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ART. I.—*The Structure of the Old Testament.*

WE propose in this article to inquire into the structure of the Old Testament. This inquiry is of course a purely elementary one, and belongs at the very threshold of Old Testament studies. It is not, however, on that account without its importance; and it is hoped that even the present imperfect attempt at its presentation may not be altogether devoid of interest.

Two extreme and opposite errors must be avoided at the outset, either of which tends to the denial of the existence of any such structure as our inquiry presupposes, and so to make all investigation in this direction unmeaning and superfluous.

The first springs from too exclusive a view of the divinity and inspiration of the sacred writings, hastily concluding thence that all must possess a uniform character, and present an even and unvaried surface; that since the Bible is everywhere the revelation of God, there must be an equal amount of disclosure everywhere. The Scriptures thus viewed become simply a capacious reservoir of heavenly truth, into which successive communications from above were poured, with no other effect than that of raising the general level; the separate value of each new revelation consisting merely in the absolute addition thereby made to the sum of the whole. Anything like a nice articulation or careful arrangement and adjustment of its

- ART. III.—1. *Progress of Statistics*, read before the American Geographical and Statistical Society, at the annual meeting in New York, December 1, 1859. By Jos. C. G. KENNEDY, A. M., Superintendent of the United States Census; Corresponding member of the Society, and of the Royal Statistical Commission of Belgium, and London and Dublin Statistical Societies, etc., etc. New York: J. F. Trow, printer, 50 Green Street. 1861.
2. *Preliminary Report on the Eighth Census*. 1860. By Jos. C. G. KENNEDY, Superintendent. Washington: Government Printing Office. 1862.
3. *Population of the United States in 1860*; compiled from the original returns of the Eighth Census, under the direction of the Secretary of the Interior. By Jos. C. G. KENNEDY, Superintendent of Census.

IN the collection of the details embodied in the Eighth Census, there were employed sixty-four marshals, comprising those of all the United States judicial districts, together with special agents for unorganized territory; under whose directions were 4,417 assistants. There were employed in the office, at one time, under the accomplished Superintendent, one hundred and sixty-eight clerks, and sixteen messengers, labourers and watchmen. The cost of collecting the statistics, before the work of comparison and compilation in the Superintendent's office commenced, exceeded considerably one million of dollars. The marshals of the United States are required by law to subdivide their districts, taking care not to include a greater population (by estimate) than 20,000 in any one subdivision. The assistants are furnished with blanks and instructions, and required to visit every house, manufactory, and workshop; and, when they have completed their districts, to make two copies of their work. The original returns are filed with the clerks of the county courts; the copies are forwarded to the marshal, who deposits one with the Secretary of the State for his district, and transmits the other to the Census office in Washington.

The first national census was taken in 1790, in accordance with the second section of the first article of our Constitution, which requires the enumeration of the inhabitants within each subsequent decade; in pursuance of which, we have made eight enumerations of our people. "The United States," remarks a French statistical writer, "present in their history a phenomenon which has no other example. It is that of a people which begins the statistics of its country on the day on which it lays the foundation of its social condition, and which regulates, in the same act, the enumeration of its fellow-citizens, their civil and political rights, and the future destinies of the country." Referring to the penalties imposed for a refusal to answer the interrogatories of the Marshal, he says: "Statistics were treated seriously, eighty years ago, by a people that, however jealous it is of its liberty, does not hesitate to punish, as a culpable infraction, what is elsewhere regarded as an action of no consequence, or treated with futile opposition."

It is a most happy circumstance that the insurrection which broke out soon after the last decennial enumeration, did not occasion the destruction or loss of any of the returns. The present census, accordingly, presents a full statement of the condition of the population immediately preceding the civil war now raging.

