

COMMUNICATION

FROM

HON. HORACE CAPRON,

COMMISSIONER OF AGRICULTURE.

DEPARTMENT OF AGRICULTURE,
Washington, February 20, 1869.

SIR: Your favor of the 19th instant, asking for any suggestions relative to the agricultural schedules for the census of 1870, is before me.

It is of the utmost importance that these inquiries should be as full as may be consistent with accuracy and completeness in the returns. The old schedules are deficient in several important particulars, some of them considered of the first importance in the collection of any European census. As you desire an answer at once, I will proceed briefly to enumerate a very few obvious points in which the list of inquiries may be enlarged:

Acreage of all tilled crops, orchards, and pasturage; the number of acres in timber, &c. Distinction should be made between autumn and spring-sown grain, in acreage and quantity.

The acreage of corn for forage, of roots, as well as of field peas, and of winter rye for pasture, should be obtained.

In connection with the value of farm animals, there should be an item showing the value of farm animals lost by disease or neglect.

It is also of great importance to obtain an estimate of the value of grain, fruit, and cotton destroyed by insects. The value of all other (miscellaneous) crops destroyed in the same way might be included under one heading.

The number of acres of orchards and vineyards in bearing should be obtained, with the number of trees or vines; and as certain sections (as near the lakes of western New York, on the southern shores of Lake Erie, in California, and elsewhere) are increasing the planting of vineyards with marvellous rapidity, it might be well to include the number of acres and vines planted but not in bearing, which would in many cases exceed those in bearing.

The acreage of meadows should accompany the quantity of hay, and the acreage in pasture should be included.

The value of poultry, and quantity and value of their annual product, are desirable; items of information representing many millions of dollars, which might easily, and with a reasonable degree of accuracy, be obtained.

There are also new products of the south, as peanuts, castor beans, several tropic fruits, as raisins, &c., which might be desirable to include.

Other hints may possibly be of equal importance, but these are suggestions at the present time as worthy of consideration in the preparation of the schedules.

I have the honor, dear sir, to be, very respectfully, your obedient servant,
HORACE CAPRON,
Commissioner of Agriculture.

Hon. J. A. GARFIELD,
House of Representatives.

COMMUNICATIONS

FROM

M R . E D W A R D J A R V I S .

DORCHESTER, MASSACHUSETTS, *February 17, 1869.*

DEAR SIR: In your favor of the 8th instant you proposed four specific and one general question for my consideration:

1. Whether the census can be taken more thoroughly and economically through the officers of the internal revenue than through the marshals.
2. Whether any changes should be made in regard to compensating the census-takers, whoever they are.
3. In how short a time do you believe it practicable to take the census, and to take it well.
4. What modifications ought to be made in the tables.
5. Whether any other suggestions occur to me to be made as to this whole matter.

I will answer these in their order; yet the 1st and 2d must be combined in some degree; also the 1st and 3d, and the 5th may apply in some measure to all.

1. Whether the marshals and their appointees or the internal revenue officers and their appointees shall be employed.

The use of the latter, the assessors, promises the best chance of a thorough and reliable enumeration of the people.

There is but one marshal in most States, and at most one in each judicial district—52 in all the United States according to the register of 1868; and there is one assessor in every congressional district, making near five times as many assessors as marshals. Each marshal appoints deputies—four in Massachusetts—and if this is the average, there are 208 in the United States. The assessors appoint about one assistant assessor for every 15,000 or 20,000 inhabitants, or about seven for each. If so, there are between 1,600 and 1,700 of these officials in the whole country, probably eight times as many assessors as deputy marshals.

The assistant assessors are scattered through all the country, each resident in the district of his labor, and presumptively acquainted with the character and condition of the people, their occupations, and their means.

The deputy marshals are more in the centres of population, many, perhaps most, and in some districts all of them resident at the place of the court—Boston, Providence, New York, Trenton, &c.

The assessor's office requires them to have some knowledge of, and some direct or indirect intercourse with, every family. The deputy marshals have business only with few—with those having business that may come under the cognizance of the national courts, or with offenders against the national laws. In either case these standing officials can do but a part, and properly only a small part, of the work of the census, but must appoint deputies, who, if the plan I shall hereinafter propose be adopted, must be very many.

The assessors, principals and assistants, being among and nearer the

people and more acquainted with them, will be able, first, to select for the enumerators men of proper character, who are themselves residents of their respective sub-districts and know the localities and the condition and circumstances of the people; and, second, having a general knowledge of the people, these officials—the assessors—can better judge of the character of their reports, whether they are consistent with the known or probable facts, and to discover any error.

In the revenue department will be found a better class of minds—men of better education, much better training, more used to business, to accounts, to analysis and combination; they are presumptively disciplined in accurate habits of thought and accustomed to close and truthful dealing with men—with facts, and representing these with mathematical precision.

The marshal's office does not necessarily require these qualities, for either principal or deputy, nor does their administration call them into daily and constant use.

In either case the appointing officers would naturally select for their deputies, or the enumerators, according to their own ideals of characters—the assessors, men of precision and rigid discipline; the marshals, simply men of fair character, or those personally acceptable. The government, therefore, will probably obtain a more thorough and reliable enumeration through the internal revenue than through the marshal's department.

The economical view refers to the value of the work rather than the actual expenditure. That which will produce the most complete and reliable census is the cheapest; and therefore, I suppose, the census can be more economically taken by the revenue officers and their co-operators.

In either case the enumerators—those who must visit and take account of every dwelling, shop, and farm, and their population and wealth—should be paid sufficient to secure the requisite skill and faithfulness; and such service cannot be obtained by the government at less cost than the same degree of skill and amount of service are obtained for in the general business of society.

2. The present manner of compensation, or rather that adopted in the law of 1850, and practiced in the seventh and eighth censuses, seems to be just and expedient, but the rate should be increased to suit the present state of financial values. The law of May, 1850, offers the marshal one dollar for every thousand persons enumerated under his direction, provided there are one million or more people in his district, and one dollar and a quarter if the population be less. But in no case shall he receive less than \$250; and if he have less than \$500, he may have allowance for clerk hire. By section five, the marshal "shall determine the rate of compensation to each assistant marshal," and by section 12, "each assistant shall be allowed as compensation for his services, after the rate of two cents for each person enumerated, and ten cents a mile for necessary travel," and by section 13, in addition, "there shall be paid for each person fully returned ten cents; for each establishment of productive industry fully taken and returned fifteen cents; for the social statistics two per cent. upon the amount allowed for the enumeration of the population, and for each name of a deceased person returned, two cents.

