

THE RELATIVE STRENGTH AND WEAKNESS OF NATIONS.

TWO STUDIES IN THE APPLICATION OF STATISTICS TO SOCIAL SCIENCE.

I. STRENGTH.



FROM one of the little-known but very remarkable financial essays of Pelatiah Webster, a patriot merchant of the era of the Revolution, who most urgently resisted the issue of the Continental currency, predicting all the malignant effects which ensued therefrom, we quote these words:

"I conceive very clearly, that the riches of a nation do not consist in the abundance of money, but in number of people, in supplies and resources, in the necessities and conveniences of life, in good laws, good public officers, in virtuous citizens, in strength and concord, in wisdom, in justice, in wise counsels and manly force."

As the century is now just ended since the first steps were taken to frame the Constitution under which we live, it may be fitting to account to ourselves for the work which has been done in the land wherein we dwell during this hundred years.

We may, perhaps, test the wisdom of our laws and the equity of our institutions by measuring the development of our resources, the abundance of our supplies, and the strength of our nation. Our national domain is a trust with which we have been endowed. How have we discharged the trust?

The main source of all material life is land. The sea supplies food in small measure, but upon the land mankind almost wholly depends. May not that system of land-tenure and that form of government, therefore, be

OUR NATIONAL DOMAIN.

WHAT WE HAVE DONE WITH IT, AND WHAT WE MIGHT DO WITH IT.

SECTION 1. ARABLE LAND—1,500,000 SQUARE MILES.					
IN ACTUAL USE.					
Corn and Pork. 1,900,000,000 bushels. 112,500 sq. miles.	Wheat. 500,000,000 bushels. 60,000 sq. miles.	Hay. 40,000,000 tons. 50,000 sq. miles.	Oats. 550,000,000 bushels. 30,000 sq. miles.	Cotton. 20,000 sq. miles.	Miscellaneous. 30,000 sq. miles.
I.	II.	III.	IV.	V.	VI.
302,500 square miles now produce all our grain, hay, cotton, sugar, rice, and garden vegetables.					
SECTION 2. PASTURE-LAND.			SECTION 3. MOUNTAIN AND TIMBER.		
WHAT MIGHT SUFFICE.					
Beef. 60,000 square miles.	Dairy. 60,000 square miles.	Sheep. 60,000 square miles.			
VII.	VIII.	IX.			
(A square mile = 640 acres.)					

Compiled from the records of the Agricultural Department and other sources.

I.

POPULATION OF THE UNITED STATES,

EITHER AS ENUMERATED IN THE CENSUS OR AS COMPUTED BY MR. E. B. ELLIOTT, ACTUARY OF THE TREASURY DEPARTMENT.

June 1.		
1860..31,443,321	_____	Enumerated.
1861..32,060,000	_____	Computed.
1862..32,704,000	_____	"
1863..33,365,000	_____	"
1864..34,046,000	_____	"
1865..34,748,000	_____	"
1866..35,469,000	_____	"
1867..36,211,000	_____	"
1868..36,973,000	_____	"
1869..37,756,000	_____	"
1870..38,558,371	_____	Enumerated.
1871..39,555,000	_____	Computed.
1872..40,596,000	_____	"
1873..41,677,000	_____	"
1874..42,796,000	_____	"
1875..43,951,000	_____	"
1876..45,137,000	_____	"
1877..46,353,000	_____	"
1878..47,598,000	_____	"
1879..48,866,000	_____	"
1880..50,155,783	_____	Enumerated.
1881..51,495,000	_____	Computed.
1882..52,802,000	_____	"
1883..54,165,000	_____	"
1884..55,556,000	_____	"
1885..56,975,000	_____	"
1886..58,420,000	_____	"
1887..59,893,000	_____	"
1888..61,394,000	_____	"
1889..62,921,000	_____	"
1890..64,476,000	_____	"

considered best which has resulted in the largest production and in the most equitable distribution of the products of the soil? May we not claim this position among the nations?

Is not the only equitable distribution of the materials required for food a substantially even one by weight? There may be a great difference in the quality, but the requirement for nutrition is the same among rich and poor alike; each adult person must have substantially the same quantity of the chemical ingredients of food or "nutrients" by the conversion of which the body is sustained, and which are derived from animal and vegetable food.

There can neither be matured strength in the man nor in the nation without an adequate supply of food; on the other hand, the very existence of the almshouse and the pau-

per asylum in civilized countries bears witness to the admitted necessity of a substantially equal distribution of food by quantity or by weight.

Raw land, if such an expression may be used, itself possesses no more value than free air or running water. A price may be paid, or a contest may be waged for a time, in order to secure the opportunity to reap and dispose of the harvests which are due to original fertility; but, with very rare exception, the virgin properties of the soil are soon exhausted, and what is known as "economic rent" almost wholly disappears; then land ceases to be a mine and becomes a laboratory, only yielding product, and therefore only yielding wages and profits, according to the measure of the labor put upon it and of the capital put into it.

At last it may cease to yield either wages or profits in response to labor and capital unless both are combined under the direction of skill and experience.

There is no absolute private ownership of land in this or in any other civilized country, yet limited possession is necessary to its use and to its production. When subject to such limited possession it becomes useful and valuable.

All systems of land-tenure which tend to limit or retard production, so that even a slowly increasing population gains upon the means of subsistence, may be rightly subject to change. Or if, after the product of the land has been made in sufficient measure for the welfare of all who dwell upon it, it is then so wrongly distributed that a considerable part is wasted in the support of standing armies or dynastic privileges, while great numbers of people suffer from absolute want, it will be only a question of time when such forms, systems, or institutions must give place to others, either by peaceful evolution or by violent revolution.

The purpose of these studies is to treat the present relative conditions of the so-called civilized nations of Europe, and to compare them with the conditions of the United States, in respect to the production and distribution of the means of subsistence which are wholly derived from land.

It is proposed to apply the test of such a balancing of accounts as a business man is accustomed to call for when any corporate enterprise is subjected to his scrutiny. The work of States may be considered in the nature of a corporate enterprise subject to the control of the people who are the members of the corporation, as they may choose to direct.

At the same time, all such direction by statutes, and all customs which precede or attain

II.

MILES OF RAILWAY IN OPERATION IN THE UNITED STATES

ON THE FIRST OF JANUARY IN EACH YEAR, BEGINNING 1865. COMPILED FROM POOR'S RAILWAY MANUAL.

1865.. 33,908	The average number of men employed per mile of railway in the census year was a little under five. With the increase of traffic, it is doubtless a little over five now. The executive force of all the railways therefore numbers about 650,000 men.	
1866.. 35,085		
1867.. 36,801		
1868.. 39,250		
1869.. 42,229		
1870.. 46,844		
1871.. 52,914		The construction of railways in 1886 will probably exceed 6000 miles, at about \$25,000 per mile, or at sixty men per mile, earning each an average of a little over \$4.00—therefore representing a construction force of about 350,000.
1872.. 60,293		
1873.. 66,171		
1874.. 70,278		
1875.. 72,383		
1876.. 74,096		
1877.. 76,808		
1878.. 79,089		
1879.. 81,776		
1880.. 86,497	One million men are therefore occupied at this time either in the construction or operation of the railways of the United States.	
1881.. 93,545		
1882.. 103,334		
1883.. 114,025		
1884.. 121,543		
1885.. 125,379		
1886.. 128,967		

Capital stock	\$3,817,697,832
Funded debt	3,795,727,066
Other debt	259,108,281
TOTAL	

Passenger receipts	\$200,883,911
Freight receipts	519,690,992
Total, including miscellaneous	765,310,419

The railway mileage, Jan. 1, 1881, was 93,545. In a treatise upon what would be an adequate service, written in that year, the writer said that 117,500 miles should be added in the next fifteen years; but as we should have at least one commercial crisis and railway panic during that period, it might be safer to assign twenty years to the work. Since Jan. 1, 1881, we have had both the crisis and the panic, but we have added 35,422 miles, leaving only 82,025 for the next eleven to fifteen years.

the force of law, must be brought into harmony with a true science of law if they are to be permanent, else they will only create confusion and become inoperative. It may be said that no true science of law has yet been established among men: then the more reason to test the present condition of nations which claim to be governed by law, in order to determine by a comparison of their conditions which one has attained the best results, so that a basis may be laid for a true inductive science of law governing the social order, fully consistent with the higher law which governs the universe.

As regards land, the continent of Europe and the territory of the United States are about even. The area of Europe, including all of Russia, is 3,761,657 square miles. The area of the United States, including Alaska, is 3,501,404.

If we omit in Europe the uninhabitable portions of Norway, Sweden, and Russia, and if we omit Alaska from the territory of this coun-

III.

CHARGE PER TON PER MILE

FOR MOVING MERCHANDISE OVER THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD, AT THE AVERAGE, IN EACH OF THE SEVERAL YEARS DESIGNATED.

1855.....3.270 gold.	
1865.....3.451 paper.	
1866.....3.092 "	
1867.....2.754 "	
1868.....2.742 "	
1869.....2.387 "	
1870.....1.853 "	
1871.....1.649 "	
1872.....1.592 "	
1873.....1.573 "	
1874.....1.462 "	
1875.....1.275 "	
1876.....1.051 "	
1877.....1.014 "	
1878......930 "	
1879......796 gold.	
1880......879 "	
1881......783 "	
1882......738 "	
1883......910 "	
1884......830 "	
1885......680 "	

The railway service of the United States for the last four years, 1882 to 1885 inclusive, on the authority of Poor's Railway Manual, has consisted in moving 1,597,058,562 tons of food, fibers, fabrics, timber, metal, and fuel an average distance of 111 miles each ton, at a charge of \$2,052,849,085.

The average service for each man, woman, and child of the population has been in moving 7 1/4 tons of food, fuel, and other necessities of life 111 miles, at a charge of \$9.35 to each person per year, or a fraction over 2 1/2 cents a day.

The New York Central and Hudson River Railroad may be taken as a good example of an important line of railway under most efficient management, and as a standard of what all other lines may accomplish when the magnitude of their traffic will permit them to make as great a reduction in rates. The average charge per ton per mile on this line from 1865 to 1868, four years, was 3.0007 cents per ton per mile. From 1882 to 1885, four years, the charge was 0.7895. Difference, 2.2202 cents. If we may assume that the people of the United States have been saved two and one-fifth cents per ton per mile on the whole railway traffic of the last four years, either by the construction of railways where none before existed or by such a reduction in the charge for their service, the amount or money's worth saved in four years has been \$3,898,373,159, which sum would probably equal the cash cost of all the railways built in the United States since 1865, to which sum might probably be added the entire payment upon the national debt since 1865.

try, we reach a substantially even proportion of habitable land, to wit, about 3,000,000 square miles in each country.

The population of Europe approximates 334,000,000.

When this article is published, the population of the United States will be substantially 60,000,000.

If we omit Russia wholly from the computation, the area of the remainder of Europe covers 1,500,000 square miles, of which the population is about 240,000,000.

IV.

GRAIN CROPS OF THE UNITED STATES,

MAIZE OR INDIAN CORN, WHEAT, RYE, BARLEY, OATS, AND BUCKWHEAT, FROM THE REPORTS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE.

1865	1,127,499,187
1866	1,343,027,868
1867	1,329,729,400
1868	1,450,789,000
1869	1,491,412,100
1870	1,629,027,600
1871	1,528,776,100
1872	1,664,331,600
1873	1,538,892,891
1874	1,455,180,200
1875	2,032,235,300
1876	1,962,821,600
1877	2,178,934,646
1878	2,302,254,950
1879	2,434,884,541
1880	2,448,079,181
1881	2,066,029,570
1882	2,699,394,495
1883	2,623,319,089
1884	2,982,246,000
1885	3,014,063,984

The close coincidence between the increase in the miles of railway constructed and the bushels of grain produced will be observed.

