The population register is a list of all the inhabitants having their customary residence in a commune, with an indication of their names and Christian names, place and date of their birth, civil condition, their legal residence, their occupation, business or position, and their nationality.

The utility of the population registers manifests itself under a triple aspect: political, administrative and statis-

tical. The revision of the lists of electors for the legislative chambers, and the provincial and communal councils, is made by the communal administration from the facts noted in the population registers; in police matters these registers also render valuable services; finally, the regular keeping of these documents makes it possible to draw up certain parts of the annual statistics of the movement of the population, to publish annually the approximate figure of the population of the kingdom, and even, as in 1896, to find therein, in case of necessity, the basis for an industrial census without having recourse in the first instance to a technical enumeration.

B. Economic Statistics.—From the beginning the government has concerned itself with the economic elements of national prosperity. The first statistics on mines, quarries and metallurgical establishments date from 1838. The outlines of these statistics were after some years revised and completed on the advice of the Statistical Central Commission; a new publication appeared in 1852, relating to the years 1845 to 1849.

The elements of these statistics are collected by the corps of mine engineers, centralized by the chief engineers of a mining district, and finally transmitted to the central administration which abstracts them by groups of data and publishes the results. The publication is annual. At the present time* it appears in a brochure and under the title: “Statistique des industries extractives et métallurgiques et des appareils à vapeur en Belgique pour l’année. . . .” (Statistics of extractive and metallurgic industries and of steam apparatus in Belgium for the year . . .). They include detailed tables relating to coal mines, their production, expenses, profits and losses; the classification of the personnel, the wages and the production per employe. Other summary tables relate to the manufacture of coke

* Since 1901; previous to that year the statistics of mines, etc., appeared in “Annales des Travaux publics” (up to 1894), and in the “Annales des Mines” after that. Ever since 1855 they have been the object of special publications.

and of charcoal, to licensed and free metallurgical mines and to quarries. For these latter businesses, the data relating to open quarries are assembled by the communal administrations. The metallurgical industries are also the object of statistics: they include successively blast-furnaces, steel works, the manufacture of zinc, of lead and of silver, the manufacture of iron, and establishments for the working of iron and steel; steam apparatus is included when accounting for the number and power of motors, the number and the heating surface in square meters of the generators, by provinces and principal industries. In the provinces which do not possess mines these data are gathered by the civil engineers. The publication ends with a table of the accidents occurring in coal mines.

The statistics of extractive and metallurgical industries, together with certain returns published by the tax authorities relating to industries subject to the excise law, are the only official Belgian statistics containing data on industrial production; for this reason they are of special interest.

The statistics of the foreign commerce of Belgium also date from the first years of national independence. It was the Minister of the Interior who took the initiative in this, the first publication embracing the years 1831 to 1834. Seven official publications appeared successively, the last relating to the year 1840. The following year the statistics of foreign commerce were placed under the Minister of Finance, who still actually makes the returns.

The volume of business transactions was at first expressed by means of "valeurs officielles permanentes" (permanent official values), that is to say, the price at which each article of merchandise was valued, was fixed, once for all, by the administration. The list of values was decreed in 1833; it remained in force until the Order in Council of October 10, 1847, which prescribed an annual revision of values for such merchandise as formed an important part in trade. Since that time the system has been generalized. It is necessary to note, however, that the revised official values

are applied only to such products as are admitted free or are subject to specific tax; the articles of merchandise taxed *ad valorem* must be declared by the importer and exporter. A special commission of experts each year makes a revision of the official values. The cost of transportation up to the Belgian frontier, or beginning from that point, are included in the value.

The origin and the destination of merchandise is one of the most important points to be explained. In Belgium, from 1831 to 1840, it was held that the country of origin was that from whence the merchandise came at the actual moment of its passage into Belgium, even when in reality it originated in another country. The exports by land were considered as being destined for the country where the merchandise entered when leaving Belgian soil. On this principle, however, Belgium appeared to have no commercial relations with certain states, Switzerland for example. This rule was abandoned in 1841. Since that date the real country of origin is sought for, that is to say, the country from which the merchandise has been expedited on its destination to Belgium, either directly or in transit through other countries, even when there has been a transshipment. In the countries of transshipment the merchandise must not have become nationalized by being the object of a commercial transaction. The country of destination is indicated by the exportation; it is the country toward which the merchandise is really sent, no matter whether the article is Belgian in origin or nationalized.

Between 1831 and 1854 the Belgian statistics presented foreign commercial products under three general headings: raw material, produce and manufactured articles; under the heading of produce was designated products delivered for consumption in their natural state. This classification was abandoned in 1854, the merchandise being from that date enumerated in the rules of the custom house official in

alphabetical order.* In 1907 the principle of systematic grouping was revived, and in 1908 merchandise was grouped and presented under four classes: I, live animals; II, beverages and foods; III, raw and simply prepared materials; IV, manufactured products. There has recently been added a fifth division relating to gold and silver metals, and gold and silver coin.

Belgium has taken the initiative in bringing about an international convention to consider the establishment of commercial statistics common to the principal nations. The first convention took place in Brussels in 1910. An international conference met in the same city in 1913. The contractual states decided to establish, in addition to the commercial statistics published by each country, special statistics based upon a common nomenclature, grouping the merchandise imported and exported into a limited number of classes, with an indication of the value and, as far as possible, of the weight. A common nomenclature was decreed to this effect; the publication of these special statistics will be assured by an office established in Brussels under the name of "Bureau international de statistique commerciale"

This bureau will publish a bulletin. The convention will become obligatory, after ratification, beginning with the first of July, 1914; it is concluded for seven years and may be tacitly renewed. The signatory states are Germany, Belgium, Bolivia, Chili, Colómbia, Cuba, Denmark, San Domingo, Spain, France, Great Britain, Guatemala, Haiti, Honduras, Italy, Japan, Mexico, Nicaragua, Norway, Paraguay, Dutch East Indies, Peru, Persia, Portugal, Russia, Siam, Sweden, Switzerland and Uruguay.

The common nomenclature includes the five categories

* In 1906, we drew attention to the importance of these classifications and we have shown what were the results one might draw from this grouping applied to Belgium statistics. Compare our article "De quoi se compose le commerce extérieur de la Belgique" (What constitutes foreign commerce in Belgium) in the *Revue économique internationale* (*International Economic Review*) March, 1907.

enumerated above; the total number of articles of merchandise enumerated is 186.

The comparison of the data relating to international commerce cannot fail to lead to some general information of the highest interest. It is to be desired that some of the large states which have not yet become signatories to the convention will soon join with those who have given their adhesion.

To the commercial statistics are joined several statistics relating to industries subject to a particular fiscal rule (excise duties). These industries are placed under the control of government agents, and in that way their production can be known. With the mining and metallurgical industries supervised by mine engineers, these are the only Belgian industries of which some data relating to their production are known. Statistics are applicable to breweries, vinegar factories, distilleries, sugar factories and refineries, and to tobacco culture.

The most important contribution to economic statistics is that furnished by the censuses of industry. We have set forth, in a few words, the Census of 1846 organized by Quetelet. It remains for us to describe, briefly, the Censuses of 1880, 1896 and 1910.*

The industrial census of December 31, 1880, was decreed by the law of May 25, 1880, and was carried out at the same time as the census of population and of agriculture. From the view point of the extent of statistical operations, it presents a special character. The Statistical Central Commission had expressed the opinion that it was impossible to extend the census indiscriminately to all industries and trades; according to the Central Commission it was because too much had been attempted in the industrial census of 1866 that nothing worth while had been secured. Therefore it was decided to limit the return to 57 branches of industry only, out of the 111 in the methodical classification. The list of these industries is available in the official publication.

* Reproduced from the statement (*Exposé*) of the Methods of the Census of Industry and Commerce, December 31, 1910.

Even with these restrictions, the census could not be carried out in an absolutely complete fashion, for the questionnaires were obviously subject to errors or showed omissions. Serious difficulties resulted, and these were considered so unsurmountable for certain industries that they were abandoned, the facts obtained being absolutely incomplete. Such was the case for the sea fisheries, the manufacture of carpets, woolen and silk tapestries, the manufacture of laces and of tulle and blond, the construction of sewing and quilting machines, the construction of telegraph and telephone apparatus, public works enterprises, and the transportation of mail, of passengers, and of merchandise by ordinary roads, by railways, and by navigation.