If this compensation was no more than sufficient in 1850 and in 1860, it is not now. All other labor, whether skilled or unskilled, now receives nearly or quite double the wages that were given to it 10 and 20 years ago, and the government must pursue the same course, or be content with inferior service, and inferior worth of the work when done.

The British government paid the enumerators of England and Wales

ten dollars and ninety-six cents (\$10 96) per thousand, in 1841, eleven dollars and eighteen cents (\$11 18) in 1851, and eleven dollars and forty cents (\$11 40) in 1861. Wages are very much lower in England than in this country; and the districts, as I shall hereafter show, were much more easily surveyed than ours.

I see no reason to change the plan of payment, that is, so much per person, house, farm, or shop, &c., enumerated and recorded. The rate, however, of 1850 and 1860 should be increased, and there should be a discrimination in favor of larger payment of the enumerators, in the sparse districts of the newest States and Territories, whose labors and difficulties are much greater than in the old States. This should be left to some superior officer, as the principal assessor in the States, or the chief of the Census Bureau, or some other proper officer to be determined.

3. In how short time can the census be taken properly? The answer to this depends: 1. On the plan adopted for the enumerators. 2. On the kind of men employed as enumerators.

If the former plan of large districts and few enumerators be adopted, a month, at least, should be allowed them to collect the facts and prepare their returns.

In the early censuses the enumerators seem to have been allowed long periods to collect their facts and make their returns.

1. 1790. The marshals of most of the States dated their reports, and these dates are printed in the government report. These dates vary from May 4 to September 19, 1801, and the South Carolina report was dated February 5, 1792; nevertheless the Secretary of State published his reports of the whole, except South Carolina, October 24, 1791.

2. 1800. The State reports are dated, North Carolina, August, 1800; the others vary from June 2 to December 21, 1801. The report of the Secretary is dated December 8, 1801.

3. 1810. I have not a copy of this report, but I consulted that in the library of the Massachusetts Historical Society, which unfortunately lacks the title and some prefatory pages. I am unable therefore to say when the government completed and published it, but some of the State reports are dated January and February, 1811.

4. 1820. Census takers began the first Monday of August. They were allowed eight months, to April 1, 1821, to complete the enumeration and transmit their report to the Secretary of State; and by act of March 3, 1821, this time was extended to September 1, 1821. The government report is dated December 18, 1821.

5. 1830. The facts relate to June 1. Enumerators allowed to February 1, 1831, to collect and return their facts. This was extended to August 1, 1831, by act of February 3, 1831. The general report is dated January 16, 1832.

6. 1840. There is no date nor certificate of State or national officers attached to the general report or the compendium; nothing to indicate its progress except the printer's date, 1841, on the title-page.

7. 1850. The first short summary report was made to Congress December 1, 1851. The second, December 1, 1852; printed 1853. The principal report is dated November 10, 1853. The compendium is dated September 1, 1854. The mortality volume was dated November 20, 1855. I find by my letter-book that I corrected the last proof of the part that I contributed to this volume, November 17, 1855.

8. 1860. The preliminary report was dated May 20, 1852. The first large volume, population, was printed 1854. I prefaced the mortality report in the last volume. I wrote the last chapter January, 1866. I wrote the index in March and corrected the last proof in April, 1866.

Thus you see, that in all the eight enumerations and preparations of the reports a long time has been taken, which, with the means and force allowed by the government, was necessary.

The districts were very large, and the houses and places of business to be visited, and people to be counted, and all the circumstances, ages, sex, conditions, &c., to be recorded, were very many. The marshal in the seventh and eighth censuses carried his six schedules, with his 141 questions, beside those concerning slaves, to be asked and answers recorded. He must find at each house, shop, farm and store, a trustworthy and willing informant. He must patiently go through all these items, and to many offer much explanation in order to elicit the desired information.

In many cases, the marshal, not finding a suitable witness in or about the house, was obliged to make more than one visit, travelling over the same ground, perhaps long distances, several times before he could accomplish his purpose.

As in the progress of years the people have become more intelligent and more familiar with the manner and objects of the census, they are better prepared with the facts and feel more ready to co-operate with the public officers. It has been, therefore, growing less and less difficult and laborious to get the facts; besides, there has doubtless been an improvement in these officers. They are more intelligent and disciplined, more courteous and persuasive, and win the popular confidence more and more easily, and hence they do their work within a month, while their predecessors required eight and ten months, and more, to gather all that was required.

It must be remembered that even now, or, at least, at the enumerations of 1850 and 1860, as well as previously, the assistant marshals were new to their work. They have been appointed afresh every 10 years. They had no previous training for, or knowledge of, this business. Many of them were mere hungry men, wanting any employment, with no exact mental habits, no discipline, no mathematical acquirement, no facility of explanation to make the questions clear to the dull, and no courtesy to win over the unwilling. With the chance of such as these, with the average of such as probably will be selected if the old systems shall be continued, and especially if political affinities are deemed essential qualifications, we cannot expect that they can complete the enumerations in less than a month's time.

The British system is better than ours has been.

England and Wales are permanently divided into 631 registration districts, and these into 2,191 sub-districts, with a permanent superintendent, registrar or sub-registrar in each. These officers are constantly employed in gathering, recording, and returning the facts connected with the births and deaths. Thus there is spread a constant corps of trained, disciplined, intelligent officers, used to this kind of work, in continual intercourse with the people and making inquiries as to their domestic condition and history.

To this corps of near 3,000 established officers is the census committed. They are required to divide their sub-districts into others so small and containing so few houses and families that an enumerator can visit and collect all the facts in one day. There were 31,144 of these small districts, and as many enumerators appointed by the sub-registrars, at the census of 1861, in England and Wales.