It may be held that by the construction of the railways in advance of the population a great rise in the value of fertile land in the East has been retarded and the increased product of the Western farmer has been rendered possible; while under the land-grant system, land which might otherwise have been sold in large parcels has been broken up into small farms by the reservation of alternate sections. Under this influence, a superabundant supply of food has been produced by a less proportion of the population occupied in agriculture in 1885 than in 1865.

The population of the United States is now a fraction under twenty to the square mile; while that of Europe, aside from Russia, is about 160. But there are many portions of the eastern section of the country which are as densely populated as any of the European States, with the single exception of Belgium.

The low cost of the railway service in the United States makes the distance between the farm and the factory of very little consequence so long as there are no artificial obstructions to commerce. The whole country is one great neighborhood in which each man serves the other; and in this is its true strength. The wages for one day's work of an average mechanic in the far East will pay for moving a year's subsistence of bread and meat a thousand miles or more from the distant West.

On the other hand, Europe is filled with obstructions to commerce which are far more difficult to surmount than that of distance.

In other conditions aside from land there is a considerable similarity between this country and Europe. Until a very recent period more than one-half the territory of Europe was still kept back in its progress by the serfdom of the peasantry of Russia; while nearly one-half the territory of the United States which had been occupied before the opening of the

V.

PRODUCT OF GRAIN PER CAPITA,

AND RATIO OF THE INCREASE OF GRAIN TO THE INCREASE OF POPULATION.

Date.	Bushels, per head.	Ratio to Population.
1865	32.50	1.00
1866	37.80	1.16
1867	36.73	1.13
1868	39.30	1.21
1869	39.44	1.21
1870	42.24	1.30
1871	38.64	1.19
1872	41.00	1.26
1873	36.90	1.13
1874	34.00	1.05
1875	46.19	1.42
1876	43.50	1.34
1877	47.00	1.44
1878	48.37	1.49
1879	50.20	1.54
1880	48.80	1.50
1881	40.00	1.23
1882	51.12	1.57
1883	48.40	1.49
1884	53.68	1.65
1885	52.50	1.60

The increase in the per capita product of grain does not show as conspicuously on the chart as the absolute increase, but it gives even greater evidence of progress in common welfare. A less proportion of the population is now occupied in agriculture, and especially in the production of grain, than was required at the beginning of this period, while the substitution of machinery for the arduous hand work of a former day has greatly relieved the severity of the toil, and rendered the harvest much more certain.

civil war was kept back in its material progress by slavery.

Again, there is as great a difference in the relative conditions of soil and climate, and in the physical conformation of the land — as great a difference between the mountains and the plains of the United States, as there is in Europe.

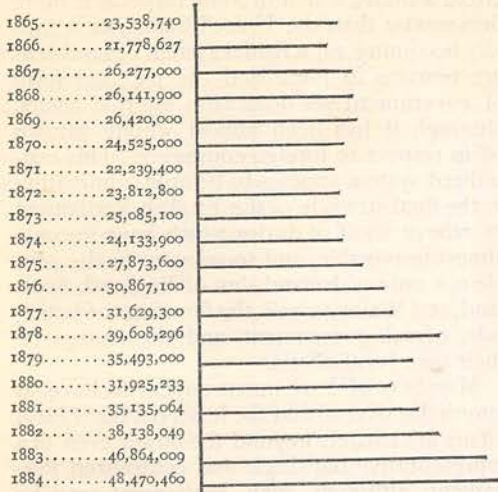
The relative differences in the conditions of the people of the several states of either continent must therefore be sought in some other cause than in the physical geography or the climatology of the two continents.

Reference may perhaps be made to the differences in language and in creed in Europe. But it must be remembered that the settlers who have occupied the United States formerly differed as much as the people of Europe in these matters; yet the common school of this country has proved, or is proving, to be the solvent of race, creed, language, color, and condition, and is rapidly merging the whole population, so far as the conditions of material welfare are concerned, into one single

VI.

HAY CROP OF THE UNITED STATES.

FROM THE STATISTICS OF THE DEPARTMENT OF AGRICULTURE.
Tons.



The hay crop at the farm is worth much more than the cotton crop at the factory.

Food costs the average family three to four times as much as clothing. The combined value of the poultry and eggs only which are annually consumed is computed at \$200,000,000. This is more than the value of the product of pig-iron, silver bullion, and the wool-clip combined.

and substantial body politic, as firmly bound together as if all the people had been strictly homogeneous.

It is not, however, the purpose, nor would it be within the ability of the writer, to attempt any general treatment of the profound differences which have brought the greater part of continental Europe either to actual or prospective national bankruptcy, and in some places to such abject conditions of want as may perhaps account for the conditions of socialism, communism, nihilism, and anarchy. These phases of resistance to social order as now established may perhaps be deemed only the reflex or complement of despotism or of dynastic privileges, and of misapplied and misdirected national greed as yet unenlightened as to what is the true source of the wealth of nations.

The business man who attempts to comprehend the causes and effects of existing conditions may well leave the philosophy of the subject to the student and to the statesman; but perhaps such a one can apply common business methods of account to the conditions of the present, and by sorting assets and liabilities and striking a trial balance of the accounts of the several civilized states of the world, he may perhaps throw a little light upon problems which students and statesmen alike now seem to be incapable of solving.

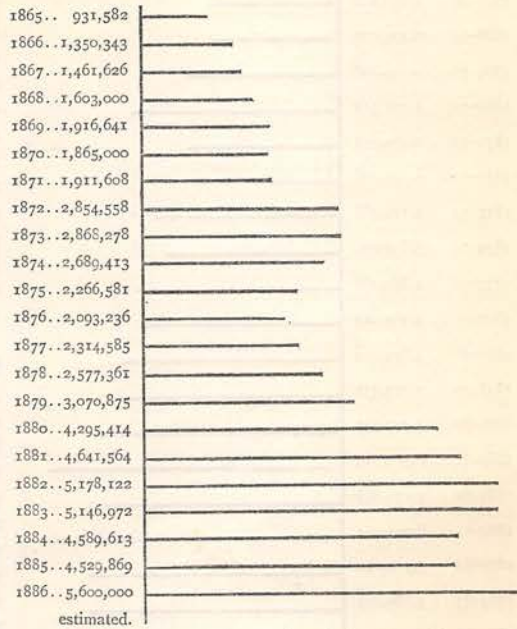
VII.

PRODUCT OF PIG-IRON IN THE UNITED STATES.

COMPILED FROM THE RECORDS OF THE IRON AND STEEL ASSOCIATION.

Estimate of 1886, given by the courtesy of the Secretary, Mr. James M. Swank.

Tons of 2000 lbs.



The production of iron is a necessity. It is a very arduous and somewhat undesirable occupation; but the number of men and boys required to mine the ore and limestone, to mine the coal used in blast-furnaces, and to convert these materials into pig-iron at the present time does not exceed 125,000, on the basis of the total number thus occupied in the census year.

On the other hand, there is no surer indication of prosperity than an abundant supply and use of iron.

The per capita consumption of iron is greater in the United States than in any other country in the world.

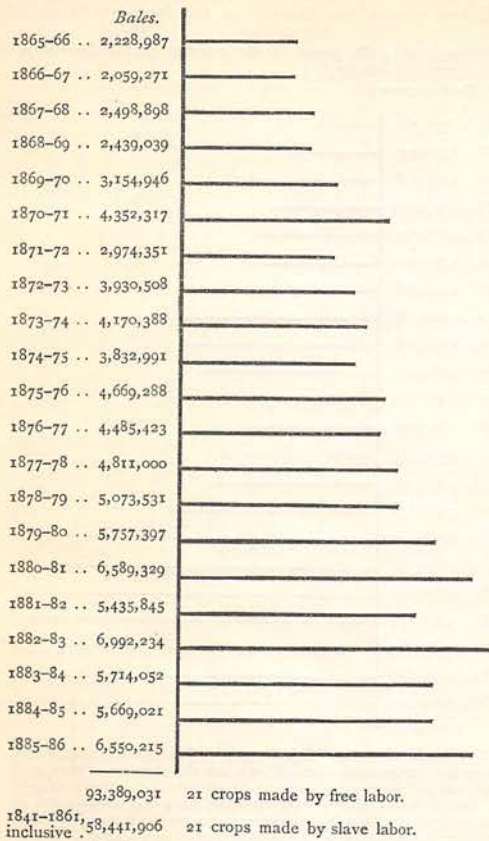
There can be no question that the 3,000,000 square miles of habitable land in Europe, taken as a whole, could sustain in peace and plenty a very much larger population than now exists thereon, if the relations of the people among themselves were the same as the relations of the people of the several States of this Union to each other. The potential of subsistence in Europe has not yet been approached.

Again, if there were no greater obstruction to mutual service between the people of Asia Minor and of North Africa, especially Egypt, than now exists or may soon exist between the United States and the Dominion of Canada, an absolute abundance of food, fibers, fuel, and materials for shelter, upon which material life and welfare depend, would be assured to as large a population in Europe as the absolute but visionary figures of our census bring into prospective view upon this continent a century hence.

If such are the natural conditions, then the social and political differences must be

VIII.

COTTON CROPS OF THE UNITED STATES.



The average weight, per bale, has also steadily increased.

The value of 35,000,000 bales of cotton produced by free labor in excess of the product of slave labor cannot have been less than \$2,000,000,000, or about the full valuation of all the slaves who were made free by the war. This gain is due not only to the freedom given to the blacks, but to the emancipation of the white men of the South from the indignity of enforced idleness.

weighed in the trial balance of nations by their material results. We will set off democracy against dynasties in figures and by the facts of life.

In the attempt to bring into comparison the absolute weakness of the states or nations of Europe whose chief strength is now assumed to be in their armies and navies, I have used tables showing the progress of the industries and arts upon which our own material welfare chiefly rests, dating from 1865 to 1885, inclusive. Several of these tables have been previously used in other publications, but they are now brought down to the latest dates and grouped together in such a way as to show their real significance.

In Europe we find nineteen separate and partly or wholly *independent* nations or states, nearly all governed by dynasties, with the

exception of Switzerland. Even in republican states like France, the dynastic method has not yet been displaced by local self-government in any true sense of that term, while in Great Britain, which in some respects is more democratic than the United States, or is rapidly becoming so, a feudal system of land-tenure remains in force and the paternal form of government yet dominates internal affairs, although it has been almost wholly thrown off in respect to foreign commerce. This centralized system appears to be now culminating in the final struggle of the English Parliament to relieve itself of duties which have become almost impossible, and to relegate to the people not only of Ireland, but of England, Scotland, and Wales as well, the functions of home-rule, of self-government, and the charge of their own local affairs.

Members of Parliament appear to have at length discovered that the lesser details of local affairs are entirely beyond the power even of a representative but single and centralized Parliament, although such Parliament may be nominally supreme. One can more readily comprehend the present condition of Great Britain and Ireland by imagining the deadlock which would arise in this country if it were necessary to apply to Congress for an act to construct water or sewage works for the service of each town or city in Massachusetts or any other State, or to build a railroad in any part of the country.

In the United States, on the other hand, we find thirty-eight *interdependent* States to which others may soon be added, in each of which local self-government in the strictest sense is absolutely assured by the support of the central sustaining power of the nation. We have neither the weakness of the centralized nation nor that of the separate petty states; but under our system we have the united power of a body of English-speaking people outnumbering all the English-speaking people of Great Britain and her colonies combined.