It was seen also that, after the abstracting of the documents, the data relating to industrial apparatus, the return for which had been asked for on the instructions and questionnaires, were incomplete or defective. As they appeared to be too vague, it was thought best not to publish them. On the other hand, the limits of some industries were extended. The total number of industries taken into account was 49.

The information relating to these industries was collected by the aid of questionnaires. These documents were of four kinds: first, the personal census; second, the census of motors, steam boilers and generators; third, a census of industrial apparatus, with the exception of hand tools; fourth, the census of production.

In the personal returns the attempt was made to learn the position held, the number and sex of the persons employed in the industrial undertakings, the average duration of employment and the time of employment, the wages of the laborers per day (in money, in kind, or in share of profits).

The census of motors, steam boilers and generators aimed to enumerate the number and power of the motors and the customary steam pressure and the number of simple steam generators.

It has been stated that the information relating to apparatus was too incomplete to be published.

Finally, as regards production, the census aimed to determine the number of products according to the nature of the products, and also the value of the annual production.

The Census of 1880 revealed the existence in Belgium of 26,522 industrial establishments, divided among the 49 branches of industry considered; the number of employers was 28,096, the number of clerical employes, 15,508, of laborers, 384,065; the number of motors, 13,113, developing a horse-power of 242,435. As to the production, its value was estimated to be, according to the census, 2,177 million francs.

The Census of October 31, 1896, decreed by the law of June 29, 1896, was organized by the Order in Council of July 22, following. This census, the methods and results of which have been described in volume XVIII of the publication, presents, in comparison with former enumerations, a certain number of characteristic features which it is useful to recall. In the first place, its generality: it was extended to all industries and trades, including home work, which had not been enumerated since the Censuses of 1846 and 1880, and transportation industries, which were excluded in 1846, and the collection of the data for which had been given up in 1880. The only Belgian information to which that of 1896 is comparable, subject to the omissions which have just been noted, is the industrial enumeration made fifty years earlier, in 1846.

The Census of 1896 presents also the characteristic of not being immediately preceded nor accompanied by any general enumeration. To obtain knowledge of the employers and heads of workingmen's families to whom the forms should be sent, use was made of the population registers, established as a result of the decennial census of the population, December 31, 1890, and brought down to date by the communal administrations. The use of these registers as a basis of census operations made a careful cor-

rection of the documents indispensable; the mechanism of these supplementary operations, too long to describe in this place, are stated in detail in volume XVIII (already cited) of the publication.

Not only were the employers required to answer a questionnaire, but in addition the heads of workingmen's families were invited to complete the blank forms relating to the wage-earning population. A special form (Form B) was sent to every family in which at least one member had been designated on the population register as a workingman or workingwoman in industry or trade. This furnished the following information concerning every member of the family: name and Christian name, sex, place of birth, date of birth, civil condition, degree of relationship to the head of the household or occupation. A special agent visiting the home of the family noted for every workingman or workingwoman in industry or trade the following facts: work at home or outside of house, name and industry of the employer, commune where establishment was located, street and number.

It may be said that the essential characteristic of the Census of October 31, 1896, was the minute correction to which the documents were subjected. Independently of internal criticisms to which they were subjected, the forms intended to contain the answers of the persons enumerated were distributed to the heads of workingmen's families and thus served as a reciprocal check. Form B assisted materially in correcting the faulty returns relating to classification of industries and to the number of occupied workingmen; they served also to bring out the omissions in the census of industrial enterprises of small importance. Other means of check also supplemented this process of statistical criticism.

From the census of industries there were excluded: the Belgian government railroads; the various public services of the local administrations, of an industrial character; the enterprises pertaining to establishments or institutions of an unproductive character; the industrial occupations which

are intimately associated with the carrying on of trade; and industries which may be considered as a prolonging of the agricultural industry.

The Census of 1896 showed 337,395 enterprises and divisions of enterprises, 1,102,244 persons actively engaged in enterprises, of whom 842,000 were workingmen and workingwomen in private enterprises, among whom 118,000 workingmen and workingwomen worked at home; small industries (1 to 4 workers) engaged 13.92 per cent. of the working population; industries of average size (5 to 49 workers) 26.96 per cent.; large industries (50 to 499 workers) 36.66 per cent.; and the largest industries (500 workers and over) 23.46 per cent.

The Census of 1910 was extended to industry and commerce. It was taken December 31, by means of two individual forms distributed by census agents at the homes of all persons whose names appeared on the household form used for the population census, as carrying on an industrial or commercial occupation.

The employers in industry and those engaged in commerce were required to make answer to the questions in a special form; these questions concerned the nature of the industry or of the commerce, the juridical form of the enterprise and the fact as to whether or not the enterprise listed on the form was, in its entirety, the only occupation of the employer, or whether it was a division of a business, the number of motors and their horse power, whether the sales were wholesale or retail (as regards commerce), and finally, the number of persons employed (members of the family of the employer, clerical force and wage earners).

The second individual form was for the purpose of collecting the answers of the clerical force, of the workingmen in factories and the workingmen in homes, and the collaborating workmen of the latter.

The census was entirely centralized. All the forms were transmitted by the communal administrations to the Bureau of Labor; that office examined, corrected and abstracted

them. There were 383,094 returns to the communal administrations to be corrected or completed; 95,537 forms were discarded, either because they related to categories not included in the census or because they were duplicates.

The census comprises two parts: the occupational enumeration and the industrial enumeration. The occupational enumeration shows, commune by commune, the number of persons carrying on an industrial or commercial occupation, whether they are independent owners of the business, members of the family of the employer, clerical employes, workmen, unemployed, the industry or branch of commerce in which they are employed (38 groups).

In addition, two blanks are reserved for the study of supplementary occupations. A fourth blank was reserved for statistics of wage earners and employes working in a commune other than that of their domicile, the migrations of workmen being of considerable importance in Belgium on account of the easy means of transportation. These statistics make possible for the first time a study of this phenomenon in all its details.

The occupational enumeration is published.

The second part, in preparation, is the industrial enumeration. It includes four blanks relating to the nature of the industries, and their location, the juridical form of the enterprises and their extent expressed by the number of workmen employed and, finally, the sex, age and civil condition of the workmen and clerical employes.

There were enumerated on December 31, 1910 (occupational census):

For industry: 260,521 employers, 91,693 members of the families of employers, 86,302 clerical employes, 1,185,381 manual laborers, 1,161 clerks not working, 85,103 manual laborers not working—a grand total of 1,710,161 persons, to whom are to be added 8,983 persons carrying on under a supplementary title an occupation connected with industry.

For commerce: 216,130 employers, 215,696 members of families of employers, 48,822 clerical employes, 37,711 man-

ual laborers, 1,621 clerical employes not working, 2,783 manual workers not working, making a total of 522,763 persons; in addition, 24,045 persons carrying on under a supplementary title a commercial occupation.

Taking into account 5,084 persons enumerated who have not been classed in a definite group, there were then at the time of the census 2,238,008 persons carrying on under a principal occupation heading an industry or commercial business, and 33,028 persons belonging to these categories by reason of their supplementary occupation. The population of Belgium being 7,417,454 on the same date, the population engaged in industry or commercial industries represents more than 30 per cent. of the total.

C. Social Statistics.—We have already said that the first judicial statistics compiled in Belgium were due to the initiative of Quetelet; aided by Ed. Smits, director of the statistical bureau, he published a return, including the years 1826 to 1830, and embracing the courts of assize, the correctional tribunals, and the police tribunals. Later the Department of Justice continued to publish these statistics at irregular intervals, following the plan of Quetelet. In 1832, there were added statistics of civil and commercial justice which formed the subject matter of a special publication. The statistics of criminal justice were established for the civil year (January 1 to December 31); the statistics of civil and commercial justice for the judicial year (October 1 to September 30). This arrangement still exists.

After it was decided to publish every ten years an account of the condition of the kingdom, the judicial statistics disappeared as a special publication. The figures relating to the activity of the criminal courts during the years 1840 to 1849, and of the civil and commercial courts during the years 1841–1842 to 1849–1850, were included in an account of the condition of the kingdom for the period 1840 to 1850; figures for the years 1850 to 1859 for criminal statistics, and from 1850–51 to 1858–59 for civil statistics, in the account (*l'Exposé*) for the period 1850 to 1860. Meanwhile, the

figures for the first half of the decade were also published in the statistical collection published by the Minister of the Interior.