The number of states has increased from thirty-one to thirty-four, and five new Territories have been organized; but there has been no accession of territory, except a narrow strip to the south of the Colorado River, along the Mexican line, not yet inhabited. The estimated area of the United States, as given in the Seventh Census, was 3,306,865 square miles; an extent greater than the Roman empire, or that of Alexander; neither of which is said to have exceeded three million square miles; and more than ten times as large as France and Great Britain combined. Texas has the greatest number of square miles, 237,321. The entire New England states have only 62,116, and the middle states, including Delaware, Maryland, and Ohio, 151,760. Texas in area is larger than the New England and middle states, by more than 2300 square miles.

Aggregate Population.

Total number of whites, 26,957,471; free coloured, 488,070; slaves, 3,953,760; Indians, 44,020; making an aggregate of 31,443,321. Adding Indians who have retained their tribal character, 295,400, we have the grand total of 31,738,721. Oregon has the smallest population of any state, 52,465, more than 18,000 less than the city of Newark. New York has the largest, 3,880,735, being in excess of the population of Scotland, more than 800,000, and of the population of New England, more than 700,000. The middle states have nearly seventy inhabitants to the square mile; New England more than fifty; Texas less than three,—in 1850, it had less than one.

The increase of the entire free and slave population, during the ten years, omitting the Indian tribes, has been 8,251,445; and the rate per cent. is set down at over 35. The increase has been greater, by more than a million, than the whole population numbered in 1810, and nearly as great as the whole population in 1820. Vermont is saved from a positive loss of inhabitants by only one third of one per cent. New Hampshire has gained only two and one-half per cent. Maine nearly eight. Massachusetts has a population of 1,231,066, or nearly 158 to the square mile. South Carolina has gained 35,201 inhabitants of all conditions. More than half were free coloured and slaves, the relative increase of the free coloured being more considerable than that of any other class. It has less than twenty-nine inhabitants to the square mile. The gain of Virginia upon her aggregate population is beyond twelve per cent. The white class gained seventeen, the slaves less than four. New York gained 783,341, being at the rate of more than twenty-five per cent. The free coloured population in New York has fallen off sixty-four. The gain of Pennsylvania, in round numbers, has been 595,000, and the free coloured has increased about 3000. The population in Texas has increased at the rate of 184 per cent. The population of Illinois has more than doubled, its rate of increase going beyond 101 per cent. Missouri has increased by the number of 500,000; which is within a fraction of seventy-four per cent. The population of the United States, for the ten years from 1850 to 1860, in-

creased at the rate of more than 800,000 annually; and, for the last seventy years, the mean rate for each decade has been more than thirty-three per cent. From 1830 to 1840 was the only decade in which it fell below that rate; in every other, it rose above.

President Monroe, as much as he had witnessed of the growth of our country, so inadequate was his conception of its rapidity, that near the close of his administration in 1824, he proposed to colonize the Indians of New York, and those north of the Ohio river, and east of the Mississippi, in territory now embraced in the state of Wisconsin; under the impression that it was a region so remote that they would not be disturbed by our increasing population for a long time to come. Wisconsin is now a great and flourishing state, having a population of nearly 800,000. And what is still more wonderful, two other states beyond the Mississippi, Iowa and Kansas, have sprung up, as if by magic, having together a population of another 800,000. Illinois is large enough to make seven states of the size of Massachusetts, and have territory to spare. So is Arkansas. Missouri is large enough to make more than eight. There is territory enough in Illinois, (55,409 square miles) with a population no more compact than that of England and Wales, (307 to the square mile,) to contain the entire population of the United States, as it was in 1840. It already has a population approaching two millions. In 1810, it formed part of the territory ceded to the United States by Virginia, and contained little over 12,000 inhabitants. Now, it has as many citizens as Venice, or the United Provinces, in their proudest days, with a profusion of agricultural products almost out-running all available markets. Its natural resources are practically unlimited. Yet it forms only a small portion of that vast region sloping from the Alleghenies to the Mississippi, which is almost everywhere equally productive and equally accessible. The same "causes which transferred the sceptre of power and civilization from the banks of the Euphrates and the Nile to the shores of Western Europe," now in operation, are transplanting a prodigious population from Western Europe to the plains of the Mississippi, which already begins to press

through the gorges of the Rocky Mountains, and to roll down the Pacific slope.

