

STATISTICS *VERSUS* MALTHUS.

ACCORDING to Malthus, who published his *Principle of Population* in 1798, anything like a condition of universal comfort can never be reached on earth. The first two chapters of his essay contain the gist of his argument. His theory is that there is a constant and irremediable pressure of population on the means of subsistence. It is the nature of human beings to increase at a greater ratio than their food. "A strong check on population, from the difficulty of acquiring food, must be in constant operation. This difficulty must fall somewhere, and must necessarily be severely felt in some or other of the various forms of misery, or the fear of misery, by a large portion of mankind. . . ." ¹ "There are few States in which there is not a constant effort in the population to increase beyond the means of subsistence. This constant effort as constantly tends to subject the lower classes of society to distress, and to prevent any great permanent melioration of their condition." ²

Supposing a community were confined to a small area of land, so that no extraneous assistance could be obtained, it is conceivable that its numbers might increase beyond the capacity of the soil to produce subsistence. But this fact is no reason why the world should be considered incapable of producing sufficient food to supply the needs of any possible numbers that can appear for centuries hence. If a family were confined upon six square yards of land, there would not, in a few generations, at the ordinary rate of increase, be standing room for the occupants; but would such a case afford any grounds for concluding that the earth had not sufficient space to afford standing room for its inhabitants? Arithmetic will show the absurdity of any such conclusion, for it has been calculated that the whole existing population of the globe, estimated at 1,400,000,000 persons, could find comfortable standing room within the limits of a field ten miles square.³ We believe statistics will also show the conclusions of Malthus to be preposterous. It is true the population might outrun the means of subsistence if it were confined upon a

¹ *The Principle of Population*, p. 2. By T. R. Malthus. Reeves & Turner. Seventh edition, 1872.

² *Ibid.*, p. 9.

³ *The Distribution of Products*, p. 22. By Edward Atkinson. G. P. Putnam's Sons. Second edition, 1885.

given area, but then the deficiency of food would arise in the circumstances which caused the overcrowding, and not from the incapacity of the world to produce subsistence as Malthus' doctrine has taught. Such a case of overcrowding has nothing to do with the question, whether the capacity of the world is sufficient to supply any possible population that can exist for many centuries with abundant sustenance, supposing labour is efficiently applied to raise it.

What we want to discover is, whether population ever has so increased as to exceed Nature's capacity to supply its needs of subsistence; whether, in fact, "a strong check on population from the difficulty of acquiring food *must* be in constant operation;" whether "this difficulty *must* be felt somewhere, and *must* necessarily be severely felt in some or other of the various forms of misery, or the fear of misery, by a large portion of mankind."

That population never has so increased, and is in no appreciable danger of doing so, at all events until the distant future, we maintain to be absolutely demonstrable from statistics. We do not deny that vice and misery have kept down population. Undoubtedly they have done so to an enormous extent. All we say is, the vice and misery have had their origin in man's ignorance and folly, not in "the niggardliness of Nature" in supplying his wants.

The generally admitted fact, that poverty has a tendency to stimulate the increase of population, seems to point to the existence of a law as regards population exactly the reverse of the Malthusian. The affluent notoriously do not have the number of children that parents in straitened circumstances generate. Statistical evidence incontrovertibly proves that a large community, other things being equal, is capable of producing more food and more wealth generally, man per man, than is possible in a smaller community. Europe has overgrown the dread of famine, and no doubt in future days will outlive the dread of pestilence. Famines are objects of terror in the early stages of social growth when numbers are numerically weak. Thus the last great famine that visited England was in the fourteenth century. At the present day, with a population in round numbers eleven times greater, a famine is so exceedingly improbable that such a calamity is no longer feared.

Statistics will now be brought forward from Mulhall's *Dictionary of Statistics*, to show how enormously the world's population has increased during the present century, and to what extent the inhabitants per square mile have increased in each country during the period.