The General Report, census 1861, vol. 3, p. 1, says:

The enumerators were required to be intelligent and active, able to read and write well, not younger than 18 years of age nor older than 60. They were to be respectable per-

sons, likely to conduct themselves with strict propriety and courtesy in the discharge of their duties, and well acquainted with the district in which they were to act. No difficulty was experienced in procuring the services of a highly respectable body of enumerators, including clergymen and many other professional men, who undertook the work from public motives.

In another place it is stated that many schoolmasters were employed for this purpose.

Schedules were prepared at the General Registry Office in London, one at least for each family in the kingdom, containing lines and columns, places for the record of all the names, and facts, age, sex, domestic condition, &c., of each person in the kingdom.

These blanks were sent—over 40 tons—in 1861, from the central office to the 631 superintendent registrars; by them sent to the 2,191 sub-registrars, and by these distributed to the 31,114 enumerators throughout the kingdom.

Each enumerator left one of these blank schedules with each family in his district, within the week next preceding the 8th of April. The family was directed to fill the schedule, with answers to each inquiry, as to each member, referring to the night preceding the 8th April.

On the 8th of April the enumerator called on each family, took the schedule, and examined it carefully, item by item, with some responsible member of the family, to make it certain, by renewed affirmation, that each answer was fully and correctly made. But if the schedule was not filled, or only partly filled, then he took the most intelligent member of the family, or witness, that he could find, and with this aid he made all the requisite record.

In this manner, and with this plan, so carefully drawn and so systematically carried out, the census of England and Wales was taken in one day. The same was done in Scotland in 1861, and also in all Great Britain in 1851.

We can adopt and carry out the same plan in this country. With the aid of the assessors and their assistants the whole country may be divided into small districts, which one man can traverse and canvass in one day.

We have a very much more intelligent population than any European country, and our people are very much more used to co-operating with the government. They have more sympathy with public operations; have more regard for law, and take more pleasure in carrying out national and State measures than the people of old countries.

If there be any doubt raised, or exception made, it can be only in some of the new States and Territories, where possibly, but not probably, there may be found no fitting and willing man to enumerate the people in some districts. If so, an officer can be sent; some member of the army, or some soldier, under the direction of his superior; and, also, in some districts the dwellers may be so widely separated that a day is insufficient for the work. Provision of more time and payment should be made for all these cases.

In all cases the enumerators should be held responsible for the correctness of their records, and for the probable correctness of their facts. They should see that no statements inconsistent with each other, no such gross improbabilities, or manifest impossibilities, as have been allowed to come into some of our former censuses, should now be permitted to appear in their schedules and returns to the assistant assessors.

Then these assistant assessors should revise all these returns for the same purpose, comparing them with their more general knowledge of the people and their condition; to see if every village, hamlet, street, road, and dwelling, so far as they know, has been visited, and the statements are all consistent with each other.

Again, all these returns should be re-examined at Washington by men

competent for the purpose, to see that every class of facts has been obtained in every State, county, and town; and no such omissions as whole counties without a death, or a farm, or a store, that have formerly been made, should be again permitted.

In all these cases, if any such error, fault, or omission, appear to the assessor, or to the authorities in Washington, the papers should be immediately returned, or exact copies of them, to the subordinate officers, assessors or enumerators, and they be required to re-examine, and cause correction to be made.

USE TO BE MADE OF THE FACTS AFTER BEING GATHERED IN THE CENTRAL OFFICE AT WASHINGTON.

This is a matter to be considered in connection with the limit of time allowed for the publication of the report of the census. This is very various. It was as little as possible in the early censuses. The work filled four large quarto volumes in the eighth census. There may be a great amount of profitable tabulation, calculations, and deductions, that will show what we are as a nation, what progress we have made, and what we may be. There may be many valuable lessons of philosophy, of political economy and humanity drawn, and much instruction in regard to health, happiness, and prosperity, derived from the census.

The character of the men who are to do this work on the gathered facts, the qualifications of mind, experience and heart, constitute a very important element in the consideration of the time when the report shall be made, after the enumerators have done their work.

Nearly, I think quite, all other civilized nations have permanent statistical bureaus connected with their governments. These are managed by permanent officers who are scholars, trained mathematicians; men eminently fitted for their work. They are generally, perhaps always, retained long in their office, for their governments find it for their interest to keep and profit by the talent which they develop and cultivate. Dr. Tarr, master spirit of the English registry office, has been there from 1837. Mr. Hammich and others have been there nearly as long. They are among the accomplished and practical scholars, mathematicians and calculators of the nation. I met them in the London Statistical Society, where they are among the leading members, and their articles in that Society's Journal are authority for the world on questions of vitality, of population and political economy.

Berg of Sweden, Engel of Prussia, Baumbauer of Holland, Quetelet of Belgium, Legoyt of France, chiefs of their bureaus of statistics, have been long, and some of them very long in this branch of the public service. So also Von Hermon of Bavaria, Varrentropp of Frankfort. They are retained as long as they can be persuaded to serve. I met these and many others at the International Statistical Congress in London, 1860. I find their names in the reports of the same body at their meetings in Belgium, Prussia, Paris, Italy, Vienna, &c., years before and after 1860. Their names appear also in the periodical reports on population and mortality of their respective countries, and in their own statistical journals.

With such trained and cultivated men, and with co-operators of similar character and experience, the European nations are ever ready to take their census, most of them once in three or five years, and to send forth reports full of wisdom and instruction, of reliable statements and deductions profitable to their peoples and to the world.

Their reports are not only more valuable, but also prepared in a shorter

period than those written and published by extemporized corps of unused men, with no especial fitness for their work.

Yet even these statistical bureaus of men so fitted and ready could not prepare their reports of census in very short periods.

In England, census of 1851: The schedules were collected by the enumerators March 31. The first volume of the report, folio, 221 pages, was dated July 21, 1852. The second and third volumes, folio, 1,438 pages, population tables, ages, &c., were dated April 24, 1854. 1861: The schedules were gathered April 8. The returns were all received in London in May. A general statement of the population was made June 7. First volume of report, with summary tables, was dated September 29, 1862. The large report was dated July 23, 1863.