If, since the year 1790, the average rate of increase of our population has never been less than 33 per cent., or one-third every ten years, then taking this as the rate of increase in the future, and leaving out of view the possible effects of the present civil war on our population, we have in round numbers the following results :

A. D. 1860, the population was,	. . . . .	31,000,000
“ 1870, the population will be,	. . . . .	41,300,000
“ 1880, “ “	. . . . .	55,060,000
“ 1890, “ “	. . . . .	73,410,000
“ 1900, “ “	. . . . .	97,880,000

If in 1820, forty years ago, any one then old enough to be acquainted with the simple rules of arithmetic, had applied the above rule to ascertain the probable population in 1860, the result reached would have been 30,461,116; almost a million less than the census shows. We may therefore safely set down 100,000,000 for A. D. 1900. Humboldt, as late as 1823, estimated the entire population of the whole American continent at 34,942,000; only about three millions more than the present population of the United States. The progress of our country has clearly unfolded the principles on which the multiplication of human beings depends, and has demonstrated that a prosperous community, possessing abundance of unoccupied land, will double its numbers in about twenty-three years. The agricultural facilities and salubrity of climate of these United States are equal to those of any portion of the globe of similar extent. Of the eastern continent we cannot find that the productive soil constitutes more than one-third, and of that third a part is poor. Should the density of population here ever equal that of Europe, (110 to each square mile,) the population would exceed 350,000,000. Should it only equal that of New England, it would exceed 165,000,000. It is an interesting fact that in the colony of Connecticut the governor was of opinion, in 1682, that all the land which was fit had been taken up already. Connecticut had then only 10,000 inhabi-

tants. A hundred years afterwards it contained 300,000, and now, 460,000; all subsisting on that soil which the governor had so early represented as fully peopled. The three states, Massachusetts, Rhode Island, and Connecticut, are already more densely peopled than old England was six centuries after the Norman conquest.

The population of New Jersey is 672,035, including 18 slaves, or persons formerly in this condition, who are still dependent on their former masters, or their estates, for maintenance, and 25,318 free coloured. In the preceding census it contained 489,555, including 236 slaves or apprentices, and 23,810 free coloured. This shows a gain of 182,480, or nearly 20,000 over 33 per cent., which is considerably beyond that of any preceding ten years since 1790. It has among its inhabitants 122,790 who were foreign born. Of these, over 33,000 are in Essex county, and over 26,000 in Hudson county; over 33,000 are from Germany, and over 62,000 from Ireland. Princeton has a population of 3,105 whites, 1,631 being males, and 1,474 females; 621 coloured, 265 males, and 356 females; making a total of 3,726, and showing a gain, since the preceding census, of 705. Trenton, with a population of over 17,000, has only 54 more coloured than Princeton. Newark, with more than 70,000, has only 1,287 coloured. Jersey City, with nearly 30,000, has only 335. New Brunswick, with more than 11,000, has 495. Burlington, with over 5,000, has 518. This class constitutes exactly one-sixth of the population of Princeton, while it constitutes less than one-fifty-sixth of that of Newark, and but a little more than one-twenty-fifth of that of Trenton, and one-sixty-fourth of that of the United States. New Jersey has 856 clergymen, 859 physicians, 1,204 lawyers, 30,325 farmers, 2,086 teachers, 7,444 carpenters, and two dancing-masters. Massachusetts has more than 41,000 shoemakers; New York more than 17,000 blacksmiths, and 21,000 merchants; Pennsylvania more than 18,000 miners. There are in the United States 1,379 sisters of charity; 313 of them in Maryland, and 540 in Ohio, or nearly two-thirds of them in these two states; there are nearly 2,500,000 farmers, 54,500 physicians, 33,000 lawyers, 37,500 clergymen; of these Oregon having 125, and New York 5,235; there are

1,153 shepherds; 722 of them in California, and 412 in the territory of New Mexico.

