

Trade and people have grown up together, having nourished one another; the like may be said of some parts of Germany and Italy.

But on the other side England never was so populous as it might have been, and undeniably must now be far lesse populous than ever, having so lately peopled our vast American Plantations and Ireland; the decay of our Manufactures hath much depopulated our Inland Corporations of the Villages Adjacent; the decay of our Fishing Trade our Sea-Towns; I know this want of people is hardly credible with so many who see no farther than their own ease and gain; they will tell us, we have so many people already that we know not what to do with them; which is true, and so they have in Spain, where their Villages are in a manner foresaken, and many of their great Cities and Towns lie half empty; most of their ordinary people having no employment at home, are gone to America, those that remain chiefly consisting in Gentlemen, Lawyers, Officers and Shopkeepers, with their necessary men of husbandry and servants: I must not omit Priests and beggars, since to the honour and comfort of Spain they make about a fourth or fifth part of the whole; there little or no support for other ranks of men: how near this we are in England let any man judge, or how soon we shall come to it through the decay of our Manufactures;

- sparse population, agriculture
 - more difficult to promote industry
 - making some things
 - sparse populated countries - poor & miserable
 - need several trades / diverse jobs

N.L. TRANTER
 "Population" COPY 3

II

Josiah Tucker, *The elements of commerce and the theory of taxes*, 1755, in R. L. Schuyler, *Josiah Tucker, A selection from his economic and political writings*, New York, 1931, pp. 63-7, 89.

I. Where a Country is thinly peopled, it is impossible to promote a brisk and general Circulation of Industry and Labour, by reason of the Distance and Dispersion of the People from each other, and the Consequence of that, their Want of Rivalship and Emulation:— So that the greater Part of those few Inhabitants must lead a sauntering, lazy, and savage life, thereby making near Approaches to the State of mere Animals, the most wretched of all others for an human Creature to be in. This Observation is confirmed by Experience; For in every Country, extremely thin of Inhabitants, the People are proportionably poor and miserable, and lead such Lives as are but a few Removes from the brute Savages of the Woods and Mountains. Suppose only Ten Thousand Inhabitants left in Great Britain, and what would be the Consequence? —These few Inhabitants would soon degenerate into British Savages, correspondent to the Clans of the Highlands of Scotland, or the Indians of America. Suppose the Country better peopled, and then the Evil would lessen in Proportion. It is moreover observable, That in Country Places, where there is a scarcity of Inhabitants, one Trade will not be sufficient for a Man's Subsistence, but several distinct Occupations must be joined together in order to obtain a bare and wretched Support:—By which means it comes to pass, that there cannot be that Quantity of Work performed, as where every one exercises and improves himself in one particular Calling: And as to the Quality, or Workmanship itself, that must necessarily be clumsy, rude and imperfect.

II. Where a Country is thinly peopled, the very Activity, or in other Words, the exciting Cause of that Activity, viz. the Self-Love of the Inhabitants, will take a wrong Turn. For in such a Situation, the Figure that Commerce can make, must be very mean and contemptible: So that Country Gentlemen, who at the best do not entertain a

very kind Opinion of the Advantages of Commerce, are confirmed in their Prejudices against it, and choose rather to vie with each other in the Dangers of the Chace, or the Pretensions of Birth and Family, and the Length of their Pedigrees, than in giving Incouragement to the Increase of low-born Tradesmen and Mechanics.

III. Where a Country is thinly peopled, the Property of Lands will be the more easily ingrossed, and intailed in a few Families; by which means the Land-holders become more absolute and despotic over their Vassals. In this Case, Numbers are kept in Poverty and Wretchedness to raise the comparative Grandeur of one Family, and flatter the Pride of their petty Tyrant:—I say, the Pride only; for as to the Comforts of Life, he will not be on a Level with a common Tradesman in a populous and industrious Country; because he cannot have the Convenience of Markets, the Supplies of Foreign Trade, the Variety of useful Manufactures, or even the Pleasures of Society: And all that he has to put in the Scale against these real Disadvantages, is the imaginary and ungenerous Satisfaction derived from the greater Misery of his wretched Dependents. Whereas Commerce, as it is calculated to extend Industry, Happiness, and Plenty, equalizes Mankind more than any other Way of Life; and at the same time that it connects them together in Bonds of mutual Interest, it renders them FREE. Trade and Vassalage, Commerce and Slavery are, in their Natures, repugnant to each other.