A.—POPULATION.¹

	Thousands Omitted.				
	1800	1820	1840	1860	1880
United Kingdom	15,570	20,710	26,540	28,730	34,650
France	27,720	30,380	34,102	37,290	37,430
Germany	22,330	26,040	30,590	36,410	45,260
Russia	38,140	44,220	54,080	65,730	84,440
Austria	21,230	23,620	28,170	32,240	37,830
Italy	13,380	15,790	18,610	21,820	28,910
Spain	10,440	11,680	11,820	15,560	16,290
Portugal	3,080	3,210	3,490	4,030	4,350
Belgium	2,960	3,280	4,020	4,690	5,480
Holland	2,280	2,510	3,130	3,620	4,060
Denmark	900	1,040	1,290	1,580	1,960
Sweden	2,330	2,580	3,210	3,870	4,610
Norway	880	1,010	1,280	1,590	1,950
Switzerland	1,820	2,040	2,310	2,530	2,810
Greece	9,200	10,300	1,020	1,310	1,690
Servia			1,240	1,920	
Roumania			4,390	5,330	
Turkey			10,230	8,310	
Europe	172,260	198,410	236,150	275,860	312,990
United States	5,310	9,640	17,070	31,440	50,410
South America	20,000	22,000	23,500	24,800	25,600
British India	70,000	83,000	98,500	143,300	191,400
Canada	470	840	1,730	3,360	4,340
Australia	10	90	410	1,330	2,880
Cape Colony	40	80	270	420	1,030
	268,090	314,060	377,630	480,510	588,550

In the above Table Lombardy is counted Italian, and Schleswig German, territory.

B.—POPULATION.—INHABITANTS PER SQUARE MILE.²

	1800	1820	1840	1860	1880
United Kingdom	131	172	221	240	290
France	135	148	165	175	180
Germany	108	124	145	174	217
Russia	18	20	25	30	40
Austria	90	99	118	134	158
Italy	120	138	162	190	247
Spain	51	58	59	78	82
Portugal	88	92	101	115	124
Belgium	260	287	348	409	480
Holland	177	195	228	260	312
Denmark	60	71	89	108	127
Sweden	14	15	19	23	27
Norway	7	8	11	13	15
Switzerland	114	127	145	160	175
Greece	33	40	52	65	84
Turkey, &c.	70	80	100	120	120
Europe	48	54	64	75	85
United States	12	6	10	11	14
Canada	—	—	—	—	1
Australia	—	—	—	—	1
Cape Colony	—	1	2	3	4
British India	150	161	197	158	210
South America	3	3	3	3	3

¹ Mulhall's *Dictionary of Statistics*, p. 356. G. Routledge & Sons. 1884.

² *Ibid.*, p. 357.

Malthus overlooked the important factor of improvement in transit in his calculations. In the foregoing Table B, we see that in the year 1800 A.D. the number of inhabitants per square mile in the United Kingdom was 131, and that in the year 1880 it was 290, which is more than double. Yet, with the continued increase of population, "the preponderance of England is every day increasing, not only in population, but also in wealth and in all elements of national importance."¹

"The estimates of public wealth by the most experienced economists show that the capital of the United Kingdom has doubled in forty years."²

Estimates.		Wealth of the United Kingdom.	
1800	Beck & Pulteney	£1,800,000,000	
1840	Porter	4,000,000,000	
1860	Levi	6,000,000,000	
1877	Giffen	8,840,000,000	

Reflection, then, will, we think, convince us that the misery and disease induced by insufficient nourishment, which has unquestionably tended to keep down population in the past, cannot have been due to any lack of Nature's bounty. The world's population is larger now than at any period within the range of history; and as the earth is capable of yielding sufficiency of food, even under the existing order of things, with whole continents to a large extent lying waste, it is clear, as far as production is concerned, the earth could have afforded abundance in past ages, *if the requisite intelligence and labour had been forthcoming.* The Malthusian theory does not accord with facts. As populations grow, instead of production being less per head, statistics clearly prove it to be greater. The intelligence which is fostered in large communities; the advantages of the division of labour; the improved transit, which increases in efficiency with an enterprising people in proportion as numbers become large, and is impracticable until population has developed—are more than a match in the competition of production for any advantage a thinly scattered community may in some respects gain on a virgin soil. Malthus and his followers, while bringing prominently forward the needs of an increasing population, keep out of view the increasing means of supply which the additional labour of greater numbers will produce. Man has no power to create anything: all he can do is to change the position of things. His labour in production is confined to this; and so long as there are a pair of hands to provide for every mouth, with intelligence and energy ample production is assured, unless society erects artificial barriers by means of its laws regarding the distribution of wealth. The real cause of much of the vice and misery existing in society seems to lie in the unequal distribution of wealth.

¹ *The Progress of the World*, p. 109. By M. G. Mulhall. Edward Stanford. 1880.
² *Ibid.*, p. 110.