During the decade from 1850 to 1860, more than fifty millions of acres of land were brought into cultivation; and the productions of agriculture multiplied in ratio greater than the population. The products of manufactures increased nine hundred millions of dollars, or at the rate of eighty-six per cent. The banking capital ran up from about \$230,000,000 in 1850, to nearly \$500,000,000 in 1860, while the circulating currency was augmented more than \$52,000,000. The amount of insurances increased about \$311,000,000. More than 22,000 miles of railroad were completed, and the capital involved increased from less than \$300,000,000 in 1850, to more than \$1,151,500,000 in 1860; "while to indicate on the map of our country the lines of telegraph, would be to represent the web of the spider over its entire surface. Our internal and foreign trade kept pace with our advance in production and increase of capital. Education, free to a great extent, has been made more accessible, and crime has rather diminished. We experienced no effects of wide-spread pestilence, and our country seemed the chosen abode of prosperity and peace."

Of the entire population of the United States, 87 per cent. are native born; 13 per cent. are foreign born, of whom more than 5 per cent. are Irish, and more than four German. New York has the largest number of foreigners; in round numbers nearly a million, which is a fourth part of all in the United States, and also a fourth part of the total population of that state. North Carolina and Florida have the smallest number, being about equal, or only about 3,000 each; but the total population of North Carolina is nearly one million. The greatest foreign increase has been in New York, Illinois, Wisconsin, and Pennsylvania; the least in Vermont, Florida, North Carolina, and South Carolina. The greatest number of Irish reside in New York, Pennsylvania, Massachusetts, and Illinois; the smallest number in Florida, North Carolina, Oregon, and Arkansas. The greatest number of Germans reside in New York, Ohio, Pennsylvania, and Illinois; the smallest number in Vermont, Maine, New Hampshire, and Florida. Of the whole number of foreign born more than three millions and

a-half, or nearly 87 per cent., are inhabitants of the free states; and more than a half million, or less than 14 per cent., of the slave-holding states. The cities having the largest percentage of foreign born are St. Louis, Milwaukie, San Francisco, and Chicago. The total population of St. Louis is 160,773, of which 96,086 are natives of foreign countries, the per centage being more than 59. Of the more than 805,000 inhabitants of the city of New York, more than 383,000 are foreigners, more 203,000 being from Ireland, and nearly 120,000 from the German states.

From careful ethnological observations in other countries, it appears that the mass of the inhabitants of many districts continue in the spots where they originally settled; and that their marriages with the people of other parts of the country have not been sufficiently extensive to obliterate the traces of their origin. Distinct dialects will linger in different districts, and peculiarities of countenance, complexion, stature, and mental disposition, from generation to generation. Difference of language and religion will long stand in the way of a complete fusion of the peoples and races that make up our American population. Intermarriages, even between the Roman Catholic and the Protestant Irish, are comparatively rare. Among the native white population the ratio of the number of males to that of females is very nearly as 104 to 100; among the foreign born, the numbers are very nearly in the ratio of 117 to 100. The Superintendent of the Census estimates that, since the close of the last war with England in 1814, about three and a quarter millions of the natives of Great Britain and Ireland—"a population for a kingdom"—have emigrated to this country; and that there are now living in the United States one Irish emigrant to every five remaining in their native land. Next in magnitude is the migration from Germany, amounting to nearly a million and a half; the next from France, exceeding 208,000.