In the town meeting of New England, and of some of the Western States which were settled by her children, and in somewhat less degree in the county divisions of other States, we find an absolute democracy guarding its own local affairs with a jealousy of centralized power which is sometimes even too urgently expressed. Each little community is, perhaps, more self-governing and self-sustaining under the protection, first of the State and next of the nation, than any which ever before existed in any civilized state, or in any period of time since the Norsemen clashed their shields in the meetings of the freemen, from whom so much of our liberty has been derived.

What would have been our condition had

IX.

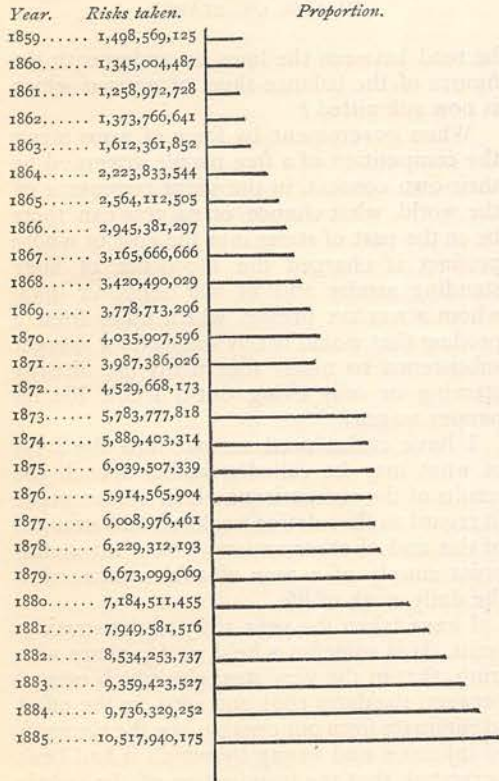
PROGRESS IN WEALTH.

Computations of wealth, such as are given in the census, are not of much value. Progress in wealth can, perhaps, be measured as accurately by the amount of insurance against loss by fire as by any other standard.

The following table, compiled by Mr. C. C. Hine, editor of the *Insurance Monitor*, of New York, gives the amount of risks taken by all the fire insurance companies which are licensed to transact business in the State of New York.

In the judgment of Mr. Hine, about ninety per cent. of all the insurance taken in the United States is covered by the companies which make an annual report of their whole business in the United States to the Insurance Commissioner of this State.

The effect of the war may be traced by the apparent reduction of risks during the period in which business intercourse with the Southern States was interrupted.



and also forming a nucleus around which freemen may gather at a day's warning, to be formed into an army with which it would be useless for any foreign or domestic disturbers of the peace to attempt to cope.

To what do we owe this immunity from force? Is it not mainly because we have almost learned the open secret that in all commerce, whether between states or with other nations, each man serves the other, and that the gain of each is the gain of all?

Was there any more potent influence by which the people were induced to surrender their carefully guarded separate existence under the confederate form of government which preceded the adoption of the Constitution, than the difficulties and dangers to the Union which occurred during the Revolution itself, and also in the short period from 1783 to 1787, growing out of the separate attempts to control not only the trade with foreign countries, but of the several States each with the other, by separate laws and regulations?

Were not the prime causes of the war of the Revolution itself and the separation of the colonies of America from Great Britain strictly commercial in their character? The resistance to the stamp tax was but the final pretext. The real grievances had existed for a long period, and they consisted in the attempt of England to prevent the manufacture of iron and steel in the colonies, and to repress textile manufactures, which were rapidly becoming established. To this end repressive laws were passed, commerce between the several colonies was restricted or forbidden, and the navigation acts, passed at the instance of Cromwell in a vain attempt to destroy the free commerce of the Dutch, were revived in an equally futile attempt to restrict the growing commerce of the colonies, especially with the West Indies and the Spanish Main. John Hancock had himself been one of the great smugglers of his day. It remained for the Congress of the United States to do what Great Britain failed to accomplish. By means of the same navigation acts, modeled on those of Cromwell (known as the 12th of Charles II.), applied to our own people, we have substantially succeeded in driving our own flag from the ocean.

Whatever may now be the difference of opinion among men of affairs in this country in regard to the conditions by which foreign commerce shall be conducted, there is but one common judgment as to the vastly greater commerce which exists among ourselves. No one now questions that the stability of this nation and its exemption from the necessity of a large permanent armament have been more fully assured by the single provision of

the Potomac become the Rhine, dividing two nominally independent states or communities, or had the country beyond the Mississippi remained under the dominion of a foreign nation?

We may answer this question by referring to the facts. The nineteen *independent* states of Europe, whether empires, kingdoms, dukedoms, or republics, require a standing army of over four million men in the aggregate, to guard the frontiers and to maintain the so-called balance of power. About ten million more men are held in reserve who have already wasted the best and most productive part of their lives in preparing for, or in active war.

The thirty-eight *interdependent* States of this country require a standing army of only 25,000 men, serving mostly as a border police,

X.

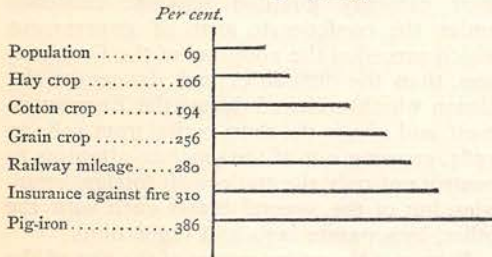
RECAPITULATION.

The percentages of gain represented by the preceding tables are given below. While all estimates of gain in wealth measured in terms of money are in some respects fallacious, yet perhaps the amount of insurance against loss by fire may serve as an approximate standard. It is computed by Mr. C. C. Hine, of the *Insurance Monitor*, that about ninety per cent. of all the fire insurance companies transacting business in the United States make returns to the Insurance Commissioner of the State of New York. From these returns he has compiled a table, from which the following figures are taken:

AMOUNT OF INSURANCE AGAINST LOSS BY FIRE.

1859.....	\$1,498,569,125
1865.....	2,564,112,505
1885.....	10,517,940,175

RELATIVE GAINS, 1865-1885.



The excess of grain, cotton, etc. which we cannot consume is exchanged for foreign imports, of which seventy-five to eighty per cent. consists of articles of food, or of crude or partly manufactured materials which are necessary in the processes of domestic industry.

our organic law which forbids any interference with commerce between the several States, than by any other law or custom which exists among us. Had it not been for this absolute freedom of domestic trade, we might have repeated the blunders of European states, and we might now be in almost as desperate a condition as many of them are in.

It will be in no boastful spirit that some of the material results of a century of the constitutional history of this country will now be given and the balance struck with other states or nations. It is only since the passive war of slavery culminated in the active war by which it destroyed itself, that a citizen of the United States could face the English-speaking people of other lands without a blush of shame. It is only in the last twenty-one years, or since slavery finally surrendered at Richmond, that local self-government has had any existence over the southern half of our country. *The Southern States have gained in their defeat the very end for which they rebelled; and they have now discovered for themselves that local self-government can only exist in any true sense where the equal rights of all men are respected, and when sustained by the power of a great nation.*

There has been not only such a revolution of institutions, but of ideas in the Southern States, that it would take a larger Northern army to re-impose the burden of slavery upon them than it did to remove it. The growing prosperity born of liberty is now so fully

assured that the very "rebel brigadiers" have become most loyal citizens and safe legislators; yet less than a generation has passed since all this was accomplished. All that we can therefore claim is that we have just begun to comprehend the problem of common welfare, while we admit that we have yet much to learn.

Short as has been the period since we first began to reap the harvest of true liberty, yet cannot the words

DISARM OR STARVE

be read between the lines or underneath the figures of the balance-sheet of nations which is now submitted?

When government by force of arms meets the competition of a free people governed by their own consent, in the great commerce of the world, what chance of success can there be on the part of states into the cost of whose product is charged the blood-tax of huge standing armies and of war-debts, or upon whom a war-tax presses which takes from a product that would barely suffice for a meager subsistence so much that many are already starving or only eking out a feeble life on pauper wages?

I have endeavored to put into the form of what may be called a visible speech the results of the comparisons which I have made in regard to the relative weakness and strength of this and of other nations,* from the standpoint simply of a man of affairs engaged in the daily work of life.

I have taken the year 1865 as the starting-point. It is sometimes held, and perhaps with truth, that in the very struggles which ensued between the dates 1861 and 1865, in the effort to eliminate from our organic law the elements of injustice and wrong by which it had been perverted, that the imagination of the people of both sections was first aroused and their knowledge of each other was greatly extended. A knowledge of the vast extent of the land and its resources also became common to all. Thus great enterprises became possible which might otherwise have been deferred for half a century or more. The great railroad constructor, the manufacturer, and the merchant of to-day engage in affairs as an ordinary matter of business, which to their predecessors, or even to themselves in their early manhood, would have been deemed impossible of accomplishment in a whole lifetime. Before the war, one line of railway to the Pacific was the

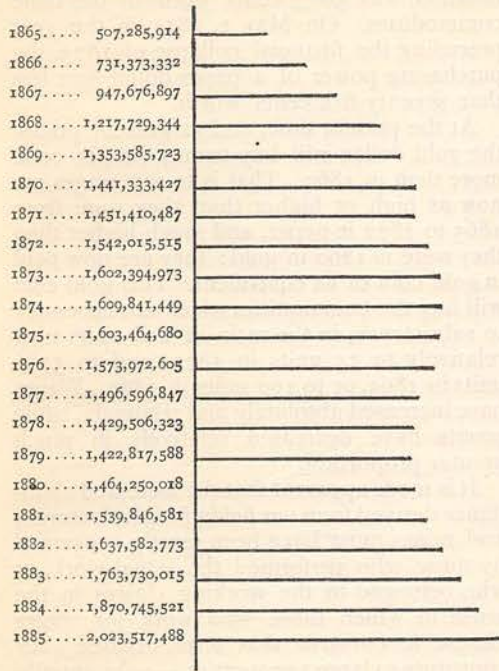
* The substance of this article was first submitted in the form of an address to the American Association for the Advancement of Science, at the meeting of 1886, held in Buffalo in August last.

XI.

LIFE INSURANCE.

COMPILED BY MR. C. C. HINE, EDITOR OF THE "INSURANCE MONITOR," OF NEW YORK.

There are now twenty-nine solvent and prosperous life insurance companies in the United States, of which nineteen were in existence in 1865. Between these two dates others have become insolvent. The data below show the progress of the existing companies by a comparison of their risks in force in each year.



vision of a half-cracked enthusiast; to-day the opening of a fifth or sixth line would call only for a descriptive paragraph in a newspaper.

In the table on page 423 the proportions of arable, pasture, and mountain or timber land of the United States is repeated from the last CENTURY as the preface to the subsequent tables. Much of the pasture land may yet be converted into most productive arable land by irrigation; while the mountain and timber land is permeated by a great number of fertile valleys.

Subsections I. to VI., inclusive, show the absolute use of land for our present grain, vegetable, and cotton crops, upon which we now produce grain enough for 80,000,000, and cotton enough for 250,000,000 people or more.

Subsections VII., VIII., and IX., if they were cultivated by well-known methods of intensive farming, would suffice for a larger product of beef, wool, and mutton, and of milk, butter, and cheese, than is now enjoyed by the present population, even at a more wasteful and lavish mode of subsistence than is now practiced.

In tables subsequent to the first I have

given the statistics of the increase of cotton, of the railway mileage, and of the products which lie at the foundation of all material welfare.