But, it is often said, if England did not import food she could not feed her population. Statements of this kind are altogether without foundation and are most misleading. "If England by any contingency were compelled to raise wheat, it would suffice to sow an area of five counties the size of Devonshire to supply all the needs of the three Kingdoms at seven bushels per head."¹ Edward Atkinson, the American statistician, declares "the average crop of wheat in the United States and Canada would give one person in every twenty of the population of the globe a barrel of flour in each year, with enough to spare for seed; and the land capable of producing wheat is not occupied to anything like one-twentieth of its extent. We can raise grain enough on a small part of the territory of the United States to feed the world."²

But further, not only is a small area of the world sufficient to raise food for the whole of its population, but the labour of a small section of the population is sufficient to raise the food for the whole inhabitants of the globe. The fallacy of the Malthusian theory will be realized when we once understand how small an area of the world is sufficient to raise the food of mankind. For so long as there is plenty of land, we may easily calculate what toil would be required for each individual to supply himself with wheat.

The average crop of wheat in England in 1880 was twenty-eight³ bushels per acre, and seven bushels is sufficient to supply an individual with food for a year. A quarter of an acre, therefore, would be sufficient land to provide the absolute necessary food for one person. With nothing but ordinary garden tools, a man ought to be able to cultivate such a little patch of ground in the time which would be equivalent to half an hour's exertion per day throughout the year. To produce the seven bushels of wheat would be a very small tax upon his energies, although in such circumstances it would be produced under great disadvantages. A community sufficiently numerous to render the separation of employments practicable would produce much greater results, man per man, than would be possible in the case of an individual working solitarily.

Even with comparatively primitive machinery and no great organization in the division of labour, there is no doubt that the labour of one man would be sufficient to supply the necessary food for a considerable number. Professor Rogers states: "I find that in early English agriculture, as in modern, a workman to twenty acres is a liberal allowance of labour."⁴ Now, at the average of twenty-eight bushels to the acre, upon the above basis, one man's labour would raise $20 \times 28 = 560$ bushels, and, allowing seven bushels

¹ *The Progress of the World*, p. 126. By M. G. Mulhall.

² *The Distribution of Products*, p. 22. By Edward Atkinson.

³ *The Landed Interest*, p. 177. By James Caird. London: Cassell, Petter, Galpin & Co. 1880.

⁴ *The Economic Interpretation of History*, p. 165. By J. E. Thorold Rogers.

to each person, his labour would raise wheat sufficient for eighty persons. But with a minute division of labour, aided by modern machinery, man's power of producing food is enormously increased. We will give a verbatim extract from Mr. Edward Atkinson's address to the British Association at Montreal in 1884, as we have not the means to make such a calculation or to test its accuracy.

“What people gain their bread with so little exertion of human labour as the people of this country? If we convert the work done in the direction of machinery upon the great bonanza farms of far Dakota into the yearly work of a given number of men, we find that the equivalent in a fair season, on the best farms, of one man's work for three hundred working days in one year is 5500 bushels of wheat. Setting aside an ample quantity for seed, this wheat can be moved to Minneapolis, where it is converted into 1000 barrels of flour, and the flour is moved to the city of New York. By similar processes of conversion of the work of milling and barrelling into the labour of one man for a year, we find that the labour of milling and putting into barrels 1000 barrels of flour is the equivalent of a man's work for one year. By a computation based upon the trains moving on the New York Central Railroad, and the number of men engaged upon the work, we find that 120 tons, the mean between 4500 bushels of wheat and 1000 barrels of flour, can be moved 1700 to 2000 miles under the direction of one man working eighteen months, equal to one and a half men working one year. When this wheat reaches New York City, and comes into the possession of a great baker, who has established the manufacture of bread upon a large scale, and who sells the best bread to the working people of New York at the lowest possible price, we find that 1000 barrels of flour can be converted into bread and sold over the counter by the work of three persons for one year. Let us add to the six and a half men already named the work of another man six months, or half a man one year, to keep the machinery in repair, and our modern miracle is that seven men suffice to give 1000 persons all the bread they customarily consume in a year. If to these we add three for the work of providing fuel and other materials to the railroad and to the baker, our final result is that ten men working one year serve bread to one thousand.”¹

It may be objected that the machinery which alone renders such results possible would take years of patient accumulation and industry to construct. The rapid recovery, however, of France after the Franco-German War makes the old theory of capital no longer tenable.² Edward Atkinson, mentioned above, reckons that “capital or labour saved in a concrete form never exceeds in value the sum of two or three years' production even in the richest state or nation.” And these statistics are approximately verified by Mulhall, who gives the accumulated wealth of the United Kingdom as follows:—³

¹ *The Distribution of Products*, p. 75. By Edward Atkinson.