IV. A Country thinly peopled, has neither the Strength, nor Riches it would have, were it better inhabited; so that it cannot make that Figure in Peace, or War, it ought to do. For Numbers of People are the Strength, as Industry is the Riches of a Country. Nay, this very Depopulation, unless preventive Remedies are used, and a proper Polity introduced, must occasion a farther Diminution of Inhabitants; because several Persons will be obliged to seek for Work in other Countries, as not having sufficient Employment, or a proper Consumption of the Produce of the Lands, or the Labour of the Manufacturer among themselves. The Lands must lie waste, where there are no Markets: and the Artificers cannot be employed without Customers.

Now when a Country, blessed with the Advantages of Liberty and Peace, commodiously situated, and happy likewise in a mild and healthy Climate, with a Soil productive of great Quantities of good

- convenience of mkt's
- supplies of foreign trade
- variety of useful manufactures
- pleasures of society

Materials both for foreign and domestic Commerce;—When such a Country increases very slowly in the Number of its Inhabitants, which might have increased very fast, we must conclude, that some Canker in Polity, or lurking Disorder, is preying upon the Vitals of that Commonwealth; which, if not timely prevented, may bring on the most fatal Consequences.

Now though Great Britain enjoys many signal Advantages, yet she will be found to labour under sore Difficulties at present, through a bad System of Polity, and the mistaken Notions of public Welfare, and National Commerce, in the following Respects;

I. Because the Marriage State is loaded with many Taxes and Expences, from which a Single Life is free. For this Burden has the same effect in its Operations, as if the Legislature had actually passed a Law to discourage Marriage, and incourage Celibacy. For the Father of a numerous Family, in paying the several Duties and Excises laid on those Commodities which his Family consumes, is fined as it were in those respective Sums, from which a Batchelor is exempt: And yet the Batchelor is not put under any Discouragements of another Nature, whereby the Scale might be brought even, or rather inclined to favour the Matrimonial Side. Nay, as Places of Diversion are continually multiplying, a Single Person with 200 l. a Year, can make a more modish Appearance, and partake of a greater Variety of Pleasures, and consequently appear in a Condition more desirable to the Generality of Mankind, than a Married Man with twice that Sum.

II. Such an Inducement to Celibacy must be greatly prejudicial to good Morals; because an Increase of Temptation will always cause an Increase of Vice. And again, a general Corruption of Morals is fatal to the Populousness of a Country in various Ways. Thus the Evil operates back upon itself, spreading and increasing as it goes on. Nay, as the Sexes will naturally associate together in the single State, and form Parties of Pleasure, the very least bad Consequence that can happen, is a giddy, thoughtless Turn of Mind, and an utter Indisposition for the Discharge of those domestic Duties, on which the Good and Happiness of Society greatly depend.

III. The Country grows thinner of Inhabitants in those Parts of the Kingdom where the Practice of destroying Cottages prevails, and

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joining several small Farms together to make one great Farm: For every Cottage or Farm-House thus destroyed, occasions the Loss of so many laborious, working Families to the Country. The same bad Effects are also produced by the unlimited Power of ingrossing Landed Estates; by the Power of intailing them upon the Male Heir; the Power of settling them all upon the Eldest Son at the Marriage-Contract; and lastly, by the Common Law of the Land, which gives all the Landed Estates of intestate Persons to the First-born Son, without shewing the least Regard to the rest of the Children. These Monopolies of Land must occasion, according as they prevail, a great Diminution of People.—Besides, it is always observable, that in Proportion the Ground is better manured, cultivated and improved: And a great number of Farms, and middling Landed Estates, thick set together, not only occasion a very great Number of Inhabitants, but also render it necessary that many of the Children of such Inhabitants should be brought up to Trades and Manufactures. And I will venture to add, that Manufacturers of this Class are the most useful, and the least subject to Corruption of Morals.—But more of this hereafter.