Scotland, 1851: Schedules left at houses first week in April; collected 8th. Examined, corrected, and sent to registrars 16th April. Re-examined by registrars and sent to clerk of sheriffs 30th. Sent to registrar general, Edinburgh, June 1. Some four distant districts were not received until July, and those from St. Kilda not until 28th July. First summary sent by registrar general to secretary of state July 22. First volume of report dated June 22, 1862; second volume, population tables, dated February 10, 1864. Both folio, large.

Ireland, 1851: Schedules left at houses 20th to 29th March; schedules collected 31st; abstract submitted by registration board to the lord lieutenant August 4; results of census by "townlands" printed; first volume, March 15, 1852; second volume, November 30; third volume, status of disease, March 30, 1854; fourth volume, ages and education; fifth and sixth volumes, deaths and causes, January, 1856. 1861: Schedules collected April 8; report dated June 24, 1862; four other volumes on agriculture, and whose dates I have not time to examine.

France, 1856: Taken July 1; published 1859. 1861: Taken June 1; published 1864.

Holland: Taken 1859; published 1864.

Prussia: Taken December 3, 1864; printed 1867, dated July 15.

Hanover: Taken December 3, 1858; printed 1860. Taken December 3, 1861; printed 1863.

Berlin, Prussia: Taken December 3, 1851; printed 1863; dated October 11, 1863. Taken December 3, 1864; printed 1866, dated April 22.

Bavaria: Taken 1858; printed 1861. Taken 1861; printed 1844. Taken 1864; printed 1865.

Sweden: Taken December 31, 1866; dated February 29, 1868; printed 1868.

The censuses of Belgium do not enable me to give you so accurately the dates of enumeration and publication. I find the same difficulty in the Spanish census and Swiss.

Thus you see that even the nations best prepared require considerable periods for the preparation of their reports, and those that do this in short periods give the most meagre and least valuable reports. Sweden, which published in 14 months, sends forth the fewest and the least profitable tables.

The most valuable documents of this nature that I have seen are the English of 1851 and 1861; the Irish of 1841, 1851, and 1861. That of 1841 was said to have been, in its time, the best census in the world, and with good reason. That of 1851 was in 10 folio volumes, which is, perhaps, my richest treasure. The censuses of France and of Belgium are very full, and worthy of the study of political economists in every nation. Most of these contain many very important tables on the law of life and the law of mortality, which, we hope, our own will imitate

hereafter. Certainly it is to be hoped that our government will so measure, analyze, and tabulate the population and mortality as to furnish the life tables for our life insurance companies, and not permit them to do their work on the European life tables, and, from the experience of life and death in other countries, conjecture the value of life in America.

The last English life-table prepared in the registry office, by and under the superintendence of Dr. Farr, is a quarto volume of 605 pages, and full of the most important calculations, tables, and instructions. It is valuable to the world, to us in America as well as to the people of Europe; but it is based on English and not on American facts. Its principles, applied to our experience of life and death, would furnish to our government, life insurance companies, and people most important aids, in their business and self-management.

The last census—eighth—of the United States is an improvement on its predecessors. It contains much that is valuable, and nothing, or next to nothing, that should be omitted. If further time could have been granted several other chapters would have been added to the mortality report:

1. On the comparative value of life in the northern and southern States.
2. On the comparative cost of producing, developing, and maturing men, and their comparative returns made to the country in labor through their self-sustaining years, in the north and south.
3. On the comparative value of life, longevity, and productive force and value to the nation of foreigners and natives in the United States.
4. On the comparative value of life and production, or laboring power, in this and other countries.
5. Refutation of the opinion, held by some abroad, that human life and power deteriorate in course of generations in America.
6. On the cost of development of a man, or building the human productive machine, and his worth to the body politic. The interest of the nation and government in the health and preservation of the laboring power of each individual. This is the political economy of health.
7. On the effect of cities or the condensation of population on human life. (This is soon to appear in the Atlantic Monthly Magazine.)
8. On the effect of prosperity and poverty on the development and preservation of life.
9. On the effect of education and ignorance on the same.
10. The connection of low health with crime.
11. The increase of human life in the progress of ages. (This is soon—March, April, and May—to be in the Atlantic Monthly.)
12. The comparative interest in human life and health manifested by the governments of the several nations by legislation, &c.
13. The law and practice of the several States of this country in measuring the life and vitality of their several peoples.
14. The comparative spread of consumption and pneumonia in the north and south, in old and new States.

These were partly prepared, the facts gathered, and calculations mostly made, in reference to them, in 1864 and 1865. I wrote them, as on the preceding page and half, 21 and 22 of this letter, to Mr. Harlan, the Secretary of the Interior, and proposed that they be completed and added to the report, but the government thought it not expedient to delay the publication of the volume.

Your fourth question: What modification should be made in the tables, remains to be answered.

I am not sure whether you refer to the schedule of primary inquiries,

or to the tabulation of these facts, in the reports. I will, however, answer to the first.

I have here copies of the schedules that were used by the marshals in 1860.

SCHEDULE I.—POPULATION.

The plan of this was drawn up by the American Statistical Association, in answer to a circular from the census board in 1849 or spring of 1850. It was adopted, with little alteration, by the census authorities. The basis was the English census. Columns 8 and 9 of this schedule indicate inquiries that, I fear, will elicit no satisfactory information. On the contrary, it is probable that these will irritate and offend, and render the informants less disposed to answer the other questions. Yet Mr. Shattuck, whose opinion on these matters I regard very highly, thought much of ascertaining the fact of the number of real-estate owners, as persons who had the most interest in the prosperity of the country. Yet I would omit these queries, and, if need be, obtain the facts of ownership of real estate from the public registers.

Column 11 should rather refer to the standing fact of the married state than to the event of marriage, within the year. That is of but little consequence, taken alone. But the broader fact of the number of persons who are single, who are married, and who are widowed, is of very great consequence, and is one of the most valuable evidences of national prosperity and happiness.

Most, and I think nearly all, European nations ascertain and publish this fact. I trust we shall do likewise. If so, this column should be headed, "Single, married, widowed," and against each person should be written S, M, or W.