² “Should the national capital be diminished, the condition of the great body of the people would be greatly deteriorated; the wages of labour would be reduced, and pauperism, with its attendant train of vice, misery, and crime, would spread its ravages throughout the largest portion of society.”—*Principles of Political Economy*, p. 60. By J. R. M'Culloch. London: Ward, Lock & Co.

³ Mulhall's *Dictionary of Statistics*, p. 469 (“Wealth”).

Land	1880 millions
Cattle	235 "
Railways	770 "
Public Works	547 "
Houses	2280 "
Furniture	1140 "
Merchandise	350 "
Bullion	143 "
Shipping	120 "
Sundries	1255 "
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Total	8720 "

Taking, then, the aggregate wealth at 8720 millions, and the value of the annual income at 1247 millions,¹ we find about seven years' income in the aggregate wealth. When, however, we take out the land, valued above at 1880 millions, we find the value of the aggregate wealth equals about five and a half years' annual production. It is not practicable to include the value of the land in the aggregate wealth of a society, or we have the paradox—the scarcer the land the greater the wealth. The proprietary right to the land is no doubt a source of great wealth to individual proprietors; but from a social point of view, a community would be wealthier where there was sufficient land to meet the requirements of all, even though its exchange value was very low.

The above statistics solve the mystery of the rapid recovery of an enterprising people after a devastating war. Even if all the wealth were destroyed, which is never the case, it would only represent some five years' normal production in the richest nation in the world. No population ever works up to its productive capacity or anything near it. There is always a reserve force, as in our idle classes, unemployed, paupers, criminals, women, and children. So that in an emergency much more labour than ordinary is applicable for production. How quickly buildings can be restored has been proved over and over again in the case of earthquakes. Chicago was rebuilt, as if by magic, when a few years ago fire had demolished a large part of the city. So railways and machinery generally, if destroyed, could quickly be restored under the spur of necessity. Given the numbers, with developed intellectual and moral energy, and a population can quickly produce the requisite machinery for the provision of its food, which, being completed, the labour of a small percentage of the population can supply food for the whole. Moreover, the greater the population the less the relative tax upon its energy for its food supply, so long as there is land to raise it upon.

The prediction that the earth will eventually be overcrowded is mere assumption. It certainly is not so now, nor can it be for some centuries, even at the greatest known rate of increase. Nor must it be forgotten that the quantity of food raised per acre will

¹ Mulhall's *Dictionary of Statistics*, p. 245 ("Income").

very probably be increased in the future, as it certainly has been in the past. Doubtless there is a limit to the production of corn to the acre, but no one knows what that limit is. It does not seem by any means true, within limits, that Ricardo's teaching is correct, that greater returns can only be procured at a greater relative cost. "The sewage farm at Croydon is an area of 600 acres, a light and not otherwise fertile gravel. But being irrigated by the drainage, the fertilizing powers of which it completely exhausts, and discharges as pure water, it will grow for ten months in the year an average monthly crop of rye grass at the rate of seven tons to the acre. After a time the sewage is shut off from some portions and oats sown on the land. Of these the land commonly yields a good 100 bushels to the acre."¹ We have only to call to mind the enormous crops of the market gardeners around London to realize how immensely more productive the land is capable of becoming under a system of heavy manuring. These gardeners raise three heavy crops annually upon much of their land. The supply of manure, too, will in a great measure come from the source that creates the additional demand, when chemistry enables the inhabitants of towns, as it has already partially done, to utilize the sewage which is now permitted to be wasted in polluting our rivers.

That the increase of population is one of the factors of progress we do not doubt, but we cannot believe in Mr. Herbert Spencer's theory that progress either has been, or will be, induced by "pressure on the means of subsistence,"² *as far as mere food is concerned*. The evidence seems rather to show that the increased facility in producing food, which is possible in large communities, renders them capable of more easily supplying their wants. In this way ever increasing desires arise, taxing the energy of the population for gratification, and so producing a pressure which Mr. Spencer assigns to the deficiency of food.

When Mr. Spencer wrote his *Principles of Biology* he had not access to the statistics which Mulhall, Giffen, Levi, and Professor Thorold Rogers have since supplied. These statistics seem to render his theory, that danger from deficiency of food³ originates with increase of population, quite untenable. Even the selected statistics given in the foregoing pages seem sufficient to establish the point; and a much more formidable array might be produced if space permitted.

There seems little room for doubt, however, that the increase of population has been one of the factors of progress. For the purpose

¹ *The Economic Interpretation of History*, p. 231. By J. E. Thorold Rogers.