The tables printed in connection with this article give conclusive testimony to the enormous growth in wealth of the United States since the end or even during the civil war. It is admitted, however, that growth in wealth may not be synonymous with growth in general welfare. Absolute proof of the latter, statistical especially, is a matter of great difficulty to the economist and the statistician. For the present I can only refer to the following table No. XIII, in which the increase of deposits in the savings banks of Massachusetts is given, and also the increase in the purchasing power of a dollar, as shown in table XII. This subject will be treated more at length in a future article.

In the judgment of the Commissioner of Savings Banks, and of many others who are competent to form an opinion, at least three-fourths of the present deposits in these banks belong to those who are strictly of the working classes, in the limited sense in which those whose daily work is necessary to their daily bread make use of that term. This system of savings banks, managed by unpaid trustees without expectation of personal profit to any stockholder or individual, or to any one except the depositors and the relatively small executive force required, is practically limited to New England and the Middle States. The total sum on deposit in all those States is now computed at \$1,100,000,000, at an average of \$356 to each depositor.

If the system were extended throughout the country, and the deposit per capita of the people of the United States were equal to that of Massachusetts, the total sum would amount to somewhat over \$8,400,000,000.

Another fact may be cited which fairly sustains the general statement that those who do the actual work of production are now securing to their own use a larger share than ever before of the joint product of labor and capital.

The earning power of \$100 in gold coin invested in United States bonds of the best class was, at the highest point of paper-money inflation in 1864, $16\frac{6}{100}$ per cent. per year. At the present time the earning power of \$100 in gold coin invested in $4\frac{1}{2}$ per cent. United States bonds is only $2\frac{2}{100}$ per cent. per year.

While the power of capital to secure income merely as capital has thus been diminished, the wages of by far the larger part of all the mechanics, operatives, domestic servants, and the like, are now as high or higher in gold coin

XII.

WAGES, PER DAY, OF CARPENTERS, PAINTERS, MACHINISTS, BLACKSMITHS, CABINET-MAKERS, AND OTHERS IN SIMILAR OCCUPATIONS.

Comparisons of wages at different dates and in different places are apt to be fallacious, because of the difference in conditions; therefore, certain specific leading establishments have been taken as a standard, where the work has been continuous. The statistics were obtained by the Massachusetts Bureau of Labor Statistics, in part from the books of the employers and in part from the accounts of workmen.

Table I.—Workmen of average capacity, per day.

1860.....	Gold	\$1.68
1865.....	Paper	2.285
1870.....	"	1.824
1872.....	"	1.375
1878.....	"	1.714
1881.....	Gold	2.18
1885.....	"	2.04

Table II.—Workmen of superior skill, per day.

1860.....	Gold	\$2.37
1865.....	Paper.....	2.75
1870.....	"	2.25
1872.....	"	1.87
1878.....	"	2.12
1881.....	Gold.....	3.00
1885.....	"	3.00

RELATIVE PURCHASING POWER OF ONE DOLLAR OF LAWFUL MONEY AT DIFFERENT DATES, AS COMPILED BY MR. WM. M. GROSVENOR BY THE TABULATION OF THE PRICES OF TWO HUNDRED ARTICLES, COMPRISING NEARLY EVERY COMMODITY IN COMMON USE, ONE DOLLAR OF GOLD BEING TAKEN AS A STANDARD IN 1860, REPRESENTED BY A PURCHASING POWER OF 100.

One dollar, lawful money,		100
1860.....		
May 1, 1865.....		56.84
" 1870.....		75.47
" 1872.....		74.45
" 1878.....		118.76
" 1881.....		102.97
" 1885.....		123.63
Average, year 1885.....		126.44

Wages of mechanics in Massachusetts having been twenty-five per cent. more in 1885 than in 1860, while the purchasing power of money was twenty-six per cent. greater, the workman could either raise his standard of living, or on the same standard could save one-third of his wages.

than they were in paper money at the highest point which wages or earnings reached in the paper-money inflation period of 1864 to 1867. See table XII.

By the use of this extremely valuable table of the prices of 200 commodities, constituting almost everything necessary to subsist-

ence, compiled by Mr. Wm. M. Grosvenor, of New York, it appears that if the purchasing power of one dollar in gold coin, on May 1, 1860, be taken as the standard, or one hundred cents' worth, the corresponding purchasing power of one dollar of lawful money on May 1, 1865, at a period of great paper inflation, was 56 ⁸⁴/₁₀₀ cents' worth of the same commodities. On May 1, 1872, in the year preceding the financial collapse of 1873, the purchasing power of a paper dollar was less than seventy-five cents' worth.

At the present time, and at present prices, the gold dollar will buy twenty-six per cent. more than in 1860. That is to say, wages are now as high or higher than they were from 1865 to 1872 in paper, and much higher than they were in 1860 in gold: they are now paid in gold coin or its equivalent. This gold coin will buy the commodities which are necessary to subsistence, in the ratio of 126 units now relatively to 75 units in 1872, and to 57 ¹/₂ units in 1865, or to 100 units in 1860. Wages have increased absolutely and relatively, while profits have decreased relatively in much greater proportion.

It is made apparent that the increased abundance derived from our fields, forests, factories, and mines must have been mostly consumed by those who performed the actual work, or who belonged to the working classes in the sense in which those who work for wages choose to construe that term, because they constitute so large a proportion—substantially about ninety per cent.—of the whole number of persons by whom such products are consumed.

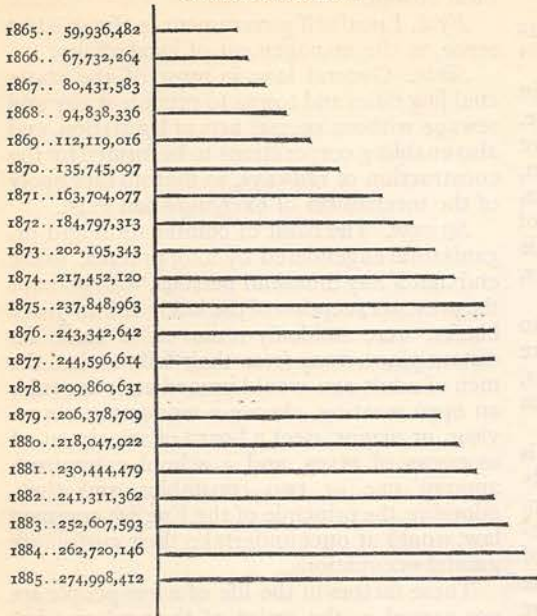
The greatest increased production has been in substances which are mainly used by the masses of the people. Articles of food necessary to life have increased more than the luxuries consumed by the rich. Hence no other evidence is needed to prove that the working men and women, in the strictest meaning of those words, are, decade by decade, securing to their own use and enjoyment an increasing share of a steadily increasing product.

The labor question, as it is called, therefore consists in determining the conditions of the distribution of that greater proportion which is consumed by those who do the physical work of production. Invention creates opportunity for skill, and hence skilled workmen who do not bind themselves to work at the same rates of wages as those who are less skillful or less industrious, are steadily rising, so that there may now be greater disparity between the conditions of skilled and common laborers than ever before.

While the great products of the United States

XIII.

DEPOSITS IN THE SAVINGS BANKS OF MASSACHUSETTS.



Population, 1865	1,267,329
Number of deposit accounts	291,488
Average deposit each account	\$205.62
Average deposit per head of population	\$47.29
Population, 1885	1,941,465
Number of deposit accounts	848,787
Average deposit each account	\$323.99
Average deposit per head of population	\$141.64

If the savings bank deposit of the whole population of the United States were now equal per capita to that of Massachusetts, the sum of such deposits would be over \$8,400,000,000.

have thus increased, in the same period the burden of the public debt of the nation has been steadily reduced. The books of the Treasury never showed the maximum debt; but in his last report as Secretary of the Treasury, the Honorable Hugh McCulloch added the debt which was due August 1st, 1865, but which had not been audited and entered, to the debt then recorded, showing that the maximum debt was but a fraction under \$3,000,000,000.

Our ability to reestablish the specie standard of value has rested mainly upon our power to produce a great excess of food, cotton, oil, and other commodities, which we have been able to export in exchange for our foreign purchases, while retaining our production of gold and adding thereto in the full measure necessary for our purpose.

A review of the traffic of the last five years will show the relative importance of our foreign commerce.

In the five fiscal years ending June 30, 1881 to 1885, inclusive, the exports of domestic products, consisting in much the greater pro-

portion of the products of agriculture, have been valued at the port of export at \$3,873,057,515, an average of \$774,611,503 each year.

At the average of \$200 worth of product per capita of the population, or at \$600 worth of product to each person occupied in gainful work, mental, mechanical, manufacturing, or distributive, this export represents the result of the work of 1,291,019 farmers, mechanics, factory operatives, railway employees, merchants, and others, in each year. So large a part of these exports, however, consisted of cotton and other farm products, that the average of \$600 product per man is too high; \$500 per hand would be a large estimate, at which rate our average export for five years would represent the product of 1,549,223 persons, and even that estimate is probably too small. Except for this foreign demand for the excess of our food, of our cotton, of our oil, of our dairy products, and the like, they might have rotted upon the field or remained unused because they were the excess over our own lavish and wasteful consumption.

In exchange for these products of our own fields, mines, and factories, we have imported \$3,314,818,061 worth of the necessaries, comforts, and luxuries of life; the balance of the traffic, including the profits of our export trade, having come back to us almost wholly in gold coin or bullion.

Possessing as we do an almost paramount control of the most available supply of food and cotton which Europe must have or starve, we hold a demand check upon every bank in Europe for the coin or bullion on which we maintain the specie standard of value, which is so essential to prosperity.

The commodities imported in the five fiscal years ending June 30, 1881 to 1885, inclusive, have been classified in the National Bureau of Statistics as follows:

A. Articles of food and live animals	\$1,079,869,829.00
B. Articles in a crude condition which enter into the processes of domestic industry	720,826,681.00
C. Articles wholly or partially manufactured, for use as materials in manufacturing and mechanic arts	390,102,678.00
	<hr/>
	2,190,799,188.00
D. Articles manufactured, ready for consumption	718,300,081.00
E. Articles of voluntary use, luxuries, etc.	405,718,792.00
	<hr/>
	1,124,018,873.00
	<hr/>
Total	\$3,314,818,061.00

Free of duty	\$1,024,385,175.00
Subject to duty	2,290,432,886.00
Duties paid thereon	986,002,925.00

Export per capita	\$17.52
Imports " "	15.04

Except for this export our excess of grain and cotton could have little or no present use, and therefore no value; what we import we could not pay for except with grain, cotton, oil, etc. The whole value of our imports, therefore, becomes the secondary product of our own labor, and the sum of such imports is so much added to the fund from which wages, profits, and taxes are alike derived.

In the use of the imports which enter into the processes of our domestic industry and are thereby converted into domestic manufactures, another great body of industrious working men and women have been occupied.

Although the domestic commerce of this and of every other civilized nation is vastly greater in volume and value than its foreign commerce, yet the latter serves as a balance-wheel to the whole. The interdependence of nations thus asserts itself; the wider the commerce or mutual service, the greater the result of the labor applied, the lower the proportionate cost, and the higher the rates both of profits and wages, which are alike derived from the final sale of all products, whether the money distributed comes from the sale of the primary products of strictly domestic industry or from the secondary products imported in exchange for the excess of the first.

Thus far it has been easy to prove the enormous growth of the productive power and of wealth in this country. We have gained in "number of people, in supplies and resources, in the necessaries and conveniences of life"; have we made equal progress "in good laws, good public officers, in virtuous citizens, in strength and concord, in wisdom, in justice, in wise counsels, and manly force"? If we have not, then

"Of what avail the plough and sail,
Or land or life, if freedom fail?"

