Wright's Presidential Address

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5th ASA President, 1897-1909

At the meeting of this Association in April last it was decided that at this meeting, and perhaps at successive annual meetings, there should be a presidential address, and the present one is the first of that character.

It is appropriate, therefore, that I should indulge in a brief historical statement concerning the origin and work of the Association.

The Royal Statistical Society of London was founded March 15, 1834, but was not incorporated until Jan. 31, 1887. Whether the founding of the Royal Society inspired the organization of this Association I cannot say, but it is safe to assume that this was the case, for it was only a brief period after the organization of the British institution that a meeting was held at the rooms of the American Education Society, 15 Cornhill, Boston, Nov. 27, 1839, for the purpose of considering the expediency of forming a statistical society. The following persons were present: Hon. Richard Fletcher, Rev. William Coggswell, D.D., Oliver W. B. Peabody, Esq., Register of Probate, John D. Fisher, M.D., and Lemuel Shattuck, Esq. They organized with the Hon. Richard Fletcher as chairman and Lemuel Shattuck, Esq., as secretary.

After discussing the objects for which the meeting was called, on motion of Rev. Dr. Coggswell it was resolved that it was expedient to form a society to be called the American Statistical Society.

A committee was appointed to prepare a constitution for the government of the society, to be submitted at an adjourned meeting, and all the gentlemen present were made members of that committee.

Dec. 11, 1839, all the gentlemen previously named being present except Mr. Fletcher, a constitution of the American Statistical Society was adopted. The object of the society was stated to be to collect, preserve, and diffuse statistical information in the different departments of human knowledge. After deliberation and discussion it was voted to adopt the constitution, and an adjournment was made until Dec. 18, 1839, when all the gentlemen named were present, together with Hon. Horace Mann, Dr. Samuel G. Howe, and Dr. Jesse Chickering. At this meeting the organization was perfected by the choice of officers, consisting of Hon. Richard Fletcher, President; Henry Lee, Esq., and Bradford Sumner, Esq., Vice-Presidents; Rev. Joseph B. Felt, Recording Secretary; Lemuel Shattuck, Esq., Home Secretary; Joseph E. Worcester, Foreign Secretary; Rev. William Coggswell, D.D., Ebenezer Alden, M.D., Oliver W. B. Peabody, Esq., John P. Bigelow, Esq., Hon. Horace Mann, John D. Fisher, M.D., Professor Bela B. Edwards, Samuel G. Howe, M.D., and Jesse Chickering, M.D., as Counsellors. At the next meeting, Jan. 8, 1840, there appeared the name of Dr. Webb.

It was voted that an application be made to the legislature for an act of incorporation. Feb. 5, 1840, the occasion of the annual meeting of the Association, the formation, progress, and purpose of the society and the public good it might do, if suitably conducted, was discussed by the President.

At this meeting it was voted on motion of the Directors—and I think we can discover the humor underlying this vote—that the name of the society be altered from that of the American Statistical Society to that of the American Statistical Association.

The officers were elected at this annual meeting, and the individual members were proposed

as Fellows, Honorary, Corresponding, and Foreign Members.

By an act approved Feb. 5, 1841, the American Statistical Association was incorporated by the legislature of Massachusetts. Thus the new Association, full-fledged and authorized by law, was ready for its work of preserving and diffusing statistical information. It has always adhered to this provision of the act incorporating it. It has not gone into economic or social questions, philosophical or ethical science, but has adhered most rigidly to its statistical objects.

Up to date it has had a continued existence, there never having been a year since its organization that it has not held meetings and had papers of a statistical character, although its proceedings have not been regularly printed. It has had during the whole period of its existence of sixty-nine years but five Presidents: Hon. Richard Fletcher, 1839-45; George C. Shattuck, M.D., 1846-51; Dr. Edward Jarvis, 1852-82; Dr. Francis A. Walker, 1883-96; and the present incumbent, 1897 to date.

Dr. Jarvis served the Association thirty years as its President, and on the election of his successor, Dr. Walker, he was made President Emeritus.