² *Principles of Biology*, vol. ii. p. 504. By Herbert Spencer. (Third Thousand.)

³ "But the danger of death which does not diminish is that produced by augmentation of numbers itself—the danger from deficiency of food."—*Principles of Biology*, vol. ii. p. 498 (H. Spencer).

of establishing the fact, let us compare the productive power of mediæval times with that of our own day. We shall see how the facility of producing food has enlarged men's desires, and has opened out a field for their energies which was formerly unknown. For, after all, an individual's tastes are in a great measure the mere consequences of his circumstances. Supply a man amply with food, and a desire for cleanliness and decent clothing may be expected to develop. As soon as these primary wants are satisfied, a comfortable home will be sought, which in its turn will be a nursery of refinement. Pleasure derived from Nature and Art is usually confined to men exempted from the lower privations; and, in any case, its culture will require leisure for development. This necessary leisure will be dependent upon the prior satisfaction of the more urgent wants.

Professor Thorold Rogers¹ estimates the population of England and Wales in the fourteenth century at $2\frac{1}{2}$ millions at the utmost. The same authority tells us, from information gathered from ancient documents relating to the estates of Merton College, Oxford, that, in 1333-6, the average crop was nine bushels of wheat and fifteen of barley to the acre, the seed being two bushels of the former, and four of the latter grain. "This produce is often in excess of the average, and the oldest writer on English agriculture, Walter de Henley, expressly states that, unless the farmer reaps full six bushels an acre, he is cultivating at a loss, giving reasons for his estimate."²

It will be interesting to see in what style the manor-houses were furnished. In mediæval times the lords of the manor resided in these houses when in the rural districts. "As might be expected, the furniture of the manor-house was scanty. Glass, though by no means excessively dear, appears to have been rarely used. A table put on tressels, and laid aside when out of use, a few forms and stools, or a long bench stuffed with straw or wool, covered with a straw cushion worked like a beehive, with one or two chairs of wood or straw, and a chest or two for linen, formed the hall furniture. A brass pot or two for boiling, and two or three brass dishes; a few wooden platters and trenches, or more rarely of pewter; an iron or latten candlestick; a kitchen knife or two, a box or barrel for salt, a brass ewer and basin, formed the movables of the ordinary house. The walls were garnished with mattocks, scythes, reaping-hooks, buckets, corn-measures, and empty sacks. The dormitory contained a rude bed, and but rarely sheets or blankets, for the gown of the day was generally the coverlet at night."³

The nineteenth century, then, presents as great an advance in food products—in quantity, quality, and variety—as it does in other commodities. The artisan of to-day has a greater variety of

¹ *A History of Agriculture and Prices in England*, vol. i. p. 51.

² *The Economic Interpretation of History*, p. 53.

³ *A History of Agriculture and Prices in England*, vol. i. p. 13. By J. E. Thorold Rogers.

food, is better clothed upon the whole, although some of his garments may not be as costly, and is better washed than the noble of mediæval times. Our meanest domestics would scorn to live in such surroundings as satisfied the mediæval aristocracy in their manor-houses. Modern times have given birth to a thousand desires, which now need to be gratified to make life worth living, and competition seems likely to increase rather than diminish, so urging the human race onward on the path of progress.

Without a numerous population an advanced civilization is impossible. External aggression has prevented any extraordinary progress in a small community; and has forced it to increase its numbers by conquest or otherwise, or has caused it to be absorbed into a more numerous or successful rival. If more immediate causes did not produce aggression from neighbouring societies, sooner or later scarcity brought about the result. In the rude state of agriculture characterizing primitive societies, variability of climate made the constant recurrence of famine felt. In such seasons of scarcity, a prosperous community became an object of general aggression, and sometimes of combined attack; and unless its numbers were sufficient to enable it to defend itself, its very existence was at once threatened.