The census shows that in the United States and Territories, in a population of more than 31,000,000, there is an excess of about 730,000 males over the number of the other sex; whilst in the United Kingdom of Great Britain and Ireland, in a population of little more than 29,000,000, the females out-

number the males some 877,000. The United States, according to the eighth census, had a larger male population than can be shown in any other country on the globe. This excess may be accounted for by the large and constant immigration; in which the females are less than the males, in the ratio of two to three, and between the ages of twenty-five and forty the males are double the number of females; by our small military and naval service prior to the war, and by the few losses heretofore sustained by the contingencies incident to a state of war. The influence of migration on the disparity of the sexes is strikingly illustrated in the excess of males in the newly-settled territories. In California the males outnumber the females nearly 67,000, or about one-fifth of the population. In Illinois the excess of males amounts to about 92,000, or one-twelfth of the entire population. In Massachusetts the females outnumber the males more than 37,000. Michigan shows nearly 40,000 excess of males; Texas 36,000; Wisconsin 43,000. In Colorado, the males to females are as twenty to one. In Utah the numbers are nearly equal. And while in New York there is a small preponderance of females, in Pennsylvania, the males are more numerous.

The census contains a very interesting and instructive table, showing the population at the military ages. The number of white males in the United States, between the ages of eighteen and forty-five years, is 5,624,065. When a population has reached nearly its permanent condition, as in Europe and the older states of America, one-fifth of the total population is found to represent very nearly the number of males between the ages of eighteen and forty-five. In the newly-settled states of the West, the proportion of fighting men is greater, with partial exceptions, than in the Atlantic states. During the year 1861, about 277,500 male whites reached and passed the age of eighteen, and 128,600 arrived at and passed the age of forty-five, leaving a difference of 148,900. This latter number, when diminished by the natural deaths (about one per cent.) of the whole military class, and increased by accessions from immigration, would express the annual increase of the military population in a time of peace; but, during a year of war, the further losses by war should be deducted. In accordance with

this statement, 123,400 is an approximation of the military increase, during the year 1861, the total foreign arrivals being 91,919. But from this number the losses by war in 1861, beyond the usual number in a state of peace, should be deducted, to make the estimate complete. The same principles will evidently apply from year to year. In a debate in the United States Senate on the 8th of June, 1864, Senator Wilson said, that since the 17th day of the preceding October, 700,000 men had been raised or re-enlisted, and put into the field. These were in addition, he was understood to say, to those whose term of service had not expired. It must of course be supposed that the losses, in such campaigns as are carried on by our immense armies in the East, the West, and the South, are considerably in excess of the gain of our population at the military ages. It is held by able writers, that, from a population of 23,000,000, not more than 500,000 can be diverted from the pursuits of productive industry to the profession of arms, without a perilous disregard of the laws of nature, and the injunctions of political economy. The overthrow of Napoleon, in the wars he waged against combined Europe, has been attributed to the violation of these laws of nature, which regulate the bounds of prudence, in this, as in all other matters of human conduct. He is said to have absorbed one in forty of the whole population in the profession of arms. It is a dictate of prudence, when the maximum number of men who can be spared from the pursuits of industry has been reached, that military efficiency should be sought in the careful husbanding of resources, in the concentration, rather than in the multiplication of forces, and in wise and valorous leadership.

A new element has been developed by the present census, viz., that of the statistics of negro slavery among the Indian tribes west of the Arkansas. The Choctaws held 2,297. One Choctaw held 227 slaves, and ten of the largest proprietors 638; while the slaves averaged only about six to each owner in that tribe. The Cherokees had 2,504, the largest proprietor owning 57. The Creeks had 1,651. The Chickasaws, 917. In these tribes, there are nearly eight Indians to each negro slave, and the slaves form about 12½ per cent. of the population, omitting the whites and free coloured scattered among them.

With regard to manumissions in the slave states, it appears from the returns, that, during the census year, the cases numbered a little more than 3,000, being more than double the number liberated in 1850, or at the rate of one each to 1,309; whereas, during 1850, the manumissions were as one to every 2,181 slaves. By the present census it appears that manumissions had greatly increased in number in Alabama, Georgia, Louisiana, Maryland, Mississippi, North Carolina, and Tennessee; while they decreased in Delaware and Florida, and varied but little in Kentucky, Missouri, South Carolina, and Virginia.