With two exceptions three quarterly meetings, besides the annual meeting, each year were held from 1840 to 1879. Some of the meetings were omitted in some of the years, especially the July meeting, which, beginning in 1881, was omitted regularly. From 1894 on no quarterly meetings were held, with the exception of a special quarterly meeting on April 16, 1897, in memory of President Walker. Since 1899 until the present year no quarterly meetings have been held, but there has been no year in which meetings have been entirely omitted.

The proceedings of the society have not been published regularly. In 1847 the collections of the Association were brought together and printed, entitled Volume I., in three parts. In the first part there appears quite a valuable paper by Professor B. B. Edwards, of the Andover Theological Seminary. Professor Edwards discussed the history and origin of statistics. There were other papers on the towns of Massachusetts in this first part, with a history of their origin.

Part two contained statistics of population in Massachusetts, prepared by Rev. Joseph B. Felt, while part three, published in 1847, contains statistics of taxation in Massachusetts, including valuation and population. This was also prepared by Mr. Felt, and was one of the first attempts at analysis of statistics by a member of the Association.

So far as I have been able to learn, papers in a desultory way were published from time to time, but no regular collection appeared until what we now know as the New Series, beginning in March, 1888, under the direction of Dr. Davis R. Dewey, and when General Walker was President of the Association. Since then the publications have appeared regularly, and they constitute a collection of exceedingly valuable statistical productions. In fact, I feel warranted in asserting that no statistical society has, on the whole, brought out a more valuable collection of statistical material, and the members of the Association can feel gratified that it has presented to the public so many carefully analyzed topics relating to the science to which we are devoted.

With this brief historical review, it is pertinent to discuss the field of labor of the Association, the condition of public statistics when it was organized, and the opportunity it has had for exerting its influence and for conducting its statistical investigations.

The scope of statistical inquiry when the Association was organized was not only very limited in quantity, but meager and unsatisfactory in quality. The vehicle of statistical information, the federal census, had not reached encyclopedic proportions. The Association had as its field from which to draw the facts for its analysis the United States census from 1790 to 1840, the Colonial censuses, and those of one or two States, more especially the efforts of the Commonwealth of

Massachusetts. A glance at the founders of our Association convinces one immediately that they were men who understood and comprehended both analysis and classification; that the analysis and classification of the facts relating to various conditions which surround the human race entered into their great object, and the purpose of social science at large, the chief object of which is to spread the knowledge resulting from the investigations of its movements, that the people may better appreciate and understand their own conditions and aid, by an increased intelligence, in the amelioration of unfavorable features and the eradication of positive evils.

They knew as well as social scientists and statisticians today that statistical methods—or statistical science, if you prefer—could evolve laws which should be applied practically to these great objects of social science. They felt that the time had arrived when something should be done outside the mere collection of data. They had an opportunity with the meager efforts back of them for this purpose.

The United States instituted the national census in 1790. There are three periods to the American census, the Colonial, the Continental, and the Constitutional, or our present period. During the first period the British Board of Trade played, an important part in American affairs, and it often attempted enumerations of the people of the colonies, but the census had not then assumed scientific form and definiteness in Europe, and, as would be expected, the results here were very imperfect. Superstition was an obstacle, but without obstacle success could not have been attained in the colonies when the mother country took her first census in 1801, and then so imperfectly that the results were of no immediate value.

During the Continental period, although resolutions in Congress had been introduced, no general enumeration of the population was secured. Various estimates and computations were made from time to time, but they came no nearer accuracy than those made in the Colonial period. It had, however, become clearly settled that there never could be a complete enumeration until the work was done by a central directing authority. It was left to the Constitution to give us first an enumeration of population and afterwards a national census, primarily for the purpose of apportioning representatives and direct taxes among the several States included within the Union and according to their respective numbers.

This attitude of Congress caused an enumeration of the population in 1790, and from this has grown the national census. Perhaps the most impressive statement relative to this growth relates to the number of inquiries at the first and at later censuses.