IV. The Nobility and Gentry of England are deterred from entering into the married State during the Prime of Life, because they can have little or no Command over their Children, when they advance towards Years of Maturity. And a Father is by no Means desirous of being treated disrespectfully by his Son, merely because he is not likely to make a Vacancy as soon as the young Heir could wish him. Yet this Consequence, bad as it is, too frequently happens to a middle-aged Man, as his Son draws towards the Years of twenty one. For at that Period of Life (such is our wrong Polity) the Parental Authority is almost at an End, and the Son can shew an undutiful Behaviour with Impunity.

Therefore to avoid this disagreeable Circumstance, the Father sends his hopeful Heir to travel into Foreign Parts, at the Age of Sixteen or Eighteen, a Season of all others, in which it is most improbable he should make any real Improvement; an Age in which he is too old for a School-boy, and too young to be able to make any useful Observations on Men or Things, being destitute of a proper Stock of Knowledge to form Comparisons between his own and foreign Countries, and without knowing the Difference between his own and foreign Countries, and without knowing the Difference

between the Religion or Laws, the Polity or Government, the Commerce or Taxes of one Country from another. In short, he is strictly and literally a Traveller, that is, a Passenger through various Countries, and the greatest Stranger to his own. However, as he stays Abroad for several Years, this is some Comfort and Relief to his Father.

But in general, as I said before, Men of Fashion do not marry in the Prime of Life. And it is observable, that they stay later in England, than in any other Country in Europe,—as if it were on purpose to be ready to move off the Stage, when their Successors come on. But alas! if they continue single during the Prime of their Years, in what manner do they spend their Time?—Generally in all the Excesses of Riot and Debauchery: so that those of higher Rank, who ought to set the Example, seldom think of raising a Family, till they are fitter for an Hospital than the Bridal Bed. What an Offspring! what Members of Society, or Defenders of their Country, are we to expect from such Parents!

V. The very Liberty which the English enjoy above other Nations, becomes in the Event, as Matters are now circumstanced, a means of dispeopling the Country. For it corrupts their Morals, hurries them into Vice and evil Courses, shortens their Days, and destroys the natural Fertility of the Sexes. In one Word, If the regular Course of Providence hath taken off its Thousands by natural Death, the Gallows and Electioneering, Spirituous Liquors and Debauchery have destroyed their Millions.

VI. Our numerous Colonies, extensive and distant Navigation, perilous and unwholesome Trades, are great and continual Drains upon us.—Add to all this, That Holland, France, and Spain keep great Numbers of British Troops in their Pay. Moreover, almost all the States of Europe draw off as many as they can of the Artificers, Sailors and Manufacturers of these Kingdoms, into their own; whilst we are so far from retaliating the like upon them, that we are for discouraging those few Foreigners who would voluntarily come over.

The way to supply these Losses, and to put a Stop to many of the Evils here complained of, is to establish such a Polity as shall give Incouragement for increasing the Numbers of People both by Matrimony, and by the Introduction of industrious Foreigners. . . .

more of small farms
causes population to grow

excesses of riot & debauchery
of first's demand

freedom
causing
immigration

encourage
matrimony
immigration

Though the Polities for promoting Marriage, and inviting Foreigners are the more immediate Ways of increasing the Number of People, yet all other Polities which tend to imploy Mankind in useful Labour, and to preserve and improve their Morals, are greatly subservient to the same good End.

A Set of Polities, for Example, which promote Industry and discourage Vice, hath the same (nay indeed a much better) Effect in its Operations, as a Sum of Money given by way of Portion to incourage Marriage. For it puts Mankind into a Capacity of increasing their Species, without bringing Misery on themselves, or intailing it on their Posterity; and by opening new Sources of Wealth and Prosperity, it incourages them to ingage in the Marriage State with a good Prospect of supporting their Families with Credit and Comfort.