May not this vast gain in the conditions of material welfare in the United States be mainly attributed to the following elements in our national life?

First. The free purchase and sale of land, and the stability which ensues from the fact that so large and constantly increasing proportion of the people actually possess land.

Second. Absolute freedom of exchange among the several States.

Third. The system of common schools which is now extending throughout the land.

Fourth. The protection which the possession of the right to vote gives to the humblest citizen.

Fifth. Local self-government in the strictest sense, in the management of local affairs.

Sixth. General laws in most of the States enabling cities and towns to provide water and sewage without special acts of legislation, and also enabling corporations to be formed for the construction of railways, so that no monopoly of the mechanism of exchange can exist.

Seventh. The habit of combination and organization engendered by long practice, to the end that if any thousand persons, with perhaps the present exception of the lately enfranchised blacks, were suddenly removed to some far distant place, away from their fellow-men; the men of adult age would immediately organize an open meeting, choose a moderator, supervisor, or mayor, elect a board of selectmen, of assessors of taxes, and a school committee, appoint one or two constables, and then, adopting the principle of the English common law, would at once undertake their customary gainful occupations.

These factors in the life of a free people are not named in the order of their relative importance, but are given in a list, each relative to the other, and, as a whole, composing the main elements of our social organism.

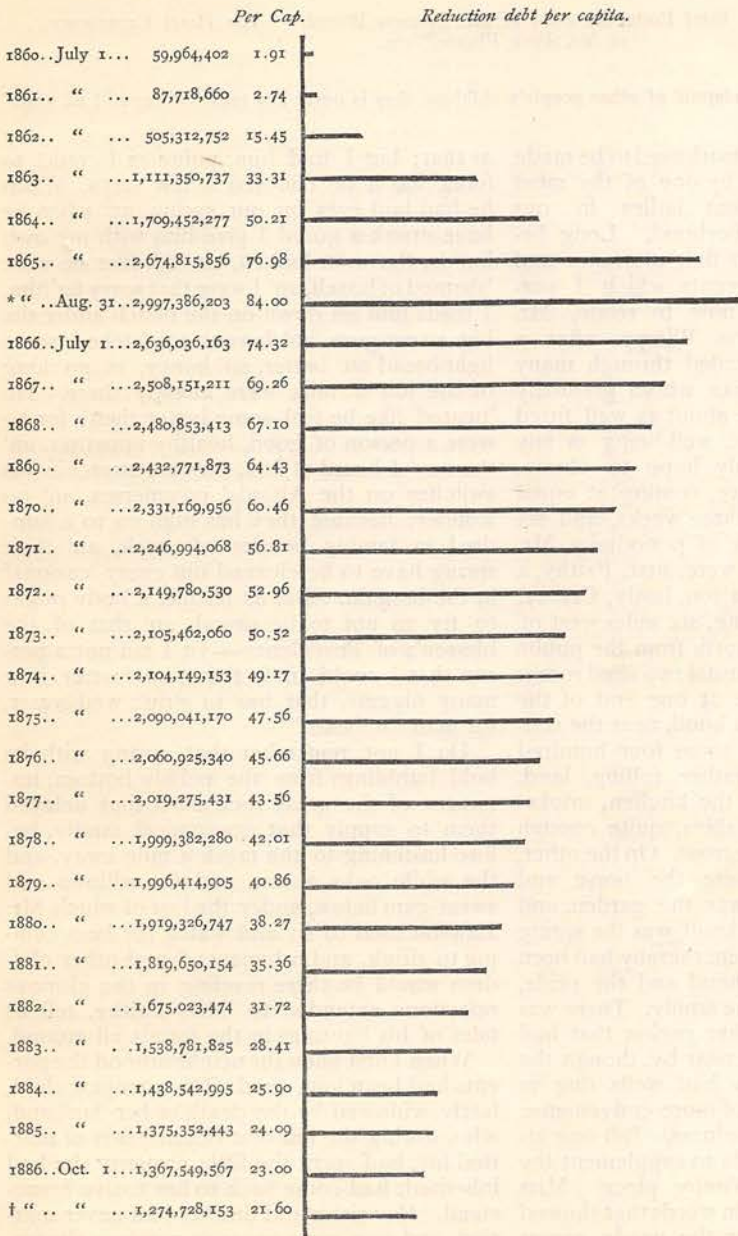
There may be a fallacy in the old democratic dogma that "the government is best which governs least," but there is no fallacy when it is put in another form: That country will prosper most which requires least from its government, and in which the people, after having chosen their officers, straightway proceed to govern themselves according to their common habit.

In the conclusion of this branch of the study of the facts and figures of this country, may it not be held that the alternate periods of activity and depression which have affected the industries of this country since the end of the civil war, have been mere fluctuations or ebbs and flows in the great rising tide of progress, ending in an adjustment to ever new and better material conditions of life? Is it not true that while the rich may have become relatively no poorer, the poor have been steadily growing richer, not so much in the accumulation of personal wealth as in the power of commanding the service of capital in ever-increasing measure at a less proportionate charge? Can it be denied that labor as distinguished from capital has been and is securing to its own use an increasing share of an increasing product, or its equivalent in money?

Edward Atkinson.

THE PRICE OF LIBERTY.

THE PUBLIC DEBT OF THE UNITED STATES.



The cost, measured in money, of removing the compromise with slavery from the Constitution of the United States, was as follows:

The national revenue collected from April 1, 1861, to June 30, 1868—four years of war and three of reconstruction under military rule—was:

From taxation and miscellaneous receipts	\$2,213,349,486
From loans which had not been paid June 30, 1868.....	2,485,000,000
Total	\$4,698,349,486

The peace expenditure would not have been over... 698,349,486

Cost of the war... \$4,000,000,000
To the computed cost of the war—\$4,000,000,000—must be added by estimate the war expenditures of the Northern States and the value of the time, materials, and destruction of property in the Southern States, together probably amounting to a sum equal to that spent by the National Government.

The price of Liberty in money has therefore been \$8,000,000,000.

This comes to \$1,135,000,000 per year for a little over seven years. The productive capacity of an average man is now about \$600 worth per year. If it was then \$500 worth, this sum represents the work of 2,270,000 men for seven years; at \$400 each, 2,837,500 men.

The average population during this period was 35,000,000. If we assume one in five an adult man capable of bearing arms, there were 7,000,000, of whom one-third paid the price of liberty in work for seven years, or in life.

In an address given in Georgia a few years since, the writer ventured to predict that a time would come when the children of Confederate soldiers would erect a monument to John Brown in commemoration of the liberty which he brought to the white men as well as to the black men of the South. Has it not come?

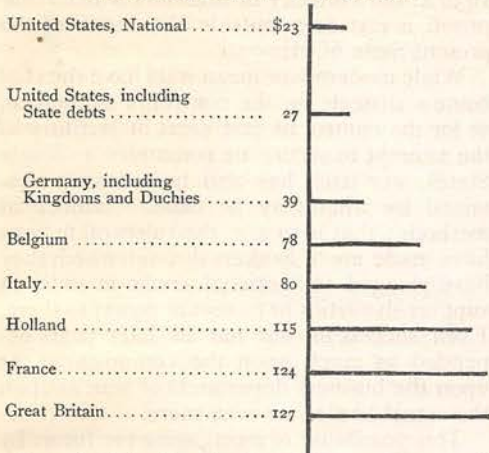
* Debt audited and entered on the 31st of August, 1865, being the highest record. \$2,756,431,571
Added for debt due but not then audited. 240,954,632
Total

† According to the old form, corresponding to the form in use 1865-85 inclusive, which does not include the bonds advanced to the Pacific Railroad Company to be paid by them. The first statement for October 1st, 1886, includes these bonds and excludes the value of subsidiary silver coin from assets.

THE RELATIVE STRENGTH AND WEAKNESS OF NATIONS.*

TWO STUDIES IN THE APPLICATION OF STATISTICS TO SOCIAL SCIENCE.

NATIONAL DEBTS—PER CAPITA.



It may be claimed that the debts of the several States constituting the United States should be added to the national debt.

In 1880 the total amount of such debts was \$226,597,594, since which date they have been diminished by large payments in many States. The present debt of all the States is not in excess of \$4.00 per capita of the whole population.

The data for computing department, county, city, town, and communal debts are not within the reach of the writer; but as these debts have been mostly incurred for public improvements, both in Europe and in this country, they do not come into the same category with the war debts of nations.

II.

WEAKNESS.

HAVING analyzed the strength of Democracy in America, we may now turn our attention to the other side, and consider the sources of the weakness of nations which are governed by dynasties.

In Professor J. R. Seeley's recent book upon the expansion of England, he has traced nearly all the European wars of recent times to the struggle of nations for dominion over other continents or parts of continents, in order to establish colonies and to control commerce therewith; commerce itself having been regarded by almost all nations, and being now regarded by the greater number, as a *quasi* war in which what one nation gains another must lose.

This fallacy has led to very many of the

† It should be stated that a considerable part of the debt of Germany and Belgium, and a small part of that of France, was incurred in the construction of railroads, but most of these railroads have been constructed for military purposes. A large part of the debt of Canada has also been incurred for the construction of railroads which are at present very unprofitable.

great actual wars of the last century and a half, and the vast national debts of Europe have been incurred in this futile and foolish attempt to set up as a rule among nations:

“ Let him take who has the power,
And let him keep who can.”

The business man who fully comprehends the function of the merchant and of the manufacturer, and the place which commerce holds in the beneficent progress of the world, may well covet the genius of Southey in order that he might add new verses to the “ Devil's Walk ” as he passes in review the great wars which have been fought to gain the control of commerce which could have been had for the asking, and which would then have yielded a vastly greater benefit to both parties than either could gain by attempting to get an advantage over the other.

What more fruitful subject for the satirist than the bluster of the party politician at the present time, whose zeal is apparently in inverse proportion to his sincerity, in regard to the respective claims of this country and of Canada over the right to fish within a certain distance from the coast, when it would benefit both countries to put the regulation of all the fisheries under a joint control, so that both might be far better served with fish than either can now be ?

What greater economic blunder has ever been committed than the support of slavery in this country for nearly a century of its history ? It was the most costly and least productive system of labor, brutalizing to the black man and debasing to the white man, yet it was justified by men of such intelligence and force that had it not been for the narrowing influence and the bitter apparent necessity imposed upon them to sustain a crime against humanity, they might have left a reputation as statesmen.

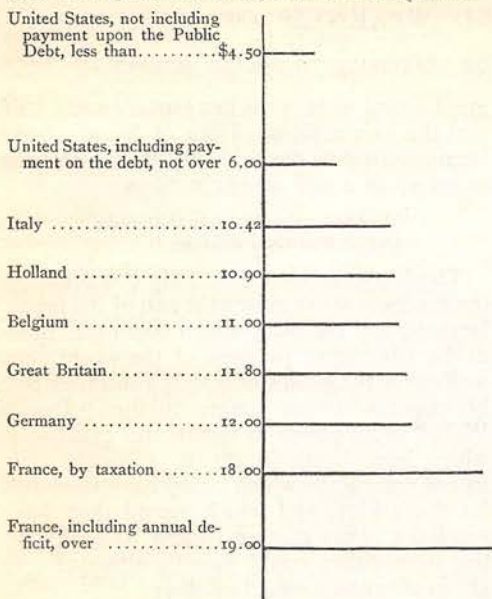
What more ludicrous commentary upon the intellectual mediocrity of legislators than the demand lately presented in Congress by the representatives of one of the New England States for a heavier duty upon sugar when imported in bags rather than in boxes, in order that the Cuban planters might be compelled to buy the decreasing timber supply of the forests of Maine in the form of sugar-boxes and charge it back to all consumers of sugar in this country ?