At the census of 1790 there was one schedule, containing four inquiries. In 1840, when the American Statistical Association had just been organized, there were two schedules, containing 82 inquiries or details. In 1890, just one hundred years after the first census, there were 233 schedules, containing 13,161 inquiries or details. Reduced in 1900 to 7,476. Of course, in 1790 the 4 queries related to the members of the family, the people only, while in 1890 the inquiries did not apply to one individual, but they were all projected. This was the grand sweep of one hundred years.

In 1810 an attempt was made to collect data relative to manufactures. This was repeated in 1820, omitted in 1830, and taken up again in 1840, and has continued through all censuses since that time, but until 1850 the inquiries as to manufactures amounted to but little.

A start was made in agricultural statistics in 1840, and the work has been continued throughout.

There were Colonial censuses in the colony of Massachusetts in 1754-1765-1776. State censuses were ordered in 1837-1840 and 1850. The regular decennial enumeration of the inhabitants under State authorization was ordered taken in 1855 in connection with the collection of

industrial statistics, and this has been taken since then, being the mean between the dates of the federal census. Thus Massachusetts has a census every five years, both of population and of industry. Some other States organized a census on the quinquennial period relative to the United States census, but, like the earlier State censuses of Massachusetts, they were of very little value except in securing the aggregate population for the purpose of legislative representation.

The crudeness of these earlier censuses seems very strange to us, and yet they were creditable efforts on the part of the State governments authorizing the collection and showed a disposition to secure information on which to base conclusions and actions.

The first analytical survey of any of these works, so far as my observation warrants the statement, was by Lemuel Shattuck, the first Secretary of this Association, in a report to a committee of the city council appointed to obtain the census of Boston for the year 1845.

Mr. Shattuck, who drew this report for the committee, indulged in some very sharp criticisms of the federal census, and analyzed in a very creditable way the results of that particular census. Some of the members of the Association—and I regret that I have not been able to find the documents—dealt with the State censuses from time to time, and others, especially Dr. Jarvis, had much to do with inducing the federal government to expand its work, and in 1870 he analyzed some of the statistics of the federal census.

I do not know whether any of you ever knew Dr. Jarvis, but I knew him well, not only through my association with him in this organization, but by his frequent visits to my office to discuss statistical questions. He was very fond of relating some of the amusing things he found in the federal census. On one occasion he found the case of a man something over eighty years of age who had died of teething and a child a few months old who had died of old age. Of course there was a transposition in the statements, but it amused the old doctor immensely and he never tired of relating the anecdote.

The first census, as I have said, which really amounted to an attempt at scientific work was the federal census of 1850. It was better in some respects than the succeeding one of 1860. In 1870 General Walker was put in charge, and the census of that year was an enormous improvement over that of 1850; but it was just prior to 1880 that General Walker submitted to Congress a bill providing for the tenth census, and it was through an extension of inquiries of far-reaching importance that the census of 1880 became known as the encyclopedic census of the United States.

It attracted the attention of the leading statisticians all over Europe and gave the United States a position in statistical work that it had never held before. It should be remembered that the United States was then the only government collecting industrial statistics of any kind—that is, the products of agriculture and manufactures—and it is today the only State in the world that does this character of work.

We hear of industrial censuses in Europe, but they relate only to occupations, although some attempt has been made to secure statistics similar to those collected here. While the British Parliament rejected time and time again a bill relating to statistics of production, as it was feared that much trouble would ensue, yet last year a law was passed for a decennial census of English manufactures, and the work is now in progress.

The United States is therefore the leading country. Its population schedule embraces many more inquiries than that of any other census office, and it expands its work to cover all conceivable valuable data.

The first State censuses to command any attention and which can, by any stretch of terms, be

considered as scientific, were those of New York and Massachusetts in 1875. The New York census of that year was a most excellent one. The census of Massachusetts I do not feel at liberty to speak of extensively, but in bulk, anyhow, it surpassed any of the State's previous publications. A small volume had contained the results of previous censuses. It took three volumes to report the census of 1875; four volumes (and thick ones at that) to report the census of 1885, and seven volumes (large quarto) to get the results of the census of 1895; and I do not know how many volumes it will take to cover the work of the census of 1905—they are not out yet.