Column 13 would better indicate the education of the people if the age were 15, instead of 20, as few, or more probably none, ever learn to read after 15.

Column 14 is a singular and most unphilosophical medley of incongruous matter, which may confuse the informants and trouble the enumerators. As it reads, "which misfortune befalls the man, deaf-muteness, blindness, insanity, idiocy, poverty, or criminality?" the answer may be impossible, or very difficult. He is probably neither, or he may be all. I know of some who are criminal, insane, and pauper; some who are blind, insane, and pauper; some who are deaf and dumb, blind, and pauper.

The sanitary parts, the questions of mental and bodily disease or disability, should be determined in regard to every person in the nation.

For the main purpose of the census, which is to measure the power of the nation, it is not enough to merely count the people. They differ very greatly in their worth. A human being of any definite age is not a constant quantity in all cases. Men of the same age are not alike in force and effectiveness. The terms *man of 30* and *woman of 30* do not represent a definite and invariable element of population. One is strong, another is weak; one is a supporter of the community, another is a burden on it; one contributes to the common power and common wealth, another lessens them. One community of 10,000 people, with all its members in full health, is stronger and more effective than another, in which 10 per cent., 20 per cent., or 30 per cent., are sick or weak.

The government, then, wants to know, as precisely as possible, the extent and kinds of the disabilities that rest upon the people, in order, first, to know what discount should be made in the apparent amount of

its force; and second, to know the kind and place of these burdens, and then, so far as it can, find a way of relief.

It would be well, then, that this column should be headed: *Is he or she in good health for his or her age? If not, What is his or her disease or disability?*

If well, the record may be simply a mark, to show that the question was asked and answered in the affirmative; if not, then the record will be according to the fact—*fever, consumption, dysentery, broken leg, loss of arm, cut wound, insane, idiot, deaf and dumb, blind, &c.*

As this inquiry is to be made in respect to each individual who, at the time, is under consideration and in the mind of both enumerator and informant, it cannot be evaded. There must be an answer specific and direct. Whereas, if the question be asked in general terms, are any insane or idiotic persons in your family? frequently it is not answered, or in the negative, when such are really there. In this way the government will obtain much fuller and more reliable information, especially in regard to diseases and disabilities that are not pleasant to the sensibilities nor creditable to the pride of families.

With the answer to all these questions, in respect to all the people, the census officials at Washington would first determine the exact number of healthy, able-bodied, and sane persons in each State and all the States; and also the exact amount of each disease prevailing in each and all parts of the country.

This would be a most important contribution to the vital statistics of the United States. This plan was proposed in the international statistical congress at London, in 1860. The report recommending it is in the transactions of that congress, page 497. The plan was partly adopted in Ireland at the census of 1861, and produced tables of great worth, showing the extent of each kind of disease and injury in that country when the enumeration was made.

With this information the government would know the exact measure of the power on which it rests, and by which it may effect its purposes.

This, moreover, offers a standard of the national power at each successive census, by which the progress or decline of the country may be determined through the decades and ages of its being.

CONVICTS AND PAUPERS.

The other matters in column 14—the number of convicts and paupers—cannot be ascertained at the houses of the people. The family will not confess the criminality of any of its members, nor do they love to confess their pauperism. But these facts can be fully and satisfactorily learned from the public authorities, or at the institutions where these classes are confined or cared for.

SCHEDULE 2.

This is useless now.

SCHEDULE 3.—MORTALITY.

This is very important. All its inquiries should be made and answered with *very much more care* than they were in 1850 and 1860. The enumerators should be particularly enjoined to pursue this matter in every house and family, and not be satisfied with the simple statement of ignorance, as heretofore in many cases. In 1850 some whole counties returned no deaths.

In both 1850 and 1860 this schedule brought out much valuable information; but this was far short of what should have been obtained. It afforded no means of calculating the rate of mortality in any State.

Column 5 is now useless.

Column 7 will not produce information of any value, and will only burden the inquirer and witness.

SCHEDULES 4 AND 5.*—AGRICULTURAL AND MANUFACTURED PRODUCTS.

I have no suggestions to make in regard to these.

SCHEDULE 6.—SOCIAL STATISTICS.

Libraries.—The instructions of the superintendent limited these to large, generally public, libraries, containing not less than 1,000 volumes. It would be a most important indication of the extent of education and general intelligence if this inquiry should be extended to every family. If there was a column on schedule 1, headed, "Number of books in the house, belonging to the family or persons," some, but not many, would say, "None;" few—possibly many—would answer, "The Bible and a few school books." There are many, especially in the northern States, that have 100 volumes; many that have 200 or 300. Within my knowledge there are not a few who have 1,000 to 2,000, or 3,000.

This inquiry would develop a state of culture honorable to our nation, and showing a great advancement in civilization in comparison with the people of the older world.

I am not sure that I would put this into the schedule to be asked of every family, yet I would like to see it there, and the results of the experiment, and I commend it to your consideration.

I have yet to speak of your fifth and last topic—any other suggestions? This I must put in another letter, which may go hence to-morrow.

Till then, believe me, with high respect, very truly, yours,
EDWARD JARVIS.

General JAMES A. GARFIELD,
*Chairman Committee on Census,
House of Representatives, Washington, D. C.*

DORCHESTER, MASS., *February 19, 1869.*

DEAR SIR: In my last to you, mailed this morning, I answered four of your propositions, and now I will answer your fifth and last, asking for any suggestions in regard to the whole matter.

In course of my remarks I have indicated all that now occur to me, and even pointed to that to which I now beg leave to ask your particular attention—the character of the agents that shall be employed in all the stages of this work.

About 20 years ago, just preceding the 7th census, the American Statistical Association received a similar request after they had sent their plan of enumerating the population. They answered "they would then refer to the men who should do the work, and advised that men of exact mental habits, book-keepers, school-teachers, accountants, mathematicians, naturalists, men who were accustomed to look at and accept of facts in their exact measurement and character and to made records corresponding." And they advised further, "to avoid mere politicians, and all men of loose mental habits, who look upon facts as raw material to be manufactured for other purposes, to be curtailed or enlarged or shaped to suit occasions; such men and such habits could not be relied

* These were proposed by the late Mr. Lemuel Shattuck, of Boston, and Mr. Archibald Russell, of New York, both very eminent statisticians. Also Schedule 6.

upon for any work of collection or record, for however honest their intentions, they had not the power nor the discipline to see things in their exact form, still less to remember and represent them always as they originally appeared.