Beginning with 1860, the judicial statistics were again made the object of special publications, relating to both criminal actions and civil and commercial actions. Four volumes appeared in succession, embracing, first, the years 1861 to 1867*; second, the years 1868 to 1875; third, the years 1876 to 1880; fourth, the years 1881 to 1885.

All the statistics published up to this time were no more than a résumé of those compiled by the various tribunals or judicial offices. Between 1844 and 1849 it was thought best, in order to facilitate the task of the compilers, to require them to copy daily in the registers sent them by the Minister of Justice such matters as would be included in the principal statistical tables. This system did not produce all of the results that were expected, especially in the matters relating to criminal statistics. On the other hand, the publications conforming to those of French criminal statistics gave the individual characteristics of the delinquents and the causes of crime in insufficient detail. The reform of judicial statistics was made the subject of an investigation about 1890; but this reform was not actively prosecuted until 1896, under the direction of our learned colleague, M. Ch. De Lannoy. The result was a complete revision of the framework, of the methods of compilation, and of the plan of publication. Since 1898 the judicial statistics had appeared annually.† From the beginning the reform concerned itself only with trial courts and courts of judgment. Actually it included besides judicial statistics, properly so called, the statistics of prisons, those of vagrancy, of pauperism, of child protection, of deaf-mutes, of the blind, and of the insane. The courts, the prosecutors and the trial judges

*The new penal code was promulgated in 1867.

† In order to facilitate the transition between the old and the new publications, there was published for the twelve years included between 1885 and 1898 a statistical résumé of the activity of the civil and criminal courts.

are no longer called upon to furnish criminal statistics, except facts of an administrative kind. The data relating to condemned persons, to their antecedents, to the penalties they have incurred, are derived directly by the Bureau of Statistics of the Ministry of Justice from the briefs in the pigeon-holes of the courts.

This method gives all the necessary guarantees of accuracy and gives to the judicial statistics designated "criminal statistics" a special value from the scientific point of view.

The Bureau of Labor has brought an important contribution to social statistics through its general inquiries and monographs on wages, and on the hours of labor of wage earners in industry. The general Census of October 31, 1896, attempted to collect circumstantial data relating to rates of wages by means of a questionnaire addressed to all employers. The heads of business concerns were invited to give, separately, for male and female wage earners, ages over sixteen years and under sixteen years, and by kind of employment for each classification of wage earners, the total wages paid, at the last normal payment, the number of wage earners between whom this sum was divided, the total number of days work. By normal pay was understood that which had not been affected by any external events such as strikes, stoppages for repairs, etc. If the last payment had not been normal, it was necessary to choose a former payment conforming to that requirement.

The questionnaire required, besides, the facts relating to extra payments, bonuses, participation in profits, and other advantages, and particularly the method of fixing wages (by the hour, by the day, by the task, by the piece or by the job).

This method, which represented a great improvement over the methods previously employed, still did not make it possible to study the effective distribution of wages in the class of wage earners, for in the same special line of work there are numerous differences between individuals in the

matter of wages. The statistics of wages were compiled by the aid of two supplementary operations: the forms of the small industries (up to twenty wage earners) were sent back to the employers and they were invited to subdivide the occupational classifications into as many groups as there were different rates of wages.

For the establishments which did not fall under the heading of small industries, the statistics of wages were compiled by agents from the Bureau of Labor, who were charged with the collection, from the pay-roll of the actual wages of the individuals.

The purpose of these supplementary statistics was to determine with absolute exactness the daily wages of the wage earners affected, to the end of the month of October, 1896, and to work out the number of hours during which they were normally occupied during that period. The notion of an average wage was therefore completely disregarded.

In this way the wages of 671,511 wage earners were collected and it has been possible to determine exactly the actual daily wage of 612,892 of these, from the pay-roll of the employer. We do not know of another example of so detailed statistics of wages, nor so extensive, considering that the total number of wage earners included in the census exceeded 671,000.

In the course of the inquiry into wages, considerable modifications took place in the rates of wages of workers in coal mines. The Bureau of Labor decided to fix, by means of a supplementary inquiry, the direction and extent of the variations reported in this particular field. The results were published in 1901, under the title "*Statistique des salaires dans les mines de houille*" (Statistics of wages in coal mines. October, 1896, May, 1900).

Finally, to complete the facts previously gathered, the Bureau of Labor undertook a new inquiry concerning wages in textile industries, as of October 31, 1901, and a second inquiry relating to the wages in metal industries, as of October 31, 1903. These inquiries, following the census

method of 1896, endeavored to find the individual wages and abandoned the notion of an average wage. A special agent of the Bureau of Labor visited all the establishments employing more than ten wage earners, a list of which had been prepared through the aid of the archives of the census of 1896; 709 firms were thus visited in the textile industry, and in only nine among these was an answer refused to the agent of the Bureau of Labor. Everywhere else the data relating to the rates of wages were taken from the pay-rolls of the employers and in most cases the facts were copied personally by the agent of the Bureau of Labor. The wages of 71,512 wage earners in the textile industry were thus determined and compared with those of 1896. The same methods were adopted for the inquiry relating to the wages in the metal industries, in the course of which data were collected relating to the wages of 84,136 wage earners, grouped in 1,083 establishments.

The statistics of industrial accidents may be considered in social statistics, although in certain of their aspects they equally concern economic statistics. The Bureau of Labor published in 1912 the first return relating to this important problem which has appeared in Belgium. The method followed has recently been set forth in that publication in great detail, making it unnecessary for us to here describe it otherwise than very briefly.

The reparation made for industrial accidents is regulated by a law of December 24, 1903. By virtue of this law the institutions which have assumed the liability of the employers are required to collect all the facts relating to these accidents and their results, and to communicate them to the Bureau of Labor. This office thus disposes of the complete material gathered according to instructions and controlled by itself.

The first results of the statistics of industrial accidents appeared in 1912. The Bureau of Labor has taken care to establish the industrial divisions in such manner as to make it possible to calculate the risk peculiar to each industry;

and the enterprises which employ a motor have been separately compiled. Special attention has been given to the nomenclature of industries so as to group homogeneous risks; finally, the study of accidents has been made in accordance with the classification of the wage earners by age and by rates of wages.

There remain to be mentioned in this domain the statistics of strikes and lockouts published by the Bureau of Labor, but we omit to analyse them as it would unduly extend this statement.

III. Official Statistical Publications of Belgium. 1830-1914

The list of statistical publications appearing in Belgium has been prepared by the Department of General Statistics, established in the Ministry of the Interior, and appear in the Statistical Annual of Belgium for 1914. The list stops with the year 1910; we have completed it down to April 30, 1914. (See page 166 *et seq.*)

CHAPTER III. THE FUTURE OF STATISTICS

While it is not always easy to describe in the form of a résumé a system as old, varied and complex as the statistics of Belgium, one can nevertheless try to present a statement as accurate and impartial as possible. But those who have taken it upon themselves to collect this series of articles expect something more of us; they desire that the authors of the descriptive memoirs express their views as to the future development of statistics. The science which we cultivate is the first to warn us against the dangers of prophecies. The thankless rôle of a prophet does not tempt us. We do not know along what lines the statistics of Belgium will develop and toward what ideal they will tend. We shall simply indicate in what direction they could, according to our judgment, reach their fullest development.

If one studies the list of statistical publications which have appeared in Belgium, one can hardly forbear homage

to the industry, ingenuity and perseverance which was needed to accumulate such a wealth of information. The works published by our administrative services are many and various; they embrace the most diverse aspects of social, economic and moral activity. The origin of a great many of them dates back to the very first years of our political independence, and one must admire the pluck of the provisional government, not yet any too firmly established after the revolution of 1830, which at that critical moment decreed the establishment of a statistical office, thereby expressing its faith in the continuity and success of the task of national emancipation.

Many of our statistics have had in their time the merit of novelty. The industrial and agricultural censuses of 1846 served for a long time as models which in their day and manner enriched the statistical methods with a multitude of ideas and interesting and novel methods. Special merit may be claimed for the boldness and novelty of the statistics of wages of the industrial census of 1896, so perfectly planned by our colleague, and at that time co-worker, M. Em. Waxweiler, statistics which furnished the most reliable data on the wages of 612,892 laborers out of 671,596 enumerated. The statistics of industrial accidents have certainly benefited, as was to be expected from the acquired experience; the revision and presentation of the material have been considerably improved upon and the financial aspect of the problem has been elucidated by the great attention to detail and accuracy. Finally, it is worthy of notice that, in that part of the industrial and commercial census which has just appeared and which deals with occupations, there is to be found the most detailed information relating to incidental occupations and to the migration of laborers, a phenomenon so interesting to trace in a small country like Belgium where the means of transportation are numerous and inexpensive.