The Association had at its start, as I have said, a very narrow field from which to gather its material. We did not have our fine registration reports, nothing on agriculture, nothing on insurance, nothing on savings-banks, nothing except the meager census reports to which I have alluded.

Mr. Felt in his paper to which I have referred, and which was delivered before the Association in 1843, gave a brief account of what was being done at that time in foreign countries. He speaks of the Royal Statistical Society as having been founded in 1834 in pursuance of a recommendation of the British Association for the Advancement of Science. But it could not deal with the great questions which belonged to it. It had little or no information on which to base its conclusions. In fact, I have wondered many times how writers back of 1850 at least could bring out their positive deductions, as Adam Smith, for instance, when he wrote his "Wealth of Nations," seems to have had a vast amount of information, but where he got it is difficult to say.

And so it was all along the line. The Royal Society undertook to meet this great want. It appointed committees for the purpose of procuring and collecting information in respect to various strikes and combinations which existed for the purpose of altering the rate of wages. And it had a committee whose sole duty was to perfect the statistics of life, relating to births, deaths, marriages, and population.

Mr. Felt says that "in the United States but little attention has as yet been given to the subject of statistics that the attempt has never been made to present a complete view of either of the great departments of this interesting and practical science." He refers to the meager attempts of the Patent Office and to some of the individual States, the reports of the School Commissioners of New York and Massachusetts, and to a few isolated individuals who have labored in the statistical field with great assiduity. They had to fall back largely on information contained in Warden's "Statistical, Political, and Historical Account of the United States," Timothy Pitkin's "Statistical View of the Commerce of the United States," Adam Seybert's "Statistical Annals," William Darby's "Historical, Geographical, and Statistical View of the United States," and Watterston and Van Zandt's "Tabular Statistical Views." And he goes on to say that "it is in this interesting and comparatively uncultivated field that the American Statistical Association propose to labor with such means as may be placed at their disposal, with the co-operation of kindred societies which may be formed, and with the aid which may be expected from our National and State governments. It is obviously a field of vast extent, and rich in materials for collection and comparison."

And yet we see how meager the field was; how rich it is to-day in comparison with what it was when our Association was organized.

But the field has been enriched in various lines other than census taking. While the census offers the greatest field for exploitation by associations like our own, there are other fields now that were not contemplated by the organizers of this institution.

Every State publishes annually a great number of statistical works. These comprehend the

statistics of the great elements of business and industrial and social life. A student who undertakes to examine any line of State statistical works finds himself involved in a mass of facts and deductions almost impossible to analyze or classify. As the States have grown, their interests have expanded, and these interests have demanded the facts relative to State activities. So we have statistics of insanity, pauperism, insurance, banking, railroads, great manufactures, statistics of everything, in fact, that relate to the activities of the people—births, deaths, marriages, and now divorce—everything, as I have said, that relates to the activities and social environment of the people.

The federal government, in addition to the work of its census, sends out every year numerous volumes containing the most valuable statistical information on the finances of the country, immigration, shipping, the carrying trade, commerce, Indians, and patents, and many other lines of important statistical information.

In 1869 there was instituted here in Massachusetts a new era of statistical work. This came through the establishment by the legislature of the Bureau of Statistics of Labor. After a few years of work other States established similar offices, often with different designations, but, as a rule, under a law providing substantially what the law of Massachusetts provided for the Bureau of Statistics of Labor. There is now a chain of these bureaus extending from one end of the country to the other, numbering, I believe, 34 offices, while in 1884 the federal government established a similar office which was organized in 1885.

As near as I can calculate, the reports of this chain of bureaus number something like seven hundred volumes, and they constitute a vast storehouse of social and industrial information, some of the volumes not very good, but most of them of an excellent character. They here and there show the lack of a power of analysis and classification, but on the whole, with one or two' exceptions, they are honest reports. And I think, too, there has been but one spirit pervading the heads of this great chain of offices. That spirit has dominated the work everywhere, and even when the head of such an office has been appointed for purely political reasons the incumbent has soon realized the sacredness of his office and he has learned that to tell a statistical lie is the most harmful thing a man can do. He becomes inspired with the idea that he must tell the truth.