This advice is still worthy of consideration, for reasons found in the history of several of our censuses.

I will go no further back than the census of 1840. In that, several counties in the rural districts of the agricultural States are represented as without farms. Five hundred and eighty-nine counties are reported as having no person engaged in trade or commerce. Albany, New York, a large commercial city of New York, reports 35 engaged in trade, while her neighbor and rival, with less than half the population, reports 736 so engaged.

In the same census many towns are reported on one page as having *no colored inhabitants*, and on another as having *one, two, three, four, five, seven, even eight colored insane or blind persons*; many others show one-third, one-half, three-quarters, and larger proportions, even all of their colored people, to be insane, or blind, or deaf and dumb. The manuscript copy of the marshal's returns shows that all the 133 patients in the State Lunatic Hospital at Worcester, Massachusetts, are colored, and this is reaffirmed in the printed report, which says that out of the 151 colored inhabitants of Worcester, of whom only 113 are over 10 years old, 133 are insane.—So, according to that document of the United States, Massachusetts has the credit or the honor of devoting her only lunatic hospital to the exclusive use of the negroes, a statement which would have gratified the abolitionists if it had been true.

In the same census it is shown or stated that of all the colored population in Massachusetts 1 in 44, in New Hampshire 1 in 28, in Michigan 1 in 27, and in Maine 1 in 14, were insane. Through all the free States a similar though less proportion of colored insanity was offered for the world's credulity to believe.

Mr. John Quincy Adams told me that Mr. Calhoun urged this evidence of the inability of the colored race to endure the burdens of self-direction as a strong reason for the admission of Texas. The south was overcrowded with slaves, and if more room could not be found for them they must go free, and freedom was their unavoidable danger of insanity; "therefore we must have the new lands of Texas, where they may go and live with undisturbed brains. Humanity demands it."

These discrepancies of the statements, of no colored population yet many colored insane in these towns, were not noticed by the marshals who first reported, by the clerks who digested their returns, nor by the superintending and responsible officers of the census department. Moreover, Mr. De Bow, in the Compendium of the Seventh Census, 1850, page 76, reaffirms the same tale, and with much sophistry tries to show how it should be so.

But Mr. Berrien, then senator from Georgia, told me that it was undoubtedly an error; but he added, "Congress will not correct it—it was too good an argument for the south to give up, and there were too many speeches based upon this to be made in support of slavery to let this be lost."

The Statistical Association memorialized Congress, showing the untrustworthiness of the sixth census, and asking, for the honor of our country and the credibility of our national documents, that it be revised and corrected. Mr. Adams had it in charge; Congress printed the memorial, but, as Mr. Berrien said, nothing could be done beyond this.

The census department was unfortunate in its co-operations in 1850 as well as in 1840. Mr. De Bow, the superintendent, says, in his Compen-

dium, page 18, "Each census has taken care of itself. Every ten years, some one at Washington will enter the hall of a department, appoint 50 or 100 persons under him who have perhaps never compiled a table before, and are incapable of combining a column of figures correctly. Hundreds of thousands of pages of returns are placed in the hands of such persons to be digested. In 1840 the returns were given out by the job, to whoever would take them. In 1850, such was the pressure of the work that almost any one could, at times, have had a desk."

Mr. Kennedy, in his frequent correspondence with me in regard to the eighth census, spoke sorrowfully of the incompetence of the force that was granted to him, and the difficulty he had in getting the work done properly.

That Mr. Kennedy complained with good reason was manifest from the works that were sent forth. The ordinary clerks failed in accuracy, and there was not a sufficiency of the supervising intelligence to detect and correct their errors. In the Preliminary Report, which Mr. Kennedy wrote me "was prepared in haste, and without opportunity for revision," on pages 22 and 23 is a table showing the number of deaths in each State. On pages 138 and 139 there is another table showing the same facts in each month, and the total of the year in each State. These two statements of the same facts agree only in 18 of the States, and disagree in 22.

Mr. Kennedy sent me manuscript sheets of tables showing the deaths from each cause in each State and Territory, in one set of tables classified according to age, and in another according to the season and month of death. The totals from each were given in connection with each classification in every State of the whole country. There were 118 of these causes, besides those of violence.

The number of deaths from 31 causes were the same in these manuscript tables as those given in the tables of the same on pages 158 to 161 of the preliminary report. But those from 87 causes differed.

In the tables of the violent deaths the numbers given in the manuscript agree with those in the printed book, page 167, in regard to only three causes, and differ in regard to 19 causes.

The number of deaths at each of the 18 periods of life, given in pages 140 and 141 of the preliminary volume, are different in every case from the statements of the same facts in the population volume, page xlv.

The manuscript tables sent to me were prepared in the census office; they were presumptively complete, both in their specific and their general statements, and ready for publication. These were the sole and entire basis of my report. The columns of deaths at each age, in each month, and from each cause, were added, and the tables given for each State. These would have been accepted as received, and transferred to the printer, if no suspicion had arisen. On examination it was found that the number of deaths from several of the causes was not the same when classified as to age as when classified as to months of death, and those of the ages differed from the statements in the printed volumes. The whole was then revised, and about 600 corrections made.

So far, I could not go behind the record; I could only use one part to correct another. But in the catalogue of causes there were statements so contrary to the law of disease, to all experience and probability, that I made corrections there. Infants under one year were given as dying from drunkenness and from delirium tremens; persons 50 or 60 years old dying of teething; persons frozen to death in the extreme south in July and August; persons sun-struck in the farthest north in January.

Finding that the same number of deaths from intemperance and teething was given when classed by seasons as by ages, I concluded that the diseases were reported correctly and the error was in the age. I there-

fore put all these in the column of unknown age. For a similar reason I put these deaths from heat and cold into the unknown months.