These opinions of things with which we are most familiar by no means exclude a similar opinion on any other division of Belgian statistics.

We have had in Belgium an illustrious statistician, a man of many excellent parts. The name of Quetelet is too well known to need recalling, but through the rays of his glory one may discover some stars whose brilliancy is dimmed by that of this eminent savant.

Statistical science has brought out in Belgium a group of remarkable men who have given us a large number of valuable works, some of which are beyond compare.

A general view, however, of the development of Belgian statistics does not leave one with an unreservedly favorable impression.

While certain divisions of the statistics are treated in a comprehensive and methodical manner, others are of a more fragmentary character and without a definite plan. Omissions and duplication caused by lack of coördination between the different ministerial departments are frequently met with. Certain branches of statistics are entirely neglected, as, for instance, financial statistics. Others, started many years ago, have made no progress and have not been developed, such as the statistics of industrial production. In one and the same ministerial department several offices are occupied with statistics, and jealously defend their administrative functions to the neglect of harmony between their methods and definitions. Such lack of "team-play" militates directly against the perfecting of the personnel and the material, and the employment of costly machinery, the use of which is recognized as necessary.

The Belgian statistics are decentralized. We do not speak merely of that form of archaic decentralization which is now found only in a few isolated cases. In those instances the communal administrations publish their own statistical reports, which the central office, after a purely arithmetical verification, file away without being able to verify their accuracy.

If this method may be defended in very large countries, such is not the case in Belgium where the statistical mate-

rial is not so extensive that its compilation and tabulation in a central office is impracticable.

The decentralization which we have in mind concerns the division of the work between nine or ten ministerial departments. We have seen that this was regretted by Quetelet. At present the demographic statistics are assigned to the Ministry of the Interior. The Ministry of Finance has charge of the commercial statistics and shipping; and this same department also concerns itself with certain industries and publishes reports on the sea fisheries which are really collected by the Department of Marine. The judicial statistics are compiled by the Ministry of Justice together with certain other more or less unexpected schedules, such as the statistics of the insane, deaf-mutes, blind persons, and bankruptcies.

The Department of Highways deals with land and water transportation, and the Department of Railways has charge of transportation by rail. The labor statistics are taken care of by the Department of Labor, but several other offices of the Ministry of Industries and Labor concern themselves with related questions, etc.

Briefly, it is always difficult to know exactly which ministerial department has charge of collecting and publishing data in any one division of statistics.

The advantages which would accrue from a centralization of statistical operations are scientific, administrative and practical.

(a) Unity of methods, comparative statistical criticism, elimination of duplication, a common working plan, perfect regularity of the publications in the different departments, are not possible except under a centralized system.

The Statistical Central Commission had for its very purpose the realization of a general management and, to a certain extent, of a uniform plan of execution. But too often this program is still no more than a theory. There are numerous reasons in law and fact which explain why this is so. It is left to the discretion of the heads of the ministerial de-

partments as to when to consult the Statistical Central Commission with regard to work which they intend to undertake, or to propose modifications which they consider desirable of a plan previously adopted. On its part, the commission can only deplore the absence of statistics which they regard as interesting but which they have neither the means to realize themselves nor to obtain through others. These unfortunate circumstances are responsible for the lack of a uniform plan apparent in the mass of our publications. The Statistical Central Commission has always shown great activity, but it can not exceed its authority, nor increase its powers.

(b) Instead of having a number of unimportant and inconspicuous statistical offices, mere pawns on the administrative chess board, centralization would give us an influential administration which could defend its views and obtain their acceptance.

The funds appropriated could be better distributed and be used to better advantage than under the present system; it is even probable that substantial economies could be effected.

The greatest advantage, however, would be that a centralized service would have at its disposal a methodically trained office force familiar with its special needs and workable to its maximum of efficiency. No office in Belgium commands a force large enough to undertake an important task, recurring periodically, such as a census.

We should also obviate the difficulty arising from the employment of a temporary force for work of this kind, selected from motives quite foreign to statistics. At best, the least objectionable course would suggest a few months' education for newcomers, and there would still be found unassimilable elements among them. In Belgium there are no special proofs of aptitude required before admission to the departments which deal with one or the other branch of statistics. The titles, salaries, promotions, are the same as those adopted for other administrative services. While individuals have made statistical science their vocation by spe-

cializing in scientific researches, others may have come into the service through accidental administrative combinations, or in the hope of improving their position. It is possible to conceive of a more methodical organization.

The education of the professional statistician ought to be general and special. A statistician can acquire a general education in a university course comprising philosophy, political economy or mathematics; a fit discipline in the development of the reasoning faculties. None of these studies should exclude the others; of mathematicians we would require as thorough a study of logic as of political economy; of economists should be demanded a knowledge of certain branches of mathematics; and of doctors of philosophy a knowledge of the conceptions of political economy and mathematics.

The training of the statistician should be special, like that in the professions.

The central statistical service should have as many sections as there are divisions or applications: demography, moral statistics, social statistics, economic statistics, financial and administrative statistics. The whole service should be under an official bearing the title Director General or President; and at the head of each section should be a statistician with the rank of Director. No one should be appointed to take charge of a section without having worked in each other section long enough to acquire a practical knowledge of the different methods. One or two assistant statisticians would have to assist the head of a section in directing the work of the clerks; these assistants should be chosen from clerks who have shown special aptitude and efficiency in actual statistical work.

This organization would not be complete, however, if it did not succeed in establishing a firm and durable link between itself and the intellectual classes of the country. The thing most lacking in our statistical offices, which are, so to speak, dovetailed into a congeries of administrative institutions, is sufficient contact with the public, a defect which

is largely responsible for the manifest indifference to statistics on the part of the masses. An eminent statistician, M. de Foville, once said "there are even today many people who seem to think that statistics are for the exclusive use of statisticians—an error like that of believing that bread is made for the bakers only." If this error has spread, it is because everything has been done to bring it into being and nothing neglected to foster it. Those who ultimately use statistics are legion, but they are carefully kept away from statistical offices and do not succeed in making their demands heard, and receive but tardy and incomplete satisfaction. The central statistical office should keep in intimate and continuous contact with industrial, commercial and financial interests; it should be carefully informed on subjects and questions of special interest to these groups. It should place at the disposal of the cities and communities of the nation all the information which concerns them; and it should publish a periodical for quick information kept well up to date on all economic, financial, demographic and moral phenomena. This task would fall chiefly upon the president of the office, who should be a young, active, clear-headed man. The central statistical service ought also to be accessible to students of political economy and statistical science in the Universities and commercial high schools. We have in Belgium five or six courses in statistics with many students. But how many of these have a clear idea of an analysis, of the advantage of this method, or that machine? What we are striving for is not merely, as M. Waxweiler would have it, to found a seminary from which the future functionaries can be recruited. Our aim is more far-reaching; our objective broader. We would initiate our future men of affairs, bankers, merchants, manufacturers, into the methods and resources of statistics so that all would seriously make use of them.

In other words, the central statistical service ought to be a veritable scientific laboratory where anyone who so desires can come and work. It is remarkable that the utilization

of published statistics is generally narrowly restricted. Too often the analyses and deductions are dry and lacking life and detail. It is almost impossible that it should be otherwise, for a single author has neither the time nor the inclination to illuminate and enlarge upon the aspects of the problems for which the statistics offer or ought to offer a solution. All this would be different if a movement were stirred up among the intellectual classes of the country and the young students were encouraged to come and work in the offices of the central service, and to extract from the official publications all the conclusions they contain. Carefully compiled statistics contain a wealth of information; but too often they remain unused or are used in an incomplete or biased fashion. We are, therefore, of the opinion that official statistics should be so presented as to allow of their largest possible use, that the summaries be numerous and detailed, that the original documents be always at the disposal of investigators and, finally, that the administration limit itself to drawing general conclusions from its works, but take good care to popularize and distribute them, stimulating a scientific rivalry among the learned public with the view to develop them and go to the bottom of things.