The number of slaves who escaped from their masters in 1860, was not only much less in proportion than in 1850, but greatly reduced numerically. The greatest increase of escapes appears to have occurred in Mississippi, Missouri, and Virginia, while the decrease is most marked in Delaware, Georgia, Louisiana, Maryland, and Tennessee. The Superintendent remarks, with great point, "That the complaint of insecurity to slave property, by the escape of this class of persons in the free states, and their recovery impeded, whereby its value has been lessened, is the result of misapprehension, is evident, not only from the small number who have been lost to their owners, but from the fact that up to the present time the number of escapes has been gradually diminishing, to such an extent, that the whole annual loss to the southern states from this cause, bears less proportion to the amount of capital involved, than the daily variations, which, in ordinary times, occur in the fluctuations of state or government securities, in the city of New York alone." In 1850, there escaped from their masters 1,011 slaves, or one in each 3,165 held in bondage (being about one-thirtieth of one per cent.); during the census year, ending June 1, 1860, there escaped only 803, being one to about 5,000, or at the rate of one-fiftieth of one per cent. In the border states, not 500 escaped out of more than 1,000,000, in 1860, while near 600 escaped in 1850, out of 910,000; and, at the two periods, near 800 are reported to have escaped from the more southern slaveholding states. From these facts it is evident that the escape of this class of persons occurred independently of proximity to a free population, being in the nature of things incident to the relation of master and slave. The returns from

which these results are derived, were made by the persons most directly interested. But there are other means of proving their correctness, by noting the increase of the free coloured population, which, by the census, is proved to have been less than thirteen per cent. in the last ten years in the free states, whereas, the slaves have increased $23\frac{1}{2}$ per cent., an augmentation conclusive against much loss by escapes; the natural increase, irrespective of immigration, being equal to that of the most favoured people, and greater than that of any country in Europe for the same period, and this, in spite of the 20,000 manumissions which are believed to have occurred in the past ten years. It is evident that the complaints which were made against the free states, as having disregarded the guarantees of the Constitution for the security of slave property, are almost wholly, if not absolutely, without foundation.

We have the further fact that the free coloured population, which, from 1820 to 1830, increased at the rate of $36\frac{1}{2}$ per cent. in 1840 exhibited but $20\frac{4}{7}$ per cent. increase, gradually declining to 1860, when the increase throughout the United States was but little over one per cent. *per annum*. In the ten years, from 1850 to 1860, this class of our population increased from 434,449 to 487,970, or at the rate of $12\frac{1}{3}$ per cent. In the same period, the slave population increased more than $23\frac{1}{2}$ per cent., and the white population nearly 38 per cent., an excess of twofold, and threefold respectively, over that of the free coloured. These comparisons imply an excessive mortality among the free coloured, which is particularly evident in large cities. Thus in Boston, during the five years ending with 1859, the city register observes: "The number of coloured births was one less than the number of marriages, and the deaths exceeded the births in the proportion of nearly two to one." In Providence, where a very correct registry has been in operation under the superintendence of Dr. Snow, the deaths are one in twenty-four of the coloured; and for the last fifteen years, with the exception of a single year, (1862,) the deaths exceeded the births. In Philadelphia, during the last six months of the census year, the new city registration gives 148 births against 306 deaths among the free coloured. Taking town and country together, the results are somewhat more

favourable. In the state registers of Rhode Island and Connecticut, the yearly deaths of the blacks and mulattoes have generally, though not uniformly, exceeded the yearly births. They are victims chiefly of consumption and other diseases of the respiratory organs. This great excess of deaths over births, found to occur in northern cities, may be attributed in part to severity of climate, and a condition of poverty and ignorance. But to these causes must be added an unfavourable moral condition, as indicated by the fact of there being more than half as many mulattoes as blacks. "That corruption of morals progresses with greater admixture of races, and that the product of vice stimulates the propensity to immorality, is as evident to observation as it is natural to circumstances. These developments of the census, to a good degree, explain the slow progress of the free coloured population in the northern states, and indicate, with unerring certainty, the gradual extinction of that people the more rapidly as, whether free or slave, they become diffused among the dominant race." When the slavery question has been solved, the negro question will remain to exercise the highest wisdom and benevolence of Christian philanthropists.