Could there be a more complete *reductio ad*

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RELATIVE BURDEN OF NATIONAL TAXATION

Per capita of the principal commercial or manufacturing states of Europe which are solvent, and of the United States (omitting local taxation for departments, counties, cities, or for town purposes)



The true burden of taxation may not be measured even by the proportion which the taxes of one country bear to another. The measure of importance is what ratio do they bear to the productive capacity of each nation or state, and for what are they expended. These matters are treated in a subsequent table.

absurdum than the conclusion to which the late Henry C. Carey was led by his lack of insight in respect to the functions of commerce; namely, "that the material prosperity of this country would be more fully promoted by a ten-years' war with Great Britain than it could be in any other way"?

(I quote this from memory; the statement was made in a conversation to which I listened.)

Yet out of this very jealousy of nations we gained almost without cost one of our most important possessions.

One of the most singular of the incidents of one of these great European contests was the sale of the Louisiana territory to this country by the First Napoleon, who, being unable to keep it, chose that England should not possess it. In a few short weeks this territory might have come under the dominion of England. One's imagination can hardly grasp the changed conditions of the world as they would have been had Great Britain succeeded in getting and keeping the control of all that vast territory west of the Mississippi River which was comprised in this purchase, thus confining the United States substantially to what lies east of this mighty river.

It is a singular fact that there appears to be no historical school atlas in use in this

country in which the several additions to the territory of the United States are pictured and described; hence very few persons realize the vast importance and extent of the Louisiana purchase, or know the true conditions of the great contest with the slave power over the extension of slavery into what was known in 1830 as the Territory of Missouri, which comprised a vast area outside the limits of the present State of Missouri.

While modern European wars have thus become a struggle for the control of commerce, or for the control of vast areas of territory in the attempt to secure its commerce to single States, war itself has also been mainly sustained by what may be called commercial methods; that is to say, the rulers of nations have made use of bankers through whom they have pledged the national credit in order to support dynasties or to secure power to them. Even success in war has in later years depended as much upon the commissariat, or upon the business department of war, as upon the actual battles, or even more.

This possibility of mortgaging the future by incurring a national debt has finally become the chief cause of the weakness of nations. The same century that has witnessed the increase of European national debts from a little over \$2,600,000,000 to more than \$22,000,000,000 has also seen Spain, Portugal, Austria, and Greece become bankrupt, while Russia is without credit. The attempt to enforce the payment of the bonded debt of Egypt by the force of armies at the instance of foreign creditors may be held to be a disgrace to the nations that have engaged in the undertaking. The debt was incurred without the consent of the people, and even the interest cannot now be met without taking so large a share of the meager product of the fellaheen as almost to reduce them to starvation.

Before the century ends we may even witness a general repudiation of these national mortgages which the dynasties of the past have imposed upon the people of the present without their consent, and in almost all cases to their injury rather than to their benefit.

In order that the relative weakness of Europe caused by the burden of debts and of standing armies may be fully comprehended, the following statements are submitted:

The debt of the United States at its highest point, in 1865, was eighty-four dollars per head, which is now the average debt of the commercial and manufacturing states of Europe specifically named in the ensuing statement. The debt of the United States is now less than twenty-three dollars per head (or including all State debts, less than twenty-seven dollars). The national debt — now twenty-three dol-

ACRES PER HEAD OF POPULATION, AND DEBT PER ACRE.

United States (omitting Alaska), acres	32.7
Great Britain, Germany, France, Italy, Holland, and Belgium, acres	2.8
National Debt of the United States (omitting Alaska), per acre	\$300.73
National Debt of Great Britain, France, Germany, Italy, Holland, and Belgium, per acre	\$30.06

Population at last census	157,549,817
Debt of the United States at its maximum, August 1, 1865, liquidated and unliquidated, as computed by Hon. Hugh McCulloch, Secretary of Treasury	\$2,997,386,203
Population	34,748,000
Debt of the United States, August 1, 1886	\$1,380,087,279
Population as computed by E. B. Elliott, Actuary of the Treasury, August 1, 1886	58,670,000

These figures of almost inconceivable millions convey but little idea to any one who is not accustomed to such comparisons; it is only by considering them in relation to each person of the population, that the true measure begins to be defined.

In the accompanying tables will be found statements of the debt per capita, the annual taxation per capita, the debt per acre, and also the proportion which the present standing armies bear to the population and to the men of arms-bearing age.

Thus far all the facts which have been given have been taken from the "Financial Reform Almanac" of 1886, from "Martin's Year Book" of 1886, and from the official documents of the United States.

I may now enter upon that part of my treatise which rests upon estimates only. These estimates must be accepted for what they are worth. It is admitted that they are somewhat hypothetical. Are they sustained by facts?

The true income of a nation is not the money by which it is measured; it is, in fact, the product of its labor and capital, consisting of the materials for food, for clothing, for shelter, fuel, metals, and the like, converted and reconverted until ready for consumption. These products are measured in money's worth in the process of exchange, and it is important when making use of terms of money to carry with the measure of money the conception of the quantities of substance which money will buy, or which are exchanged for money.

In a very few cases certain countries, like England, possess an income from foreign investments of capital previously saved; but this is a very small element as compared to the value of its annual product.

In the following tables this increase of income from foreign investments has been considered with respect to the average value of the product per capita assigned to England.

I have attempted to establish a comparison of the product, per capita, of European countries, as compared to this country, at its measure in money. The known factors in the problem are, first, the relative rates of wages paid in the several countries considered, each

The proportion of men under arms in the commercial and manufacturing states of Great Britain, France, Germany, Italy, Holland, and Belgium is 2,200,431. The cost of sustaining these forces in the last fiscal year was \$493,505,520, or at the rate of \$223 per man.

The force which is actually under arms, aside from the reserves, is at the ratio of one man to each 200 acres; and the annual tax for his support averages \$1.10 per acre.

The average cost per man in the army and navy of the United States, including the cost of ships, fortifications, navy-yards, and all other war expenses, is about \$1,600 annually per man. The ratio is one man under arms to each 51,000 acres, and the annual tax for his support and for all other military purposes is a fraction over three cents per acre.

lars — will probably all be paid within one generation from the date when it was incurred.

In the consideration of the following tables it must be borne in mind that the annual product of a nation or state is the source of all wages, taxes, rents, and profits, and that by so much as one element of these charges upon the annual product is greater must some other element be less. No scientific method has yet been invented by which taxes can be made to stay where they are first imposed. As a rule, taxation tends to diffuse itself over all consumption, and cannot be drawn in any large measure from what would otherwise be rent or profit. Hence, when the product is small, the necessary correlative of high taxation is a low rate of wages or earnings. Therefore, low wages in Continental Europe give no evidence of low cost of production, but rather indicate that the laborer is deprived of a large and undue share of his product by excessive taxation, chiefly for the destructive purposes of war or of preparation of war.

The debt of all Europe in 1884 and 1885 was	\$22,158,000,000
Population	334,000,000
Debt of the principal solvent and commercial states of Europe—Great Britain, France, Germany, Netherlands, and Italy	\$13,269,447,000

STANDING ARMIES AND NAVIES OF EUROPE AND THE UNITED STATES,

Compared in ratio to the number of men of arms-bearing age, assuming one in five of the population to be of that age.

Standing armies of Europe in actual service	3,854,752
Men in the navies	268,622
<hr/>	
Total armed force	4,123,374
Reserves ready for service at call	10,398,163
<hr/>	
Total	14,521,537

Substantially one in five of all men of arms-bearing age.

Proportion of men of arms-bearing age in the standing armies and navies, not including reserves:

Proportion.	Exempts.
All Europe	in 16.13 15.13
Italy	" 7.50 6.50
Holland	" 11. 10.
France	" 13. 12.
Russia	" 17. 16.
Germany	" 19.50 18.50
Belgium	" 23. 22.
Austria	" 25.40 24.40
Great Britain	" 26. 25.
United States	" 322. 321.

Men in active service in armies and navies, omitting reserves:

Russia	1,004,507	Belgium ...	46,539
Italy	765,820	Sweden ...	43,174
France	575,959	Denmark ...	37,725
Germany	462,078	Greece ...	33,187
Austria	298,501	Portugal ...	29,920
Great Britain	281,746	Norway ...	22,250
Turkey	180,404	Roumania ...	20,572
Spain	116,256	Servia ...	13,079
Switzerland	113,368		
Holland	77,689		
Reserves	10,129,541		
		4,123,374 or 1 man in	81 of population.
		14,252,915 or 1	" 24
United States	36,294 or 1	"	1610

as compared to the other; second, the relative amount of national taxation per capita.

Another factor which may be deemed to be sufficiently well established for purposes of comparison is the value of the per capita annual product of the people of the United States, estimated at two hundred dollars' worth to each person.

The family group in this country consists of a fraction over five persons; the proportion who were occupied for gain was one in 2.90 in the census year, and may be computed as one in three at the present time. Two hundred dollars' worth per head would make the average product of each person working for gain six hundred dollars' worth of product per year.

The writer has himself devoted a great deal of examination to this subject, and his estimate of two hundred dollars' worth per head has been sustained by many other experts, official and unofficial. Accepting this measure as approximately true to the facts, it is

held that the value of the product, per capita, of other countries may be based upon the value of the per capita product of this country, since the product of other countries must bear substantially the same proportion to the rates of wages and the per capita tax of such country as the product of this country bears to these known factors.

In all the principal commercial and manufacturing countries of Europe and in the United States there is now such an amount of available accumulated capital, as to make it certain that if there is any art or industry in which a rate of profit ranging from five per cent. to fifteen per cent. can be obtained, that branch of work will be quickly and surely undertaken.

Hence it follows that if the sum of the wages at the current rates prevailing in each country can be ascertained, as well as the per capita taxes, we may ascertain the average value of the product of such labor by adding to these elements of cost from five per cent. to fifteen per cent. as the corresponding profit. In other words, there must be a necessary relation in the ratios which profits, wages, and taxes bear to each other in each commercial or manufacturing country, according to the respective conditions of industry in that country.

For example, assuming that one person sustains two others in France as well as in this country, we know first that the average wages in France are not more than sixty per cent. the rate of wages in this country. We also know

that national taxes are eighteen dollars per head in France and less than five dollars here. We need therefore only to establish the rate of profit which will induce the employment of capital in the arts which can be established in France in order to reach an approximate estimate of the average value of the product of each person employed in productive industry.

We may take as a class any group of skilled mechanics or artisans in the United States who earn two dollars a day, or six hundred dollars a year, each one supporting two other persons.

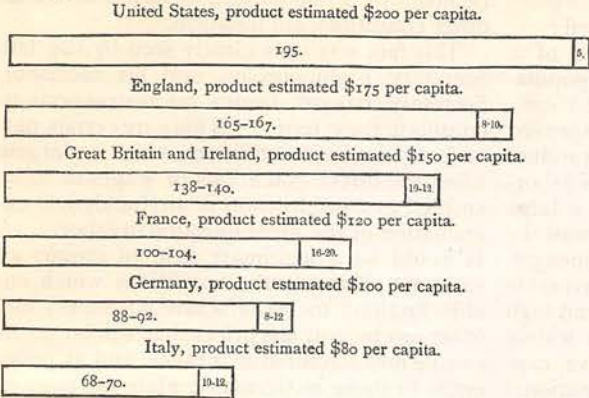
Their net wages each, free of national taxes, would be	\$585
Their proportion of national taxes for three persons at \$5 per capita	15

Wages and taxes

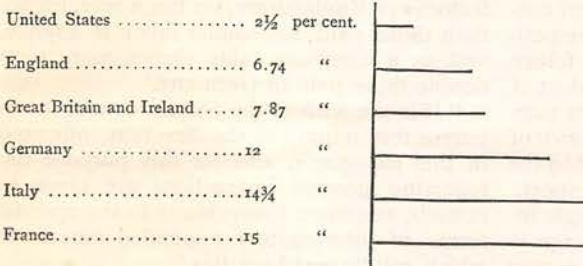
Now if any one can make ten per cent. upon this sum, capital will be found for the employ-

RELATIVE PROPORTION OF THE ASSUMED PRODUCT PER CAPITA WHICH IS ABSORBED BY NATIONAL TAXATION ONLY, ON THE BASIS OF PREVIOUS COMPUTATIONS.