In a centralized system of statistics the institution of the Central Commission, as it is organized in Belgium, loses its *raison d'être*. And yet, the existence of a consulting body is absolutely indispensable to the control of the central service, and to the maintenance of a permanent link between the departmental administrations and the statisticians.

The Central Commission should be transformed into a Superior Council of Statistics. It should be composed of scientific and administrative experts, appointed by the king upon the recommendation (with a certain number of votes) of the learned bodies, all the section chiefs and the president of the central service taking equal part in it.

We have questioned our colleagues, professors of Belgian statistics, as to the advantage of centralization and as to the qualifications needed in statistical officials. Among the

replies received we note the following which comes from M. Waxweiler and which we quote in part, verbatim:

The Director and his co-workers must hold a university diploma vouching not only for statistical science but also for general attainments in social sciences in general. Moreover, they must have passed through the administrative routine or have had a sufficient experience in the conduct of a complete statistical inquiry, that is to say, from its inception to its readiness for publication.

The University training, so far as it deals with statistical science, must not only extend to the study of statistical processes, such as the theory of probabilities and the mathematical analysis of fluctuations, but it must also concern itself with the study of statistics already published and must include the personal preparation of two or three works on applied statistics.

Moreover, there ought to be some means of assuring to the management of the Statistical Bureau as much freedom as possible from the administrative atmosphere.

M. Waxweiler suggests, for instance, such means as the formation of a library attached to the general management, the organization of periodical meetings of the chiefs of the service, the institution of a "séminaire," the assignment of the execution of certain investigations to all the co-workers, the assurance, to each collaborator in an investigation, that his name and personality will be made known.

One thus sees that our eminent colleague suggests a large number of measures of which we have already approved or, at least, he indicates plans similar to many of those which we have advocated. At the same time we would suggest the one exception that the Central Bureau, and that alone, ought to assume the responsibility for the investigations undertaken and the work published. In statistical matters the aids which are rendered to the author of the program or to him who directs the investigations are so numerous and important that it would be a real injustice to give credit to any one person, no matter how interesting he may be.

(c) From the practical standpoint:

At present, being divided among the different ministerial departments, the statistical offices possess but mediocre resources and a fortuitous equipment. The way they are organized presents a direct and insurmountable obstacle to the improvement of the statistical mechanical appliances. A complete installation of all the machinery used in other

countries would be ruinous; moreover, this mechanism would not really pay unless it were used continuously, upon a large scale and with a view to intensive production, conditions which can, of course, exist only under a centralized system. We will not speak of the offices which are rarely suited to their purpose.

The simplification which would result from centralization, the economy in personnel, in time and in money would more than pay for the initial expenditure.

We would like to see the Statistical Central Service housed in a large building away from the beaten track in attractive surroundings, on simple and harmonious lines. We have in mind a building with a central front part set off by a few steps leading to an entrance hall, the directors' office and waiting room on either hand. In the background there would be a spacious semi-circular library with galleries; from this semi-circle five or six spacious wings should radiate on a fanlike plan. Each of these wings would be occupied by a special branch of statistics, such as demography, social and economic statistics, etc. At the ends nearest the semi-circle, containing the library, are the offices of the chiefs of the respective branches. From these offices the wings increase in width towards their farther end, dovetail fashion, and should all be connected by a glazed corridor affording easy communication. The side walls should contain no windows but be left free for papers and books. The lighting should come from above. Instead of a second floor there would be a large basement court surrounded by petty offices and approached by ramps. In this basement there would be iron shelves for statistical material, the archives and book-storage. Here also would be the sanitary arrangements, a sterilization room for documents, vacuum cleaning and central heating systems, and electric elevators to carry bulletins about the work rooms.

This is our conception of the future of statistics. The reality is still far distant; but let us bear in mind that today's dream has often become tomorrow's reality.

May 1, 1914.

PUBLICATIONS STATISTIQUES OFFICIELLES DE LA BELGIQUE DE 1830 À 1914

OUVRAGES GÉNÉRAUX.

Documents statistiques sur le Royaume de Belgique, recueillis et publiés par le Ministre de l'Intérieur.

3^e publication officielle. 1836, 1 volume; 4^e publication officielle. 1838, 1 volume; 5^e publication officielle. 1840, 1 volume; 6^e publication officielle. 1841, 1 volume.

Documents statistiques publiés par le Département de l'Intérieur avec le concours de la commission centrale de statistique.

Tome I, 1857; tome II, 1858; tome III, 1859; tome IV, 1860; tome V, 1861; tome VI, 1862; tome VII, 1863; tome VIII, 1864; tome IX, 1865; tome X, 1866; tome XI, 1867; tome XII, 1868; tome XIII, 1869.

Annuaire statistique de la Belgique (Ministère de l'Intérieur, Administration de la Statistique générale), Publication annuelle. 1^{re} année, 1870.

Bulletin trimestriel publié par le Bureau de la Statistique générale du Ministère de l'Intérieur. 1^{re} année, n° 1 — Septembre 1909.

Résumé des rapports sur la situation administrative des provinces et des communes de Belgique pour 1840, présenté au Roi par le Ministre de l'Intérieur. 1841, 1 volume (envisage partiellement la période décennale 1831-1840).

Exposé de la situation du Royaume (période décennale de 1841-1850), publié par le Ministre de l'Intérieur, 1852, 1 volume.

Id. (période décennale 1851-1860). 1865, 3 volumes.

Id. de 1861 à 1875, publié par les soins de la Commission centrale de statistique. 1885, 2 volumes.

Id. de 1876 à 1900, rédigé sous la direction de la Commission centrale de statistique.

Tome I, 1907; tome II, 1912; tome III, 1914.

Bulletin de la Commission centrale de statistique (Ministère de l'Intérieur. Administration de la Statistique Générale).

Tome I, 1843; tome II, 1845; tome III, 1847; tome IV, 1851; tome V, 1853; tome VI, 1855; tome VII, 1857; tome VIII, 1860; tome IX, 1866; tome X, 1866; tome XI, 1869; tome XII, 1872; tome XIII, 1878; tome XIV, 1881; tome XV, 1883; tome XVI, 1890; tome XVII, 1897 (avec en annexe l'*Album de statistique graphique. — Démographie et hygiène de la ville de Bruxelles* — par M. le docteur E. Janssens); tome XVIII, 1904; tome XIX, 1906; tome XX, 1909.

TERRITOIRE ET POPULATION.

Statistique territoriale du Royaume de Belgique, basée sur les résultats des opérations cadastrales exécutées jusqu'à la fin de 1834, publiée par le Ministre des Finances. 1839-1853, 2 volumes.

Recherches sur la reproduction et la mortalité de l'homme aux différents âges et sur la population de la Belgique d'après le recensement de 1829, par MM. A. Quetelet et Ed. Smits, 1^{er} recueil officiel, 1832, 1 volume.

Population. Recensement général (15 octobre 1846), publié par le Ministre de l'Intérieur. 1849, 1 volume.

Id. (31 décembre 1856). 1861, 1 volume.

Id. (31 décembre 1866). 1870, 1 volume.

Tableau de la population du Royaume (population de résidence habituelle, dite de droit) déterminée par le recensement général du 31 décembre 1876 (Ministère de l'Intérieur). 1877, 1 volume.

Population. Recensement général (31 décembre 1880), publié par le Ministre de l'Intérieur. 1884, 1 volume.

Id. du 31 décembre 1890. 1893, 2 volumes.

Id. du 31 décembre 1900. 1903, 2 volumes.

Id. du 31 décembre 1910. 1913, 2 volumes (un volume reste à paraître).

Population. Relevé décennal 1831 à 1840.—Mouvement de l'état civil de 1840— publié par le Ministre de l'Intérieur. 1842, 1 volume.

Population. Mouvement de l'état civil pendant l'année 1841, publié par le Ministre de l'Intérieur. 1843, 1 volume.

Id. pendant l'année 1842, 1844, 1 volume; année 1843, 1844, 1 volume; année 1844, 1845, 1 volume; année 1845, 1846, 1 volume; année 1846, 1848, 1 volume; année 1847, 1848, 1 volume; année 1848, 1849, 1 volume; année 1849, 1850, 1 volume; année 1850, 1851, 1 volume.

Statistique du mouvement de l'état civil et de la population du Royaume pendant les années 1867 à 1881 (Extrait du tome XV du *Bulletin de la Commission centrale de statistique*). 1883, 1 volume.