The total return of deaths to the census office of all classes and ages, white and coloured, for 1860, amounts to 394,123. In 1850 the returns gave 323,272, which shows an increase, after ten years, of 70,851. But, from a combination of statistical data, it has been demonstrated that the rate of mortality in the United States, during the last half century, has continued between limits, whereof the higher is represented by the English life-table, and the lower by those of continental Europe. From this proposition the conclusion is derived that the annual deaths in the United States have been one in 45 or 46 of the population. The ratio in England and France is one in 44; in Norway, one in 56; in Prussia, one in 36. According to this determination of one annual death in 45.5, living at the middle of the year, the 323,272 deaths returned in 1850 become 501,000; and the 394,123, enumerated in 1860, should be similarly increased to 680,000. At this rate, nearly six millions of our population have deceased in the past ten years, and their places supplied by the advancing numbers

of a new generation. The number of deaths by *consumption* is the greatest of all; in 1860, 48,971. Next to this is the family of fevers, *scarlatina* alone, 26,393. Pneumonia, 27,076.

The number of the insane, according to the eighth census, was 23,999, of whom 360 were free coloured, and 406 slave. This enumeration cannot be supposed to be complete, but it is a much nearer approximation than has been furnished in any preceding census. Sensitiveness to public exposure is one of the chief obstacles to anything like perfect returns of the insane and idiotic. The Superintendent of the Census has accompanied his report with several profound and philosophical essays on various subjects, which greatly enhance its value, and which deserve to be seriously pondered, both by legislators, and the mass of the people. From the one touching the insane, we enrich our pages with the following passage:

“If we consider the subject of causation, in its broadest relations to the human race, we shall be forced to believe, however unwelcome soever may be the conviction, that civilization as it now exists, is the greatest of all the radical or remote influences productive of mental alienation. Although statistics upon the point are hitherto crude and imperfect, yet it is well known that among the aborigines of America, as well as among other savage races or people, insanity is very rare; that it appears to increase almost *pari passu* with advancing civilization, and, as a general rule, reaches its ultimatum of frequency in those nations where arts and sciences have attained the highest degree of improvement. The brain is the organ of thought, the machinery through which all operations of the mind are evolved. Like all other material things it cannot be used without being impaired, and, like the other organs of purely animal life, it requires rest for the purpose of renovation. If used in perfect obedience to physiological laws, its power is gradually augmented; if abused by their constant infringement, deterioration, debility and disease are the inevitable consequences. And how often, at the present day, is it abused?”

“A thousand years ago, when the hill-tops of England were crowned with the castles of petty but warlike chieftains, and those chieftains as well as the people, their menials, were robust with the active, unintellectual, and mostly out-of-door exercise,

which characterized the habits and customs of the feudal system; when the fine arts were but little cultivated, and the useful arts were still in a state of comparative rudeness; when newspapers were unthought of, and even the art of printing unknown; when steam and electricity still slumbered among the unknown agents which may minister to the wants of man; when enervating luxuries were scarce and dear, and within the reach of but few;—then the muscles and the blood-vessels predominated in the physical development, and consequently disease was generally seated in them. But time, science, art and literature, have wrought a wondrous change. Steam, water-power and machinery, have taken from human muscles a very large proportion of the labour which they once performed. Railroads and telegraphs have imparted to us new ideas of time and space. Life, if measured by its true meter—the sum of action and experience—has been more than doubled, yet its whole extent must be crowded into the same number of years as formerly. Disease, following this change, has left its former stronghold, and now makes the brain and nerves its seat and citadel. What an amount of mental work in the learned professions! What a wear and tear of the brains of editors and others to meet the demands of the people for newspapers and other periodical publications! What a drain upon nervous power in the production of literary and scientific works! Why should we be surprised that insanity is far more frequent than in former ages?"