The proportion divided off at the end represents national taxation. The remainder is what is left to be applied to local taxation, rent, profits, earnings, and wages.



Proportion of national taxation to estimated product :



ment of such men, and their product will be sold at such ten per cent. advance, if no more can be had, or at six hundred and sixty dollars.

This would make the final value of the product of such a workman six hundred and sixty dollars: divided into profits, sixty dollars; taxes, fifteen dollars; net wages, five hundred and eighty-five dollars.

We know that the corresponding rate of wages of a French artisan would not exceed, on the average, sixty per cent., or three hundred and sixty dollars, and that the proportion of national taxes due from him and his two dependants would be fifty-four dollars. But the gross product of France being less than it is in this country, it may require a larger proportion of the product to be assigned to profits; we will, therefore, call it fifteen per cent. on three hundred and sixty dollars, which is fifty-four dollars. This sum added to wages and taxes gives a gross value of the French workman's product, four hundred and fourteen dollars.

The ratios in this comparison would be:

Product per workman, United States	\$660
" " " France	414
" " capita, United States	220
" " " France	138

On the other hand, if the average annual product is only one hundred and thirty-eight

dollars' worth per head, or four hundred and fourteen dollars' worth for the earnings of one of a group of three by whom the two others are sustained, the reason is not that the work is not equal, but that the quantity of the product to each person is limited by the conditions under which the work is done. The same workman when removed to the United States may produce twice as much as in France with the same labor if he can adjust himself to his new conditions. The German immigrant actually does so. Does it not follow that wages are the reflex or result of the labor of the workman derived from the sale after profits and taxes have been set apart? Hence all attempts to compare the cost of production of any article by comparing the rates of wages must be entirely fallacious unless all the conditions of production are the same. The rates of farm wages are, on the average, four to five dollars per month with board, in Rhenish Prussia; in the United States they are four to six times as much, but the money cost of producing a bushel of wheat in Prussia is double the cost in many parts of the West, where machinery is used to an extent unknown

in Prussia and almost impossible on account of the very minute subdivision of the land.

The causes of the variation of the product per workman and per capita are, of course, manifold. The principal causes must be variation in:

First. The natural resources of the country.

Second. The efficiency of the workman in respect to mental training and manual or technical dexterity.

Third. The efficiency of the tools or machinery used.

Fourth. The full or deficient nutrition of the body.

Fifth. The freedom from obstruction in exchanging the surplus of one art or industry for what is deficient in another, either one part with another in the same country, or one country with another.

Upon this theory I have constructed the table on this page, to which reference may be made, and while no claim for positive accuracy in the money estimates can be made for it, it may perhaps be accepted as relatively or proportionately correct. The facts sustain these proportions, and therefore prove the theory to be correct.

Is it not also a matter of common observation that in a country like the United States,

in which laborers are perfectly free, the transfer of land and of other property very easy and very promptly made, the use of machinery fully comprehended, and any new inventions speedily adopted, that the product will be large in ratio to the number of persons employed?

Conversely, if the natural resources of a country are not large in ratio to the population, the transfer of land complex and difficult, machinery inadequate, and improved tools not readily accepted, then the product will be small in ratio to the number of laborers. It follows that if taxation takes a large share of such small product, wages must be very low, and subsistence must be very meager.

In this country all conditions are favorable to low cost of production, low prices, and high wages, and therefore conducive to a widely extended commerce. Labor is effective, capital ample, and the average burden of national taxation very light. The prices of our great staple products, such as grain, wool, and cotton, are practically determined by competition in the markets of the world. From fifteen per cent. to twenty per cent. of the product of agriculture of the United States finds its market in foreign countries. Therefore the price of all products of agriculture is determined by the price which the surplus will bring for export.

Agriculture represents the largest single industry; and the product being very large in ratio to the number of men employed, because of the fertility of the soil and the use of machinery, it follows that when the low rate of taxes has been set aside and the ratio of profit has been assigned which is required in order that capital may be invested in agriculture, the rates of wages or the earnings of farmers in this country are, relatively to other countries, very high. Under such conditions large earnings and high wages are the necessary correlative of the very low cost of the production of the staples of agriculture. One is the reflex of the other.

Up to this time the conditions of and the wages in all other arts in the United States have been practically determined by reference to the condition of and wages in agriculture. All other arts which have been undertaken in this country are therefore governed by corresponding rules; namely, by the application of machinery under the best conditions, the largest product is assured with the least expenditure of labor. Therefore in all arts, with few exceptions, after the low rate of taxation and such profit as is necessary to induce the investment of capital have been set aside, the general rate of wages has been very high, because the general cost of production has been low. The same rule, therefore, applies in all arts — that high wages or earnings are the re-

flex or complement of the large product, so long as labor and capital are left free to work together and are not subjected to excessive taxation. Hence no comparison of cost can be made by a comparison of wages unless all other conditions are identical.

This fact was very clearly seen by the late Secretary Frelinghuysen, and his successor, Secretary Bayard, begins his instructions to consuls in these terms: "There are certain natural and artificial conditions which so largely affect the direct conditions of wages as to be entitled to consideration in any analytical examination of the great question of labor. . . . It would be a legitimate field of inquiry to ascertain what are the conditions which enable England to manufacture machinery and other products at less prices than similar goods can be manufactured in France, and at prices equal to those in Germany, while the rates of wages paid to workmen engaged in such manufactories in England are, on the whole, higher than those paid for similar labor in France, and, as a foregoing table shows, more than double those paid in Germany."

"It is the wish of the State Department to pursue this inquiry in the direction indicated in this paragraph, and for this purpose the following general instructions are given to consuls, reference being made to the specific forms of interrogatory appended hereto or which will be sent hereafter."

This apparent paradox of high wages and low cost becomes very simple when applied by any employer to his own experience. In a dull time, when it becomes necessary to discharge a part of the working force, which are the operatives first discharged? Are they not those whose wages or earnings have been lowest — not those who have earned the most for themselves? Are not the men who earn the most for themselves retained because they are the most effective workmen and therefore most capable of producing goods at the lowest cost? Conversely, does not the fact which is apparently lost sight of by the proposed "organizers of labor" represent an absolute principle; namely, that the strong, industrious, and well-nourished manual laborer, or the skillful artisan or factory operative, will be substantially sure of continuous employment at the highest possible rate of wages, when the less able or competent can find no steady occupation?

Is not the rule of universal application in civilized countries that there must be a certain ratio between the *sum* of the wages and the taxes combined, and the profit which may be derived from the several arts and industries of each of the several countries?

It has been admitted that in very poor countries where hand labor prevails in greater

measure than the application of machinery, and where the taxes are very heavy while the product is very small, the ratio of profit must bear a larger proportion to the entire product than it does in a rich country where machinery is most fully applied and where the taxes are low.

In making the computations of the relative per capita product of the different countries, I have not attempted to cover this variation in the rate of profit, but I assume that, on the whole, any art in which capital can secure ten per cent. profit will be surely undertaken either in the United States or in England, France, Germany, and the Netherlands. Perhaps not in Italy without a higher rate of profit.

Upon this theory, and assuming that the product per capita of the United States may be valued at two hundred dollars' worth, that of England, with its income from foreign investments added, may not exceed one hundred and seventy-five dollars' worth; that of Great Britain and Ireland combined may be assumed not to exceed one hundred and fifty dollars' worth; that of France as not exceeding one hundred and twenty dollars' worth; that of Germany as not exceeding one hundred dollars' worth; that of Italy as not exceeding eighty dollars' worth; such being substantially the ratios which the average rates of wages with the per capita national taxation added bear to each other, and to the wages and taxes of the United States, with corresponding profits added in each case.

In order that this proposition may be made more clear, the foregoing table is submitted in which the line representing the product of each country is divided off into sections: in the sections on the right will be found the national taxation per capita; on the left, the value of what remains for distribution as wages, profits, and for municipal taxes. In the same table will be found the percentage which national taxes bear to the assumed per capita product.

In considering these remainders after national taxes have been set off, it must be borne in mind that municipal taxation as well as profits doubtless take a larger proportion in the poorer countries than in the richer ones. Hence that part of the product which may be assigned as the wages or earnings of the working people becomes less and less in proportion to the whole product, as the product itself diminishes in quantity and in value. "For he that hath, to him shall be given: and he that hath not, from him shall be taken even that which he hath."

These figures correspond to known facts. In Italy, which is relatively under a heavier burden of armies and taxes than any one of the countries treated, what is left to the

workman, either of his own product or what he can buy with his wages, now appears to be insufficient to sustain life in strength and vigor. Is it not also true that portions of the population of the German empire, especially in southern Germany, are living on the edge of starvation, becoming weaker as they become less well nourished?

In Egypt so much of the miserable product of a rich and productive country is taken away to meet the interest of a bonded debt imposed upon the people without their consent, that starvation exists in the Nile valley, which once sustained tenfold the present population in comfort.

Is it not true that France has reached its utmost limit of taxation, and the annual deficit is adding to the burden which cannot, perhaps, be borne much longer? Yet France may be saved from immediate bankruptcy by the richness of its soil and the intelligent economy of its people.

Is not the present burden upon Ireland the burning question in Great Britain?

May there not be found in these conditions the underlying causes of nihilism, anarchy, socialism, and communism upon the continent of Europe?

In considering what is left after taxes and profits have been set aside in these several countries, it must be remembered that an equal amount of money will buy a less amount of food in Europe than it will in the United States, and the price of food is much more than half the cost of subsistence to a very large proportion of the working people of Europe; else we should not be exporting the products of our fields to European countries, and there would be no call for prohibitory laws, or for high duties on grain and pork in a vain attempt to promote an increase of the farm products in Germany and in France by such artificial methods.

The true measure of these burdens upon industry may be, perhaps, more accurately measured in terms of work than when stated in terms of money or of men. The product of every country stands for so much work. In the census year the work of this country, manual, mental, mechanical, and manufacturing, was performed by one in three of the population so far as gain in money was the object of the work, the bread-winners numbering 17,400,000 in a little over 50,000,000 population.

The national and municipal taxes of that year were proportionately higher than they are now; all taxes, national, State, and municipal, in that year required substantially seven per cent. of the highest estimate of the value of the total product. This percentage

being applied to persons, represented the year's work of men numbering 1,218,000, whose labor was devoted either to the direct work of government, or in sustaining all the forms of government by way of national, town, city, county, and State taxes.

The national taxes only of the United States are now about two and a half per cent. of the product, and they therefore represent the work of 500,000 persons out of about 20,000,000 workers. This body of half a million persons is either employed directly in the service of the Government, or else is occupied in sustaining those who are in such service.

In the preceding table the proportion of the annual product assigned to national taxes is represented by percentage upon the assumed per capita product of each country.