Id. pendant l'année 1882 (Ministère de l'Intérieur. Extrait du *Moniteur belge*). 1883, 1 volume; année 1883, 1884, 1 volume; année 1884, 1885, 1 volume; année 1885, 1886, 1 volume.

Relevé officiel du chiffre de la population du Royaume par province, par arrondissement administratif et par commune à la date du 31 décembre 1886 (Ministère de l'Intérieur. Extrait du *Moniteur belge* du 14 juillet 1887). 1887, 1 brochure. Publication annuelle.

Statistique du mouvement de la population et de l'état civil en 1890 (Ministère de l'Intérieur. Administration de la Statistique Générale). 1895, 1 volume.

Id. en 1900, 1904, 1 volume.

HYGIÈNE. STATISTIQUE MÉDICALE.

Statistique médicale de l'armée belge. Période de 1868-1869, précédée d'une statistique sur la mortalité dans les hôpitaux et infirmeries militaires pendant les années 1862 à 1867. 1871, 1 volume; période de 1870-1874. 1877, 1 volume; période de 1875-1879. 1883, 1 volume; période de 1880-1884. 1886, 1 volume. Publication annuelle à partir de 1885 (Ministère de la Guerre).

Conseil supérieur d'hygiène publique. Rapports adressés au Gouvernement (Ministère de l'Intérieur. Administration du service de santé et de l'hygiène).

Tome I, années 1849-1855 à tome XVII, 1908-1909; tomes XVIII et suivants: un volume annuel.

Rapports des commissions médicales provinciales sur leurs travaux pendant les années 1859 à 1868, 1881 et suivantes (les années 1869 à 1880 n'ont pas paru). Publication annuelle (Ministère de l'Intérieur. Administration du service de santé et de l'hygiène).

Bulletin spécial du service de santé et de l'hygiène publique. Années 1893 et 1894 (Bulletin mensuel).

Bulletin du service de santé et de l'hygiène publique. Années 1895 à 1905 (Bulletin mensuel).

Bulletin du service de santé et de l'hygiène. Années 1906 et 1907 (Bulletin mensuel).

Bulletin de l'Administration du service de santé et de l'hygiène. Années 1908 et suivantes (Bulletin mensuel).

Bulletin du service de surveillance de la fabrication et du commerce des denrées alimentaires. Compte-rendu mensuel des mesures prises par le Gouvernement en exécution de la loi du 4 août 1890 ainsi que des effets produits par ces mesures.

Années 1893 à 1907. Depuis le 1^{er} janvier 1908, ces renseignements sont publiés dans le *Bulletin de l'administration du service de santé et de l'hygiène*.

Bulletin sanitaire. Publié tous les jeudis ou tous les 15 jours depuis 1901; la 1^{re} année, 1901, a paru en annexe au *Bulletin du service de santé et de l'hygiène publique*.

Introduction à l'*Annuaire sanitaire de la Belgique* (Situation au 1^{er} janvier 1912) Bruxelles, 1913.

ENSEIGNEMENT.

Etat de l'instruction supérieure en Belgique. Rapport présenté aux Chambres législatives, le 6 avril 1843, par M. Nothomb, Ministre de l'Intérieur. Périodes 1794-1814, 1814-1830, 1830-1835, 1835-1843, 1844, 2 volumes.

Rapport sur la situation des universités de l'Etat. Rapport annuel aux Chambres en exécution de l'article 30 de la loi du 27 septembre 1835 sur l'enseignement supérieur. Années 1836 à 1848.

Etat de l'instruction supérieure donnée aux frais de l'Etat. Premier rapport triennal présenté aux Chambres législatives. Années 1849-1852. 1854, 1 volume.

Situation de l'enseignement supérieur donné aux frais de l'Etat. Rapport triennal présenté aux Chambres législatives (Ministère des Sciences et des Arts). Période 1853-1855 et suivantes.

Etat de l'instruction moyenne en Belgique. 1830-1842. Rapport présenté aux Chambres législatives, le 1^{er} mars 1843, par M. Nothomb, Ministre de l'Intérieur. Précédé d'un exposé de la législation antérieure à 1830 et suivi du texte des lois, arrêtés et circulaires de 1815 à 1842. 1843, 1 volume.

Id. 1842-1848. Rapport présenté le 20 juin 1849. 1849, 1 volume.

Rapport triennal sur l'état de l'enseignement moyen en Belgique. Présenté aux Chambres législatives (Ministère des Sciences et des Arts). Périodes 1852-1854 (1^o) et suivantes.

Etat de l'instruction primaire en Belgique, 1830-1840. Rapport décennal présenté aux Chambres législatives, le 28 janvier 1842, par M. le Ministre de l'Intérieur. Précédé d'un exposé de la législation antérieure à 1830 et suivi du texte des lois, arrêtés et circulaires de 1814 à 1840. 1842, 1 volume.

Rapport triennal sur la situation de l'instruction primaire en Belgique. Présenté aux Chambres législatives (Ministère des Sciences et des Arts). Périodes 1843-1845 (1^o) et suivantes.

Recensement des élèves des établissements d'instruction moyenne et primaire, soumis à l'inspection légale au 31 décembre 1873, 1 volume.

Rapport sur l'enseignement industriel et professionnel présenté aux Chambres

législatives par le Ministre de l'Intérieur. Années 1861-62 à 1865-66. 1867, 1 volume.

Rapport sur l'état de l'enseignement industriel et professionnel, présenté le 23 janvier 1879. 1879, 1 volume.

Rapport sur la situation de l'enseignement industriel et professionnel, présenté aux Chambres législatives par le Ministre de l'Agriculture, de l'Industrie et des Travaux publics. Années 1880-84. 1886, 1 volume.

Id. par le Ministre de l'Industrie et du Travail. Années 1884-96. 1897, 1 volume.

Rapport sur la situation de l'enseignement technique en Belgique. Années 1897-1901. 1903, 2 volumes.

Rapport général sur la situation de l'enseignement technique en Belgique. Années 1902-1910. 1912, 2 volumes.

Rapport sur l'état de l'enseignement agricole, présenté aux Chambres législatives par le Ministre de l'Intérieur. Annuel pour les années 1861 à 1863.

Situation de l'enseignement agricole. Rapport triennal. Périodes 1864-66 à 1888-90.

Situation de l'enseignement vétérinaire et agricole. Rapport triennal (Ministère de l'Agriculture et des Travaux publics). Périodes 1891-93 et suivantes.

ÉPARGNE. COOPÉRATION. PRÉVOYANCE.

Compte rendu présenté au Conseil d'administration de la Caisse générale d'épargne et de retraite. 15 septembre 1865, 31 décembre 1865 et 1866, puis volume annuel jusqu'en 1884.

Compte rendu des opérations et de la situation de la Caisse générale de d'épargne et de retraite. Annuel depuis 1885.

Situation de la Caisse générale d'épargne et de retraite sous la garantie de l'Etat. Mensuelle, publiée au *Moniteur belge*.

Les sociétés coopératives en Belgique, 1873-1910 (Ministère de l'Industrie et du Travail). 1911, un volume.

Caisses de prévoyance en faveur des ouvriers mineurs. Examen annuel des comptes (Ministère de l'Industrie et du Travail). 1^{re} année, 1846 pour les années 1840 à 1846; annuel depuis 1877.

Rapport sur la Caisse de prévoyance et de secours en faveur des victimes des accidents du travail (Ministère des Finances). Annuel, publié au *Moniteur belge*.

Coup d'œil sur le nombre et la situation des sociétés de secours mutuels en Belgique au 31 décembre 1860; suivi du texte de la loi du 3 avril 1851 et de l'arrêté royal du 6 octobre 1852, et de l'état nominatif de ces sociétés par province (Commission permanente des sociétés de secours mutuels). 1864, 1 volume.

Rapport sur les comptes. (Commission permanente des sociétés de secours mutuels). Années 1852 à 1860.

Rapport sur la situation des sociétés de secours mutuels, présenté par la Commission permanente des sociétés de secours mutuels. Un volume annuel de 1861 à 1871, puis les années, 1872-1873, 1874-76, 1877-78, 1879, 1880-82, 1883-85, 1886-87, 1888-90. Les rapports pour 1870, 1871, 1872-73, sont suivis d'un *coup d'œil sur la situation des banques populaires et des sociétés des consommation en Belgique et à l'étranger et de quelques considérations générales sur la situation de la classe ouvrière en Belgique*.