When Idleness is removed, Poverty is removed likewise; and when Industry is properly and generally excited, Numbers of Hands will of Course be wanted; so that a Stock of Children may be so far from being a Burden in certain Circumstances, that they may very literally and truly become the Wealth and Riches of the Parents.

promote industry & discourage vice
 with industry all good - should be
 vice → parents
 have to be done

III

C. D'Avenant, Discourses on the Public Revenues and on the Trade of England, 2 vols, 1698, in Sir Charles Whitworth, *The Political and Commercial Works of that celebrated writer Charles D'Avenant...*, London, 5 vols., 1771, reprinted, Farnborough, 1967, vol. II. pp. 175, 179-82, 183, 184-5, 191-2, 192-3, 202-5.

The writer of these papers has seen the before-mentioned Mr. King's natural and political observations and conclusions upon the state and condition of England in manuscript.¹ The calculations therein contained are very accurate, and more perhaps to be relied upon than any thing that has been ever done of the like kind. This skilful and laborious gentleman has taken the right course to form his several schemes about the numbers of the people; for besides many different ways of working, he has very carefully inspected the poll books,² and the distinctions made by those acts, and the produce in money of the respective polls going every where by reasonable and discreet mediums; besides which pains, he has made observations of the very facts in particular towns and places, from which he has been able to judge and conclude more safely of others; so that he seems to have looked further into this mystery than any other person. . . .

Mr. King further observes, that by the assessments on marriages, births and burials, and the collector's returns thereupon,³ and by the parish registers, it appears, that the proportions of marriages, births and burials, are according to the following scheme: . . .

Whence it may be observed, that in 10,000 co-existing persons,

There are 71 or 72 marriages in the country, producing 343 children.

¹ G. King, *Natural and political observations and conclusions upon the state and condition of England*, 1696.—Ed.

² 1692 Poll Tax Returns.—Ed.

³ 1694 Act, imposing taxes to help the war effort against France. For discussion of King's analyses see D. V. Glass, Two Papers on Gregory King, in D. V. Glass and D. E. C. Eversley eds., *Population in History*, London 1965.—Ed.

Money to the Markets of the first; the first eat the Fat and the Kernel of all, and enjoy the Soft, being by their Diligence made able to buy it; and the last eat the Husk, the course, and the hard; pinch, and live miserable, being without Employment, except meer Drudging, and consequently without Money.

The Reason of the Thing answers for it self; a poor labouring Man that goes abroad to his Day Work, and Husbandry, Hedging, Ditching, Threshing, Carting, &c. and brings home his Week's Wages, suppose at eight Pence to twelve Pence a Day, or in some Counties less; if he has a Wife and three or four Children to feed, and who get little or nothing for themselves, must fare hard, and live poorly; 'tis easy to suppose it must be so.

But if this Man's Wife and Children can at the same Time get Employment, if at next Door, or at the next Village there lives a Clothier, or a Bay Maker, or a Stuff or Drugget Weaver; the Manufacturer sends the poor Woman comb'd Wool, or carded Wool every Week to spin, and she gets eight Pence or nine Pence a Day at home: the Weaver sends for her two little Children, and they by the Loom, winding, filling Quills, &c. and the two bigger Girls spin at home with their Mother, and these earn three Pence or four Pence a Day each: So that put it together, the Family at Home gets as much as the Father gets Abroad, and generally more.

This alters the Case extremely, the Family feels it, they all feed better, are cloth'd warmer, and do not so easily nor so often fall into Misery and Distress; the Father gets them Food, and the Mother gets them Clothes; and as they grow, they do not run away to be Footmen and Soldiers, Thieves and Beggars, or sell themselves to the Plantations, to avoid the Goal [sic] and the Gallows, but have a Trade at their Hands, and every one can get their Bread.

applies various
sorts of work
- more of them

V

S. Gray, *The Happiness of States: or, an inquiry concerning population, the modes of subsisting and employing it, and the effects of all on human happiness*, London, 1815, pp. 91-8, 102-4.