If the burden upon the United States corresponded to the several percentages assigned to other countries, the number who would be engaged either in the service of the Government, civil or military, or in sustaining those who perform this work, would be according to the following computation, it being assumed that out of our present population, approaching sixty million persons, twenty millions are at work in various occupations in sustaining the whole body politic :

At the ratio which the national taxes now bear to product in the United States, the actual work required to sustain all the functions of the National Government, directly or indirectly, is that of . . .	500,000 men.
At the ratio which the national taxes bear to the assumed product of England, the proportionate number of men who would be required in support of the functions of government in the United States would be	1,348,000 "
At the ratio assigned to Great Britain and Ireland as a whole	1,574,000 "
At the ratio assigned to France	3,000,000 "
" " " " " Germany	2,400,000 "
" " " " " Italy	2,950,000 "

It will be apparent to any one who reasons upon these figures, that if either one of these proportionate services in sustaining government, except perhaps that of Great Britain, were in force in this country, it would put a strain even upon our abundant resources that we could scarcely bear. What must then be the burden of those who are thus loaded ?

The computed product of two hundred dollars' worth per head of our population after setting aside ten per cent. as the maximum addition to capital, and six per cent. as the maximum of all our present national and municipal taxes, leaves only one hundred and sixty-eight dollars' worth to each man, woman, and child. This being divided by three hundred and sixty-five days in the year leaves but

forty-six cents' worth per day for shelter, clothing, and food for each person. A variation of five cents per day to each person from this computed average stands for an additional product worth more than \$1,000,000,000 a year.

Let it be assumed for a moment that our two hundred dollars' worth of product, of which two and a half per cent. supports the National Government, were depleted by national taxation to the extent of fifteen per cent., as the product of France now is, a difference of twelve and a half per cent. ; then the average sum available to each person, per day, would be reduced from forty-six cents to a fraction under thirty-nine cents ; not apparently a great variation,—only about the price of a glass of beer,—yet six cents a day comes to over \$1,300,000,000 on our present population.

If we assume that one in three of the population of Great Britain, France, Germany, and Italy is occupied for gain, the whole number of workers is a fraction less than 50,000,000 out of a population a little less than 150,000,000.

At the respective ratios assigned to the functions of government, the total number engaged in such functions is now in those four countries 6,067,000, or a fraction over twelve per cent. of the whole working force, occupied either as soldiers in active service, as officials in the civil service, or in sustaining these classes with bread, meat, and shelter. The actual number of men under arms in these countries is 2,086,000, and they cost two hundred and twenty-five dollars each. It surely takes at least one peasant's or one operative's product to sustain one soldier. If the armies and navies require the services of 2,086,000 men, and if the work of as many more is required to sustain them, then the waste of preparation for war requires the constant work of 4,176,000 men out of 30,000,000 men of arms-bearing age in Great Britain, France, Germany, and Italy, computing one in five of the population of arms-bearing age. This is very nearly one in every seven of the adult men. Deducting this number from the whole number assigned to government service as above 6,067,000, the remainder is 1,891,000, or proportionately about fifty per cent. more than have been assigned to the support of the National Government to the United States aside from their army and navy. The number needed to earn the interest on the national debts of those countries above the proportion required in the United States would fully account for this disparity.

Do not these facts sustain the approximate accuracy of all the preceding computations ? Does not the burden of armaments only re-

quire ten to twelve per cent. of the whole number of men of arms-bearing age in those countries, or eight to ten per cent. of the whole working force, if the proportion of working men and women to the population is the same as in the United States; to wit, one in three?

But is such the proportion of men and women who must labor to the utmost for subsistence? When men are wasting their time in camp and barracks, are not the women and children forced to labor in such a way that the physical stamina of the race is deteriorated, and material prosperity sapped at its very foundation?

What must then be the necessary conditions of life when the money's worth to be divided among the families of those who do the actual work of production is only one-half as much as it is in the United States? If the product of Germany is only one hundred dollars' worth per head, it will yield less than *twenty-eight cents'* worth per day for all taxes, subsistence, profits, and wages to each person. If the product of Italy is worth only eighty dollars per head, all taxes, profits, and wages must be derived from *twenty-two cents'* worth per day to each person.

If, on the other hand, the average value of the product per capita of these European countries cannot be deduced *a priori* according to the theory presented, then again we must go back to the facts; and we then find in all the various reports upon the condition of a vast body of the population of Europe that they are actually subsisting upon much less than half the income of the working people of this country. The facts sustain the theory, and the theory may explain the facts.

Many records may be found in recent consular reports of the families of German and Italian peasants who are subsisted on only four to five cents' worth of food for each person per day; and even at that price the cost of food is sixty or seventy per cent. of the whole cost of living.

On the other hand, if such are the facts as to the common life of great masses of the people, and if we cannot deduce the per capita annual product of each worker in Europe by adding ten per cent. for profit or addition to capital to the average rate of wages and the average burden of taxes,—that is to say, if the product of either country is greater per capita than this measure, then it follows that the privileged classes of Europe are securing for their own use a very much larger share of the annual product than the capitalists of this country can thus secure; and this adds to the danger and complexity of the problem in Europe, rather than rendering it more simple.

What then do these figures and facts mean? Is not the apparent strength of the armaments

of European nations a source of weakness which is now working at the foundation of the present forms of society upon the continent?

Is not our apparent weakness the very source of our strength?

Are we not stronger *without* expensive fortifications, navies, and other armaments than we should be if we spent our force in constructing them?

May not the time be near at hand when it shall no longer be lawful for one generation to mortgage the labor of the next by any national and perhaps by any municipal debt? When pay as you fight becomes the rule, will not war become almost impossible?

May not the right government of cities be found in more strictly limiting the power of cities or towns to incur debts?

Has not the power of the rings which have plundered our great cities been founded mainly in the abuse of public credit? Could Tweed have stolen the property of the people of the city of New York had he plundered them by direct taxation?

These may be questions which will soon require an answer, and which are perhaps suggested by the figures and the facts submitted in this treatise.

It may be said that the present relative conditions of Europe as compared to the United States require no statistics to bring them into view. Perhaps not; yet when a great bankruptcy occurs or is impending, the first call of the business man is for the trial balance. Such bankruptcies sometimes occur in arts which are most necessary and which must be continued. When the settlement has been made after the bankruptcy, the business is reestablished, but the expensive supernumeraries who had previously lived upon the work of others are afterward set to work to earn their own living.

In what way the representatives of the dynasties and privileged classes of Europe, or those whose present trade is war, will get their living after a hungry democracy has called for a settlement of accounts will be an interesting problem to watch.

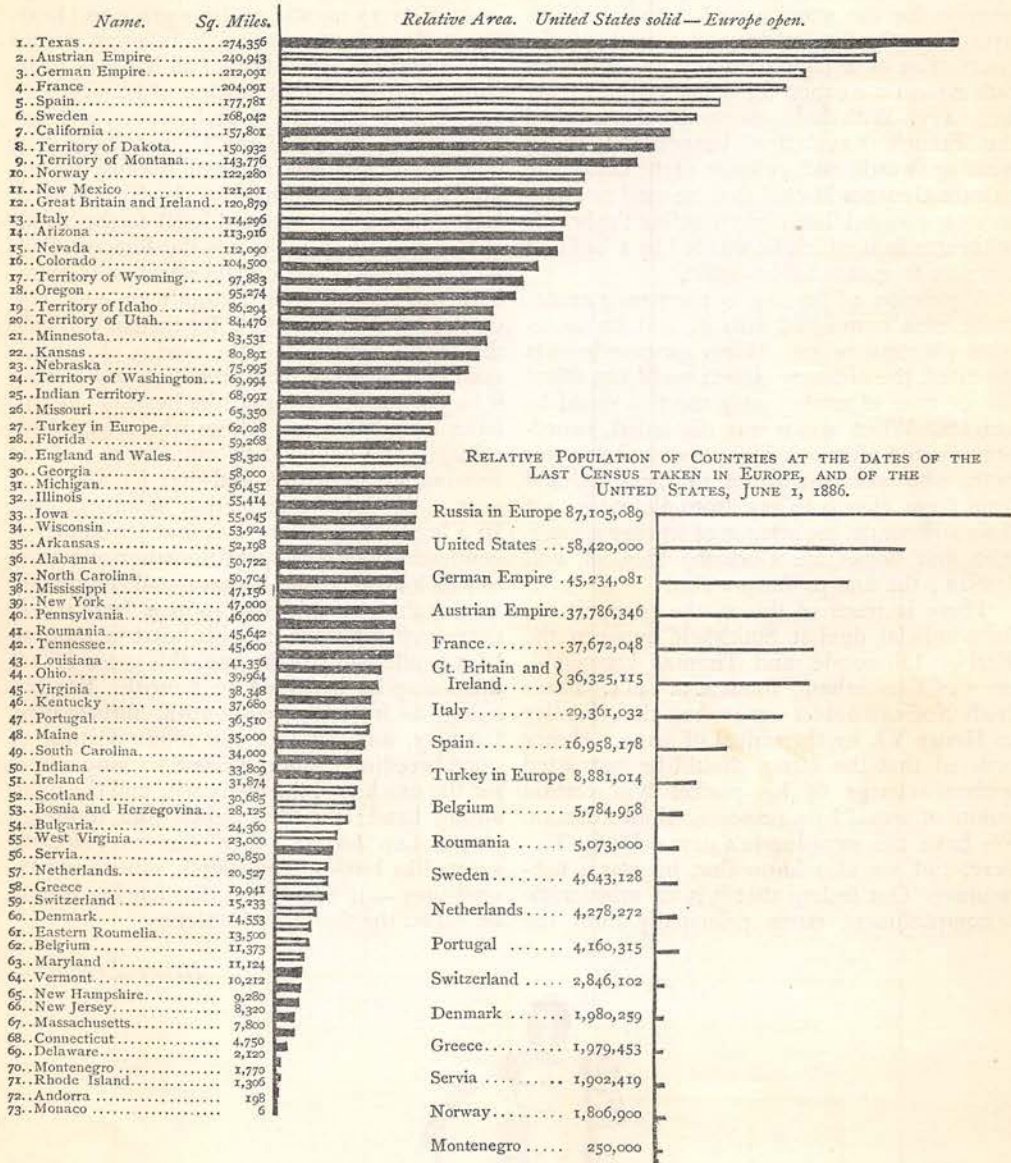
The business of government is necessary and must be continued. How will it be reorganized after the impending settlement of accounts in Europe has been completed?

Many other applications of the statistics of these two studies will suggest themselves to him who can read what is written between the graphical lines or underneath the figures. Except to one who possesses such an imagination, statistics may be but dry bones, and all figures may be mere rubbish.

Edward Atkinson.

OUR NATIONAL DOMAIN.

GRAPHICAL PRESENTATION OF THE COMPARATIVE AREAS OF THE STATES AND TERRITORIES OF THE UNITED STATES AND THE COUNTRIES OF EUROPE, OMITTING RUSSIA AND ALASKA.



The visionary possibilities of the future product of the United States may be imagined by reference to the following statements: The land in actual use for growing maize or Indian corn, wheat, hay, oats, and cotton in the whole country now consists of 272,500 square miles, or a fraction less than the area of the single State of Texas. The entire wheat crop of the United States could be grown on wheat land of the best quality selected from that part of the area of the State of Texas by which that single State exceeds the present area of the German Empire. The cotton factories of the world now require about 12,000,000 bales of cotton of American weight. Good land in Texas produces one bale to an acre. The world's supply of cotton could therefore be grown on less than 19,000 square miles, or upon an area equal to only seven per cent. of the area of Texas.