I cannot say where these errors originated. Probably the last might have been the misunderstanding on the part of the enumerators of the reports of the informants at the houses, and the officer, without thinking of the absurdity and impossibility, recorded it without further inquiry. Others must have occurred in the central office. Some of those in regard to insanity in 1840 were merely the misplacement of figures, the long and narrow columns of white insane and colored insane being side by side, and it was difficult for the eye to follow them down from the headings. The errors in the addition were from incompetent or careless accountants; and it seemed to be but an accident that two or more digesting and summing the same facts, under different classifications, or even one man doing this at different times, should come to the same conclusion and find the same sum in the end.

Whatever these errors may have been, and wherever originated, they passed or should have passed through several revisions, and these by several hands. Yet through all this ordeal of security for truth they escaped notice, and were sent forth to the government and the country, and the world was asked to believe them.

What credibility these documents, thus imperfect and in some parts so self-convicting of error, can gain for themselves or for the authorities that present them, you can easily conceive.

There is a remedy—in the selection of the men to do all the work, from the first collection of the facts to the last reviser of the printers' proof. You want men of such general intelligence as will understand the nature of things, probabilities of the reports or statements, of such acute perceptive faculties and ready reasoning as will detect at once any error, any improbability, and of such faithfulness, that will lead them to pursue the inquiry until the truth shall be known. The enumerators must do this in the first place. The assessors' assistants must again revise and scrutinize each record with the same assessors; the principal assessors must again do this; and then competent officers in the census office must do the same; and then, through all the stages of analysis, combination, tabulation, calculation, inference, and philosophy, no part must be taken for granted as true until it has had all the sifting that the best intelligence can give it.

I will beg leave to speak again of the topics of inquiry and the schedules. It would be well not to fix them unalterably in the law, but leave room or liberty to add more by proper authority—say the Secretary of the Interior and superintendent of census, or the President with them; certainly some trustworthy authority that Congress may designate.

I have meant, from that, if the enumeration of the population and mortality, and the gathering of all the other statistics specified in the schedules, be done at the same time, the work will be embarrassed and imperfect.

I would suggest for your consideration the question of separating these, and of taking account of the people and mortality at one time, and the amount of property, business, and finance at another, but all by the same officers.

Very respectfully, yours,

EDWARD JARVIS.

General JAMES A. GARFIELD,

Chairman Committee on Census,

House of Representatives, Washington, D. C.

COMMUNICATION

FROM

M R . E D W I N M . S N O W .

PROVIDENCE, RHODE ISLAND,
February 16, 1869.

DEAR SIR: I have seen the telegram to the Press, saying that your committee would like to receive hints or suggestions relating to the United States census of 1870, from any one, and I have also been requested by Hon. Thomas A. Jenckes, of the House of Representatives, to forward suggestions on the subject to you.

It would give me great pleasure to make a more extended and systematic communication upon the subject than it will be in my power to do, but an unusual press of duties at the present time makes it impossible for me to do more than to offer a few hints, without giving particular attention to fulness or system in their arrangement.

First. Upon the general subject.

I sincerely hope that in the statute organizing the census of 1870 provision will be made for the establishment of a permanent census bureau, or, better still, (notwithstanding one failure,) a permanent statistical bureau. The reasons for this are perfectly conclusive to all who are acquainted with the collection and compilation of statistics. The greatest defects in all our censuses have been owing to the want of knowledge and of experience in those employed upon them. We are almost destitute of men in this country, except in three or four States, who are familiar with the practical duties required in taking a census. The whole country needs educating on this subject. A permanent bureau, with an efficient head, would soon organize a corps of men in each State who would be familiar with the information to be obtained and with the best methods of obtaining it.

On the score of economy, also, a permanent bureau would be the cheapest. With a corps of clerks educated in the best methods of doing their duties, and with trained men to obtain the information, and by making use of local officers and other sources of information in different States, I am perfectly confident that a permanent census bureau could obtain all the information now obtained by a decennial census, except that relating to population, and could obtain it *every year*, with no greater expense than is now required to obtain it once in ten years. The efficiency and economy, in statistical matters, of men familiar with their duties are greater beyond comparison than of men who are ignorant of these duties.

A permanent national bureau of statistics is also very much needed to systematize the whole subject, to give information to all portions of the country, and to take the lead in the organization of similar bureaus in the several States. When such bureaus become general in all the States the national government will be able, with their assistance, to obtain all the statistics now obtained by the national census, and much more, far more frequently, far more correctly, and with much less expense.

Second. Who shall have charge of the census in the several States?

The plan in past censuses, of committing the charge of the census in the several States to the United States marshals has nothing whatever to recommend it. It is certain, and is certainly known beforehand, that not one in fifty of these officers has any practical knowledge of the subject, or any special qualifications for the service required. I should hope that in the census of 1870 this provision would be abolished, and that in the several States, and perhaps in districts of the States, an attempt may be made to find persons who have some special qualifications for the work. In this way there will be certainly no risk of obtaining men more poorly qualified than by the past mode of appointing them, and there may be a chance for improvement.

Third. The information to be obtained.

It is evident that the methods and agents by which the enumeration of the population is made might properly be quite different from those used to obtain the statistics relating to manufactures, commerce, agriculture, fisheries, &c. In each class of statistics desired it may be, and probably would be, advisable to employ different men and different measures. Even different measures might, to some extent, be advisable in different sections of the country, varying with the different institutions and systems of local government in the several States. Let us look very briefly, in connection with these views, at some of the different kinds of statistics that it is desirable to obtain by a census.

1. *Population.*—It has been often suggested, but generally by those unacquainted with the practical details of taking a census, that we should adopt the English plan of taking the enumeration of the whole population of the country in a single day. Without any special knowledge of the practical working of the English plan, I am confident it could not be literally carried out in this country. In some portions of the country an approach may be made to it by the employment of a large number of enumerators. This was done in the city of Providence, under my direction in taking the census of Rhode Island, in 1865. But my experience in the collection of statistics of various kinds renders it certain in my mind that the great portion of the people in this country would find it difficult to fill out the necessary blanks in a satisfactory manner. In fact, it would be found impossible to obtain a sufficient number of enumerators who were qualified for the duty to take the census of the whole population in a single day. Instead of attempting, then, what would be found practically impossible, I would think it advisable to improve the plan of former censuses by employing a much greater number of enumerators—by employing, in fact, all who could be found who were qualified for the work.