Rapport sur la situation des sociétés mutualistes pendant les années 1891-96, présenté au Ministre de l'Industrie et du Travail par la Commission permanente des sociétés mutualistes. 1897, 1 volume.

Rapport de la Commission permanente des sociétés mutualistes pour la période 1896-1905. 1906, 1 volume.

JUSTICE. BIENFAISANCE.

Statistique des tribunaux de la Belgique pendant les années 1826, 1827, 1828, 1829 et 1830, par MM. A. Quetelet et Ed. Smits. 2^e publication officielle. 1833, 1 volume.

Compte de l'administration de la justice civile en Belgique, présenté au Roi par le Ministre de la Justice.

Années judiciaires 1832-1833 à 1835-1836 (1 vol. en 1837); 1836-1837 à 1838-1839 (1 vol. en 1840); 1839-1840 à 1842-1843 1 vol. en 1845).

Compte de l'administration de la justice criminelle en Belgique, présenté au Roi par le Ministre de la Justice.

Années 1831 à 1834 (1 vol. en 1835); 1835 (1 vol. en 1839); 1836 à 1839 (1 vol. en 1843); 1840 à 1843 (1 vol. en 1849).

Administration de la justice criminelle et civile de la Belgique. Résumé statistique. Années 1841-1850 (1 vol. en 1852. Extrait de l'*Exposé décennal de la situation du royaume*); 1851-1860 (1 vol. en 1865. Extrait de l'*Exposé décennal de la situation du royaume*); 1861-1867 (1 vol. en 1873); 1868-1875 (1 vol. en 1878); 1876-1880 (1 vol. en 1883); 1881-1885 (1 vol. en 1888); 1886-1897 (1 vol. en 1898).

Statistique judiciaire de la Belgique. (Ministère de la Justice.) Annuelle depuis 1898, 1^{re} année.

Statistique des prisons de la Belgique. Période 1841-1850, par M. Ed. Ducpétiaux (1 vol. en 1852. Extrait de l'*Exposé décennal de la situation du royaume*); 1851-1860 (1 vol. en 1864).

Statistique des prisons de la Belgique. Période 1851-1855 (1 vol. en 1857. Extrait des *Documents statistiques* publiés par les soins du Département de l'Intérieur).

Rapport présenté au Ministre de la Justice par l'Administrateur de la Sûreté publique et des prisons, le 31 décembre 1869.

Statistique des prisons et des établissements pénitentiaires et de réforme pour l'année 1875. Rapport présenté au Ministre de la Justice par M. Berden. 1877, 2 vol.

Id. pour les années 1876 et 1877, 1879, 1 volume.

Statistique des prisons et des maisons spéciales de réforme, pour les années 1878, 1879 et 1880. Rapport présenté au Ministre de la Justice par M. A. Gautier. 1884, 1 volume.

Rapport de la Commission supérieure d'inspection des établissements d'aliénés, instituée par arrêté royal du 18 novembre 1851. 1^{re} année 1852.

Rapport de la Commission permanente d'inspection des établissements d'aliénés, instituée par arrêté royal du 17 mars 1853. 2^e, 1853-1854; 3^e, 1854-1855; 4^e, 1856; 5^e, 1857-1858; 6^e, 1859; 7^e, 1860; 8^e, 1862; 9^e, 1863-1865.

Rapport sur la situation des établissements d'aliénés. 10^e, 1866-1871; 11^e, 1874-1876; 12^e, 1877-1881; présentés par V.-A. Oudart, inspecteur général. 13^e, 1883-1892, présenté par le Ministre de la Justice.

Écoles de réforme de Ruysselede. Rapport fait par le Ministre de la Justice, con-

formément aux prescriptions de l'art. 9 de la loi du 3 avril 1848, et présenté aux Chambres législatives le 23 janvier 1850.

École de réforme de Ruysselede. 2^e rapport sur la situation de l'école agricole de réforme de Ruysselede pendant l'année 1850.

Id. 3^e année, 1851.

Écoles agricoles de réforme de Ruysselede et de Beernem. 4^e rapport sur la situation des écoles de réforme pendant l'année 1852.

Id. 5^e, 1853; 6^e, 1854; 7^e, 1855; 8^e, 1856; 9^e, 1857; 10^e, 1858; 11^e, 1859; 12^e, 1860.

Statistique des libéralités au profit des établissements religieux et charitables pour les années 1831 à 1849. Rapport au Roi du Ministre de la Justice du 25 mai 1850.

Id. pour les années 1850 à 1853. Rapport du 6 mars 1854.

Statistique des hospices et des bureaux de bienfaisance d'après les budgets de l'exercice 1853, 1 volume. (Ministère de la Justice.)

COMMERCE.

Tableau général du commerce de la Belgique avec les pays étrangers pendant les années 1831, 1832, 1833 et 1834, dressé et publié par le Ministre de l'Intérieur. 1^{re} publication officielle, 1836, 1 volume. Successivement 7 publications officielles dont la dernière, publiée en 1842, comprend la statistique de l'année 1840.

Relève du commerce de la Belgique avec les pays étrangers pendant l'année 1840, publié par le Ministre des Finances (Publication préliminaire). 1841, 1 volume.

Tableau général du commerce de la Belgique avec les pays étrangers. (Ministère des Finances) Annuel depuis 1841.

Tableau du mouvement commercial de la Belgique avec les pays étrangers, en ce qui concerne les principales marchandises. 1^{re} année 1840, jusqu'en 1895 inclusivement (Ministère des Finances. Annexe au *Moniteur belge*). Mensuel.

Tableau mensuel du commerce spécial de la Belgique avec les pays étrangers, en ce qui concerne les principales marchandises. 1^{re} année, 1896 (Ministère des Finances. Annexe au *Moniteur belge*). Fait suite au tableau précédent.

Statistique du commerce spécial de la Belgique avec la France, la Grande-Bretagne et l'Irlande, les Pays-Bas et l'Union douanière allemande en 1908 et 1909, examiné au point de vue de l'origine et du degré d'achèvement des produits échangés. 1911, 1 volume. (Ministère de l'Industrie et du Travail.)

FINANCES.

Budgets annuels des recettes et des dépenses (Ministère des Finances).

Compte général de l'Administration des Finances rendu pour l'année 1830 par le Ministre des Finances.

Compte rendu des recettes et des dépenses du Royaume. Annuel pour les années 1831 à 1849.

Compte général de l'Administration des Finances. Annuel depuis l'année 1850.

Compte rendu par les ministres, en exécution des articles 44 et 45 de la loi du 15 mai 1846, sur la comptabilité de l'Etat. Annuel depuis l'exercice 1848.

Situation générale du Trésor Public au 1^{er} janvier. (Ministère des Finances.)

Statistique des recettes et des dépenses du Royaume de Belgique. (Ministère des Finances.) 1840-1865, 1 volume; 1840-1870, 1 volume; 1840-1875, 1 volume; 1840-1880, 1 volume; 1840-1885, 1 volume; 1840-1890, 1 volume; 1840-1895, 1 volume.

Loi de comptes (Ministère des Finances).

Projet de loi apportant des modifications à la législation sur la contribution personnelle et aux lois électorales coordonnées Tableaux statistiques. (Ministère des Finances.) 1879, 1 volume.

Relevé, par commune, des maisons imposées à la contribution foncière au 1^{er} janvier 1891. Présenté par le Ministre des Finances à la Chambre des Représentants en annexe au document n° 261 de la session 1890-1891. 1891, 1 volume.

Etat comparatif du produit des impôts directs et indirects (trimestriel) publié au *Moniteur belge* (Ministère des Finances).

Statistique comparative des octrois communaux de Belgique pendant les années 1828, 1829, 1835 et 1836, publiée par le Ministre de l'Intérieur et des Affaires étrangères. 1839, 1 volume.

Rapport sur les octrois communaux de Belgique, présenté à la Chambre des Représentants, le 28 janvier 1845, par M. Nothomb, Ministre de l'Intérieur. 1845, 2 tomes en 5 volumes.

Rapport du Commissaire des Monnaies au Ministre des Finances. Annuel depuis 1900.

Rapport sur les opérations de la Caisse d'amortissement, des dépôts et consignations. Annuel. (Ministère des Finances.)

Situation de la Caisse d'amortissement et de la Caisse des dépôts et consignations (semestrielle) publiée au *Moniteur belge* (Ministère des Finances).