Mr. Kennedy has just added to his valuable publications his Report on the Agriculture of the United States, in 1860. It appears that there are in the states and territories, of farm lands, improved, 163,110,720 acres; unimproved, 244,101,818 acres; and the estimated cash value of these lands is \$6,645,045,007. The value of the farming implements and machinery in use in the country was more than \$246,000,000. From a table showing the quantity of wheat produced by several states, in 1860, we learn that Illinois yielded more than 23,000,000 bushels, Indiana more than 16,000,000; and the states next in order, in the amount of production, were Wisconsin, Ohio, Virginia, Pennsylvania, and New York. The production of Indian corn in some of the states, in 1860, is

also given, from which it appears that Illinois produced more than 115,000,000 bushels, Missouri more than 72,000,000; and the states next in order, in the production of this cereal, were Ohio, Indiana, Kentucky, Tennessee, and Virginia. The total amount of wool raised in 1860 was over 60,300,000 pounds. New England produced less than in 1850, by 500,000 pounds.

Not the least curious and instructive passages in the Report on Agriculture are the historical sketches of agricultural implements, such as the plough and threshing instruments. We close this article with a brief extract from that which relates to these latter instruments. "Some kind of mechanical means," says Mr. Kennedy, "for separating grain from the ear appears to have been early contrived. A complete history of the successive changes in the means and instruments for effecting this would be a curious and interesting chapter in the record of the world's progress. Such a retrospect, could it be made, would show a remarkable uniformity in the methods adopted throughout the world in ancient and modern times. It would show that, until within a recent period, mankind has been altogether unsuccessful in originating or transmitting any essential improvement upon the most ancient plan of which we have any record.

"The primitive mode of 'treading out the corn' upon a smooth circular 'threshing-floor,' in the open air, beneath the feet of the unmuzzled ox, or other animals, has prevailed among eastern nations from remote antiquity. This tritulating process, however, appears from very early times to have been facilitated by certain instruments. Thus 'threshing instruments of iron' are mentioned by the prophet Amos; and 'a new sharp threshing instrument having teeth,' at a later period, by Isaiah. Smaller grains, having a less adhesive envelope, appear to have been separated by implements analogous to the flail, as elsewhere mentioned by the same prophet: 'For the fitches are not threshed with a threshing instrument, neither is a cart-wheel turned about upon the cummin; but the fitches are beaten with a staff, and the cummin with a rod.' Cummin is threshed by the same mode in Malta at the present day, and in Syria may still be seen, in common use, the representative of the new

sharp threshing instrument with teeth. It is described as a thick plank or sledge drawn by oxen, and having inserted upon its under surface pieces of stone, flint, or iron, projecting from three-quarters to half an inch, by which the ears of corn are torn asunder. Its more ancient form among the Hebrews was frequently that of a square frame with rollers, encircled by three rings or wheels serrated in the manner of a saw. It sometimes resembled in form a cart, by which name it is called in the passage quoted. The threshing-floor of level, hard-rolled earth, was sometimes covered so as to afford shelter to the labourers during harvest; as that of the wealthy Boaz, which has furnished so interesting an illustration of the simplicity of ancient manners and customs. It was usually constructed upon an elevation, exposed to currents of wind, to carry off the chaff; as that of Ornan, the Jebusite, which occupied the rocky eminence of Mount Moriah, and was purchased by David to be for ever honoured as the site of the holy temple. Hesiod, who soon after wedded the muse to agriculture, directs the threshing-floor to be so placed:

‘Smooth be the level floor on gusty ground,
Where winnowing gales may sweep in eddies round.’

“That the threshing instruments employed had great mechanical effect upon the sheaves over which they were drawn may be inferred from their frequent use in the imagery of the prophets, as descriptive of violence and ruin. The *tribula*, as the same implement was called by the Romans, has furnished our language with a synonym for the worst forms of affliction.”

We are not surprised to learn that high authorities in England have made the United States Census of 1860 the subject of hearty praise.