I would give no large districts to single individuals, as at former periods, and I would think it especially important to take much pains to circulate information among all the people previous to commencing the enumeration relative to the questions to be answered. But the details of all this would properly be left to the superintendent of the census.

2. *Manufactures.*—From experience in taking two censuses of the city of Providence and one of the State of Rhode Island, and from much investigation and interest in the subject, I am led to place very little value upon the statistics of manufactures, as obtained by the national census of 1850 and 1860. I am confident that, from the nature of the case, it is impossible, absolutely so, for comparative strangers, even though clothed with governmental authority, to obtain any reliable information relating to a large portion of the manufactures in any place. The penalty for refusing to give information has been of no practical value in obtaining it. There are men in the city of Providence who

could sit in their offices and give more full and far more correct information, even of the details of most of the manufactures in the city, than were ever obtained, or ever could be obtained, by any United States marshal, in the manner the information has been obtained by past censuses.

I think that a radical change should be made in the mode of obtaining the statistics of manufactures. The enumerators of the population should not of necessity have anything to do with the statistics of manufactures; but I would proceed as wise business men would proceed to obtain similar knowledge—I would employ men specially acquainted with the manufacturing interests; in some cases different men for different kinds of manufactures, and always men known in the community, and in whom the manufacturers would have confidence. By the employment of such persons, and by assurances that the private business of individuals should not be exposed, it is probable that much more full and more accurate statistics of manufactures could be obtained than have ever been obtained in any former census. A person well acquainted with any particular branch of manufactures would often be able to correct the mistakes and the intentional misstatements of persons desirous of concealing their business. I have known instances in which full statistics, proved to be correct, have been obtained without the knowledge of the parties.

The returns in the office of the internal revenue department, in past years, would furnish more full and more correct information relating to manufactures than were ever obtained by census, and information might be obtained from them even now, which would aid in correcting and perfecting the returns of a future census.

3. *Agriculture.*—The statistics of agriculture as obtained by the national census in past years have been extremely incorrect and unreliable. I think that they might be greatly improved by the employment of persons to collect them who are specially interested in and acquainted with the subject. Where agricultural societies exist, their aid might be sought to assist in finding the proper persons, and after the statistics are completed in any State, those familiar with the subject might correct and greatly improve them by a system of comparison and equalization throughout the State.

4. *Mortality and miscellaneous statistics.*—The numerous errors in facts, and erroneous results of the mortality statistics of the census of 1860, have tended to discourage the collection of them in the minds of many persons. This is a serious mistake. I think the correctness of the returns could be greatly improved by changes in the forms of the blanks, and by improvements in the directions; and after the returns are received they can be corrected by comparisons and by mathematical calculations so as to show some of the most important results with absolute accuracy. As an example of this, the mortality statistics of 1860 only showed about two-thirds of the actual mortality in the whole country; but a careful mathematician, employed on the census, discovered a method by combining one census with another, and by considerable logarithmic calculations, by which he obtained the true rate of mortality, not only of the whole people, but also of the different classes of the people, as whites and blacks, males, females, &c. This gentleman, Mr. L. W. Meech, had only completed the tables for one class, white males, when the census of 1860 was closed, and is now anxious that a clerk should be employed for a few months to compile the returns so that these calculations can be completed for other classes of the population. These calculations would be of very great value in life insurance, and as the basis of other calculations in the census of 1870.

Under the head of miscellaneous statistics in the report upon the census of 1860 were included the facts obtained relating to banks, insurance, real and personal estate, the public press, railroads, churches, &c. The collection of all these, and other similar statistics, in my opinion, should be made by special agents, or clerks employed for the purpose, and not by the enumerators of population. On many of these subjects the information could be obtained fully and correctly from local reports, records, &c.

In the same way should be collected the statistics of other subjects that have not been included in the national census; the statistics of commerce, foreign and coastwise, the statistics of trade, the movement of food and merchandise from one section of the country to another, the statistics of fisheries, inland as well as ocean. The fisheries of the lakes and the salmon fisheries of Maine and Oregon must be of great importance to the country. The fisheries and shore statistics, including shell fish, of the small State of Rhode Island, in 1865, were found to be worth nearly half a million of dollars.

But it is not necessary to continue this subject. Many of the points that I have named, and others, would properly be left to the judgement of the superintendent of the census. The number and character of the questions to be asked, the amount and description of the information desired, the form, size, and arrangement of the blanks, the directions to be given, &c., are all important, and I am certain that very great improvement can be made in them, which would tend to increase the fullness and accuracy of the census, and make it much more valuable than the census of 1860. But certainly these particulars should not be fixed by law until the superintendent is appointed, and his judgement upon them is obtained.

I think there is a great danger of attempting too much; of inserting too many items in the blanks by which the work will be confused, and the accuracy and completeness of the whole will be impaired. It is, of course, necessary to keep in mind the information obtained by past censuses, and to make the census of 1870, such that all valuable comparisons can be made; but a judicious selection of questions, and arrangement of the blanks, will enable us to obtain more and better information than has been obtained by any previous census, with smaller blanks and with less labor.

After all, the most important point is that the superintendent of the census of 1870, should be appointed without delay, and set to work. His duties may be defined in general terms, leaving him to examine all subjects carefully and to report next winter such further legislation as he may deem necessary. If the appointment of superintendent is delayed until next winter, he will be compelled, from necessity, to adopt to a great extent, the blanks, and forms, and system of operations of past censuses, with no opportunity to make much improvement upon them.

In conclusion, I beg leave to apologise for the length of this paper, so much greater than I intended. With definite questions to answer, upon particular points, I might have given brief and more definite answers, but the general subject, "the census," is so vast, and my time so limited, that I have been compelled to use many more words, to say much less than I could have desired.

Respectfully,

EDWIN M. SNOW.

Hon. J. A. GARFIELD,

Chairman Select Committee on Census of 1870.