The advantage of mere numbers may be traced, with ever increasing complexity, in more advanced civilizations. No modern nation would be safe from aggression which had not a considerable military organization; or, at least, which had not the means of creating it in the event of necessity. Other things equal, an army of two hundred thousand men will be stronger than an army of one hundred thousand. The strength, however, of an army is not only dependent upon its numbers, but upon the efficiency also of its organization. The day has long since passed for nations to be dependent for their means of defence upon an army of raw recruits, who, upon emergencies, assemble for a short period of military service, as in the Middle Ages. Standing armies have become essential in Europe, and the military profession has developed into a distinct calling. In proportion to the efficiency of an army will be its dependence upon the industrial classes for supplies. If the army is to devote its energies exclusively to military affairs, it is evident it cannot be self-supporting. The physical courage and endurance of the soldier is dependent upon his supply of food: and the number and efficiency of his weapons is dependent upon the precision acquired by the workmen in the innumerable industries through which the weapons pass in their manufacture. This precision can only be gained by practice; and the minute sub-divisions of labour, which alone make this practice possible, necessitate a great number of workmen, and a great demand for the commodity produced by them. Moreover, the efficiency of an army will greatly depend upon its

means of transit and communication. In modern warfare, fleets, railroads, and telegraphs are most important elements. Military organization, then, is dependent on and must go hand in hand with industrial organization; and the complex industrial organization necessary for the production of high results is dependent for its very existence upon larger numbers of workmen.

While, however, a numerous population is an essential of that efficiency of labour which is capable of producing a high standard of material well-being, the moral and intellectual nature of the people, partly resulting from organization and partly producing it, is no less essential. How little mere numbers necessarily promote material well-being, when the moral and intellectual nature of the people is too low to produce organization, is strikingly displayed in the Eastern world. Here we find vast populations, but populations utterly deficient in all organization; and the consequence has been that rapacious Governments have rendered efficient labour impossible. We look in vain for any progress in some of the most favoured localities in the world as regards both climate and fertility. Grinding despotisms have wrung all energy from the cultivators of the soil, and have blasted all industrial enterprise. The only safeguard against the agents of a rapacious Government has been to have nothing worth removing, or wealth that could easily be concealed, an impossibility with agricultural produce and manufactures. Under such circumstances, it is not likely that much beyond the necessities of existence would be produced.

It does not follow that population will continue indefinitely to increase at the rate it has done in the present century. The rapid growth at one period in the life of an individual is no ground for assuming an equal growth—or in fact any growth at all—will be maintained through all the stages of existence; and what evidence we possess tends to the same inference respecting social growth. Even supposing a continued uniform growth of population has been the record of the past, it would be contrary to all analogy to presume an equal growth would indefinitely continue. Whatever the true law of the expansion of population may be, it is evident the old theory that the population expands with prosperity does not tally with facts. The population of France only increased¹ by 612,000 during the last decade, although its accumulated wealth² and earnings³, with the exception of Great Britain and the United States, were greater than any nation in the world. The Jewish race, which has been exceptionally affluent, has been extremely slow of growth. Our peerages are frequently lapsing for want of descendants, and it is not the wealthy rector, but the poor curate, who is notorious for a numerous family.

¹ *Balance Sheet of the World, 1870-1880*, p. 25 (Mulhall).

² *Ibid.*, p. 31.

³ *Ibid.*, p. 33.

Whether "the process of civilization must inevitably diminish fertility, and at last destroy its excess," by the slow process Mr. Herbert Spencer points out, or whether there may be other causes in the future, now unperceived, which will prevent the over-population of the globe, it is futile to predict. Few calculations of things to happen even fifty years after prove accurate, the wisdom of the wise being confounded by dominant factors altogether unperceived. What it concerns us to know is that, even with the present productive forces of civilization, the human race can easily raise sufficient food for all to be profusely supplied; and there must be sufficient land to provide for the needs of any possible population for some centuries hence. If man lived by bread alone, probably one hour's exertion a day would be more than ample to supply his wants.

The increase of population, then, so far from being regarded as a calamity, is in reality one of the factors of progress. Modern statistics silence Malthus with crushing force. They bring forward incontrovertible evidence that a large community, *cæteris paribus*, is capable of producing more wealth, man per man, than is possible in a smaller community. They lead us to expect, as populations grow and become more organized in the future, that the energy of the masses will be taxed in a constantly lessening degree for the provision of the necessities of existence, and that leisure will be greater and the comforts and refinements of life more easily attainable. As for mere food, abundance is already secured by Western civilizations, while a mere tithe of the energy of the population is devoted to its production.

No doubt it is the existing unequal distribution of wealth that hides these facts from general view. Abuses notoriously are long-lived, and error dies hard. After nearly a century of pernicious life in England, Malthus' doctrine, so fondly cherished by the affluent, is bound to wane under the light of modern statistics. With it will die an older and still more pernicious belief, that God has ordained the poor man's lot with its attendant hopelessness and misery. The dawn of a brighter era seems to be breaking, when, in due time, it will be perceived that poverty, and well nigh all the ills of life, arise from man's ignorance and selfishness, and are curable as he grows wiser and better.