In this connection I cannot deprive myself the pleasure of relating an experience of mine. I took charge of the Massachusetts Bureau in June, 1873, and on doing so I sought the advice of General Francis A. Walker, adopting for my guide the sentiments contained in his reply, and I believe I can do a service by quoting it in full:

> Dear Sirs,
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> I have given much thought to the letter in which you do me the honor to ask me my views as to the work of the Massachusetts Bureau of Labor Statistics; but, as the result, I find but little to say beyond expressing my hearty sympathy with the purposes of your office and my wishes for its success. I feel the strongest confidence that the Commonwealth is prepared for your work, and that the work can be done to the satisfaction of all citizens; and that your office has only to prove itself alike superior to partisan dictation and to the seductions of theory in order to command the cordial support of the press and of the body of citizens. If any mistake is more likely than others to be committed in such a critical position, it is to undertake to recognize both parties as parties, and to award so much in due turn to each. This course almost inevitably leads to jealousy and dissatisfaction. If an office is strong enough simply to consider the body of citizens and to refuse to recognize or entertain consideration of parties, success is already in the main assured. Public confidence once given, the choice of agencies, the selection of inquiries to be propounded, are easy and plain. The country is hungry for information; everything of a statistical character or even of a statistical appearance is taken up with an eagerness that is almost pathetic; the community have not yet

> learned to be half skeptical and critical enough in respect to such statements. All this is favorable to such laudable efforts as you are engaged in, for the difficulty of collecting statistics in a new country requires much indulgence; and I have strong hopes that you will so distinctly and decisively disconnect the Massachusetts Bureau of Labor Statistics from politics, from dependence on organizations, whether of workingmen or of employers, and from the support of economical theories, individual views, or class interests—as to command the moral support of the whole body of citizens and to receive the co-operation of all men of all occupations and of all degrees, without reference, however, either to their degrees or their occupations.

The time had arrived when the public was, as General Walker states, hungry for statistical information and adopted it pathetically. I think it was this attitude of the public that enabled this great chain of bureaus to meet with success. The rigid and religious observance of his precepts enabled the Massachusetts Bureau to set an example followed, as I have said, by thirty-fourth States and the federal government, and now it has been followed by every civilized country in the world. I do not think of any government that has not established a bureau founded on the lines of the original Massachusetts office.

And yet it was something different from hunger for statistical information that caused the Massachusetts office to be established. In the legislature of that year—1869—there were petitions for the incorporation of the Knights of St. Crispin. The petitioners were given leave to withdraw.

There had been for three or four years recommendations by one commission after another for the establishment of a bureau whose sole duty it should be to collect statistics relating to industrial conditions, etc. Nothing had come of them. The rejection of the petition of the Knights of St. Crispin caused the members of the legislature towards the end of its session to become aware of the fact that a political mistake had been made. They could not take up the petition again very well and incorporate the Knights of St. Crispin, so all at once a bill was introduced providing for the establishment of a Bureau of Statistics of Labor, and this bill was carried through very promptly and rapidly under a suspension of the rules, the members of the prevailing party in the legislature having an idea that by doing this they would appease the labor element, especially the Knights of St. Crispin, which was very strong in those days. The result politically was not satisfactory, but by this action the legislature of Massachusetts set the pace by feeding this hunger and appeasing the pathetic appeal for statistical information.

What constitutes the great difference between the statistics of the present time and those of forty or more years ago? Statistics have been called "dry bones." Mr. North, in an address a few years ago, stated that statisticians resented this popular idea about the dry bones of statistics, that there is nothing dry about them, that they are moist, juicy, fragrant as all the "perfumes of Arabia." They are more poetic than poetry, more artistic than art, more musical than music, more philosophical than philosophy. He thought then, and I think he is of the same opinion now, that the temptation to weave romances out of statistics is so strong that some so-called statisticians are wholly unable to resist it, and this is mainly true.