Bilan et compte des profits et pertes de la Banque Nationale de Belgique (semestriels) publié au *Moniteur belge*.

Situation de la Banque Nationale de Belgique (hebdomadaire) publiée au *Moniteur belge*.

Tableau statistique des magistrats, fonctionnaires et employés civils de l'Etat avec indication de la somme totale de leurs traitements (Ministère des Finances). Novembre 1855, 1^{er} janvier 1859, 1^{er} janvier 1865, 1870, 1876, 1880, 1885, 1890, 1897, 1901, 1906, 1911.

Les magistrats n'y sont compris que depuis 1885.

AGRICULTURE.

Agriculture. Recensement général (15 octobre 1846), publié par le Ministre de l'Intérieur, 1850, 4 volumes.

Id. Résumés par arrondissements et par provinces. 1850, 1 volume.

Id. (31 décembre 1856), 1862, 1 volume.

Id. (31 décembre 1866), 1871, 1 volume.

Id. de 1880, publié par le Ministre de l'Agriculture, de l'Industrie et des Travaux publics, 1885, 1 volume.

Id. de 1895, publié par le Ministre de l'Agriculture et des Travaux publics, 1898-1900, 4 volumes, partie analytique et un atlas.

Id. de 1910, publié par le Ministre de l'Agriculture et des Travaux publics, 1914, 1 volume paru.

Recensement agricole (Ministère de l'Agriculture et des Travaux publics) (annuel), années 1900 à 1910.

Bulletin de l'agriculture, publié en exécution de l'arrêté royal du 16 juillet 1885. Tome I, 1885, à tome XXIII, 1907.

Bulletin de l'administration de l'agriculture, publié en exécution de l'arrêté royal du 31 décembre 1907. Tome I, 1908, à tome IV, 1911 (juin).

Bulletin de l'agriculture et de l'horticulture. Tome I, 1911 (juillet). Publication mensuelle.

Renseignements statistiques concernant la situation des associations d'intérêt agricole pendant les années 1895 et 1896. 1898, 1 volume.

Exposé statistique de la situation des associations d'intérêt agricole pendant les années 1897 et suivantes. Brochure annuelle.

Monographies agricoles (publiées à l'occasion du recensement de 1895):

- 1° Région des dunes, 1901.
- 2° Id. des polders, 1902.
- 3° Id. de la Campine, 1899.
- 4° Id. sablonneuse des Flandres, 1900.
- 5° Id. limoneuse et sablo-limoneuse, 1901.
- 6° Id. du pays de Herve, 1900.
- 7° Id. du Condroz, 1900.
- 8° Id. de l'Ardenne, 1899.
- 9° Id. jurassique, 1901.

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Industrie. Recensement général (15 octobre 1846), publié par le Ministre de l'Intérieur. 1851, 1 volume.

Industrie. Recensement de 1880. 1887, 3 volumes.

Recensement général des industries et des métiers (31 octobre 1896), publié par le Ministère de l'Industrie et du Travail. 1900-1903, 18 volumes plus l'atlas.

Recensement de l'industrie et du Commerce (31 décembre 1910) publié par le Ministère de l'Industrie et du Travail. 1914 (4 volumes parus).

Mines, Usines métallurgiques. Machines à vapeur. Rapport au Roi en 1842 (Ministère des Travaux publics). 1 volume.

Id. années 1839 à 1844. Compte rendu publié par le Ministère des Travaux publics. 1846, 1 volume.

Mines, minières, usines métallurgiques et machines à vapeur. Années 1845-1849. 1852, 1 volume; année 1850. 1855, 1 volume; années 1851-1855. 1858, 1 volume.

Statistique des mines, minières carrières usines métallurgiques et appareils à vapeur. Pour les années 1865 à 1874, 1874, 1875, 1876 jusqu'en 1894, extraite des *Annales des Travaux publics*; et depuis 1895 jusqu'en 1900 des *Annales des mines de Belgique*.

Statistique des industries extractives et métallurgiques et des appareils à vapeur en Belgique. Volume annuel depuis 1901.

Annales des mines de Belgique, paraissant en 4 livraisons annuelles respectivement dans les mois de janvier, avril, juillet et octobre (Ministère de l'Industrie et du Travail. Administration des Mines).

La 1^{re} année a paru en 1896.

Enquête sur la condition des classes ouvrières et sur le travail des enfants (Ministère de l'Intérieur). 1846-1848, 3 volumes.

Résultat de l'enquête ouverte par les officiers du corps des mines sur la situation des ouvriers dans les mines et les usines métallurgiques de la Belgique, en exécution de la circulaire adressée le 3 novembre 1868 par le Ministre des Travaux publics aux Ingénieurs en chef des Mines. 1869, 1 volume.

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Les Industries à domicile en Belgique 1899-1909. Vol. X: Étude statistique des familles ouvrières comprenant des ouvriers à domicile. 1909, 1 volume. (9 volumes de monographies et 1 volume contenant la bibliographie de la matière.)

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I. Introduction. Recensement de la pêche maritime.

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Statistique des salaires dans les mines de houille (octobre 1896-mai 1900). 1901, 1 volume.

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II. Industrie de la filature du lin.

Salaires et durée du travail dans les industries textiles au mois d'octobre 1901. 1905, 1 volume.

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Statistique des grèves en Belgique. 1896-1900. 1903, 1 volume; 1901-1905. 1907, 1 volume; 1896-1910. 1911, 1 volume.

Mines. Statistique des accidents survenus dans les puits durant la période de 1860 à 1879, 1 volume.

Rapport relatif à l'exécution de la loi du 31 mars 1898 sur les unions professionnelles pendant les années 1898-1901. Présenté aux Chambres Législatives par le Ministre de l'Industrie et du Travail. 1904, 1 volume.

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Annales des travaux publics en Belgique.—Mémoires, chroniques et comptes rendus d'ordre technique, administratif et statistique concernant les travaux publics, du pays et de l'étranger.

Paraissent tous les deux mois depuis 1843 en fascicules de 200 pages illustrées, avec planches hors texte.

Renseignements statistiques recueillis par le Département des Travaux publics, 1851-1855. 1857, 1 volume.

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Routes et bâtiments civils. Travaux hydrauliques. Chemins de fer en construction.
—Compte rendu des opérations pendant les années 1880 et 1881.

Chemins vicinaux.—Rapport adressé au Ministre de l'Intérieur sur l'inspection de chemins vicinaux des provinces de Limbourg, de Hainaut et de Brabant, opérée pendant l'année 1851 par Eug. Bidaut, ingénieur en chef. Un volume présenté aux Chambres législatives en séance du 3 février 1852.

Carte figurative de l'importance du roulage sur les routes de l'Etat en Belgique en 1879 (Ministère des Travaux publics).

Album du développement progressif du réseau des routes de 1830 à 1880.—7 planches.
—Publié en 1880 (Ministère des Travaux publics).

Statistique du mouvement des transports sur les voies navigables de la Belgique pendant le second semestre de 1879 (Ministère des Travaux publics). 1 volume et 1 carte.

Recueil descriptif et statistique des voies navigables de la Belgique.—1880, 2 volumes (Ministère des Travaux publics).

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Carte figurative du mouvement des transports sur les voies navigables de la Belgique en 1893 (Ministère des Travaux publics).

Carte statistique de la navigation intérieure sur les voies navigables de la Belgique et des pays limitrophes en 1910. (Dressée par l'Ecole Saint-Jacques des Bateliers à Namur.)

Chemins de fer de l'Etat.—Compte rendu des opérations.—Rapports des 4 août 1835, 1^{er} mars 1837, 26 octobre 1837, 26 novembre 1838, et 12 novembre 1839.

Annuel depuis 1840.

On y a compris successivement le compte rendu des opérations des télégraphes depuis 1850, des postes depuis 1867 (le rapport pour 1867 donne un aperçu des opérations depuis 1830), la marine depuis 1873 (l'année 1873 comprend quelques développements retrospectifs), les téléphones depuis 1883.

Carte figurative de la circulation des grosses marchandises sur les lignes de l'Etat, pendant l'année 1879 (Ministère des Travaux publics). 1 feuille.

Développement du mouvement postal en Belgique.—Nombre des lettres privées, des cartes postales, des journaux et imprimés expédiés annuellement par la poste aux lettres. 1884, 1 feuille.

COLONIE DU CONGO BELGE.

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