This romantic idea leads to what we know as the statistical mechanic, the man who is ready to construct tables to order. Yet the real statistician, the man who is working out the process of making them, does not make tables to order, but he puts an integrity and devotion into his work that is not surpassed in any other line of official conduct.

The spirit of the modern statistician lies in the precepts laid down by General Walker and in the fact that there is something deeper and more comprehensive than the mere statement of figures, for the statistician must have the spirit of what again Mr. North has called ethical philosophy, the recognition of the existence of the great fundamental law, the principle which

governs this world and all things in it—the principle of evolution.

How perfectly true this is, and how absolutely lacking was this spirit at the time of the organization of this Association! The modern statistician makes statistics popular by presenting their results in popular and readable form. The official statistician is under limitations in this respect, for his work, no matter what his spirit is, must, to a certain degree, be conventional, for it must be official in its character; but the Association to which we are devoted can put this spirit into its work in interpreting the statistics of the government.

The field for our exploitation is vast and rich, and it is growing vaster and richer as time goes on. We now have what we have long needed, a permanent census office, a great clearing house of federal statistics, and more and more Congress will use it as the vehicle for sending out to the people its costly information. Not only this, but more and more will it consolidate into the Census Office other statistical works, so that there shall be harmony in preparation, unity and science in presentation.

The United States now holds a unique position in statistical work. As I have intimated, no other country approaches it. Anyone who has given any consideration whatever to the volumes and bulletins which are coming out of that office must concede this fact, and feel proud every time that such a volume is examined that we not only now have an office competent, adequate, skillfully manned to make it a great clearing house of statistical information, but that we have a man, one of our own Vice-Presidents, at the head of it who comprehends that spirit to which I have alluded—who has the judgment, the intellect, and the ability which makes him pre-eminently the peer of any statistician the world can name, and holding a field and having an opportunity not even approached by any other statistician on earth. He understands clearly the duty to which he is assigned. He understands not only the present scope of his work, but what it may be made to reach in the future.

He knows that he is painting a grand and enduring picture, not in bright colors mixed and laid by an artist's hand on canvas which might not tell at the close of another century of the work of our generation, nor yet in glowing words of description by sentences constructed by most gifted writers, whose language one hundred years hence might not mean all the interpretation we give it in our time, nor in any of the perishable methods which convey to posterity as much of the vanity of a people as of the reality which makes the Commonwealth of to-day; but that he sets the picture in cold, enduring Arabic characters, which have survived through the centuries that have passed, unchanged and unchangeable by time, by accident, or by decay, and will remain through the ages to come as truthful as of old. They are the symbols that have unlocked to us the growth of the periods which make up our past. They are the fitting and never-changing symbols by which to tell the story of our present state, so that, when the age we live in becomes the past of successive generations of men, the story and the picture shall be found to exist in all the just proportions in which it has been set by ourselves. A quiet and may be unlovely setting the statistician chooses, but he knows it will endure through all time.

At the close of the address of the President, Dr. Samuel W. Dike said:

This address has noted the many State Bureaus of Labor (34 in all, I think) besides the National Bureaus that have grown out of the Massachusetts Bureau of Labor Statistics. Mr. Wright, I believe, might have also mentioned two or three important European Statistical Bureaus that owe their origin largely to our Massachusetts Bureau. I happen to have heard from excellent authority many years ago the story of the way in which the Massachusetts Bureau was saved from impending extinction and started on the road to success. The briefest statement of an incident will give you the clue. The Massachusetts Bureau had dragged along for three or four years, and seemed to be on its last legs. Governor Washburn sent for Colonel Carroll D. Wright, then a young man scarcely rising above thirty years of age, who was completing his term of

service in the State Senate, and said to him, "I have watched your work on some measures before the legislature, and now I want you to take this Bureau of Labor and make it or bust it!" After inconsiderable urging on the part of the governor, the young man, who was intent on returning to his excellent law practice and was without statistical experience, consented.