There is a well-known general effect produced on the different species of labour, by an increase of population, of such importance as to require particular notice. This increase has a natural tendency to divide, or, if I may use the expression, to elementize labour, that is, to employ individuals more and more in one sort of it.

If we attend to the progress of a hamlet to a village, a town, a city, we shall easily discover how this is effected. Let us imagine the hamlet to contain ten families. These ten families, supposing them unconnected with populous districts, from the smallness of their number, and the poverty consequent on this, are individually obliged to do everything as much as they can within themselves. They are all more or less employed in cultivating the ground for subsistence; for if one family were to give up its time entirely to making shoes, for example, they could scarcely get employment for the one-fifth part of their time. If we suppose the whole to amount to 50, and to require, at an average, a pair of shoes a year; and two individuals of any of the given families to be capable of making shoes, while the rest of the family assisted in spinning the hemp, and getting victuals ready, these two persons, with all their bunglingness, could make these 50 pair of shoes in 40 days at the most: and supposing 20 days employed in mending, we have 60 days in a year employed, out of 300, excluding the odd 65 for Sundays and holidays: which is only the one-fifth. This family, therefore, could not support itself solely by shoemaking. It must consequently, like its neighbours, apply to some other branches of labour.

The same thing would be true of bakers, butchers, tailors, and others engaged in the more necessary employments. All the families are, therefore, obliged to apply themselves to various sorts of works. They usually employ the greatest part of their time in the business of agriculture, which is always the most necessary. The other parts

of labour, to adopt an expression used by people in some parts of our island, in the very circumstances of this supposed hamlet, they do within themselves. They all bake, brew, make and mend clothes, and so forth, each of them for itself.

Some, however, from having a liking to one species of labour, put themselves more in the way of getting jobs of the sort from their neighbours. Thus even in this hamlet the division or elementization of labour begins to appear. One or two are bakers, shoemakers, tailors more than others, though not completely so, from their not being able to find sufficient employment in the particular line. As the hamlet grows a village, the elementizing influence of an increase of population gradually displays itself more and more. The total of the demand in most lines keeps increasing, and besides, as individual circulators, in consequence, gradually give up combining different occupations, more of the demand in each line is left for those who make choice of it. The persons disposed to follow certain particular modes of labour, therefore, find more constant employment in these. When the hamlet has grown a village, consisting, suppose, of a hundred families, not only is the demand for certain sorts of articles increased in proportion to the additional number of inhabitants, but, agreeably to the principles already explained, the average annual demand from these is more than proportionally greater than before, from the increasing ratio of consumption. The higher price of things and accumulation of capital, which necessarily arise from an increase of population, and its tendency to augment and quicken circulation, equally incite and enable the inhabitants to use a greater variety of the articles of subsistence, as well as of dress. Thus the baker, butcher, shoemaker, tailor and others, find an increased demand for their articles among a given number of customers, as well as from the greater number of these in the increased population.

The same process keeps going on, in proportion as the village becomes a little town, a large town, a city, and a great city. Not only does the town contain a greater number of persons than the village, to increase the demand in every line; but each of these persons, speaking of an average, from increasing circulation, consume more than the average quantity of each individual of the village population per annum. The demand thus keeps increasing with the population in a two-fold manner, both from mere number, and the increasing average consumption of this number. The average consumption of the articles of subsistence and dress is consequently greater in towns

consumption ↑ as population ↑
 consumption ↑ as population ↑

than in villages, and in cities than in towns. And as the elementizing power depends on the demand, its influence is more minute and complete, in proportion to the populousness of the town or city.

The population of small towns, which consist of from 1500 to 3000 inhabitants, is sufficient to elementize the more common species of labour, such as baking, making shoes and clothes, building and the like. Thus in such towns we find bakers, shoemakers, tailors, carpenters and masons very distinct. This arises from the constant and universal demand for the articles of these circulators among all classes, however poor. But in the articles of the superfluous or luxurious sort, the consumption of which depends chiefly on the richer classes, the elementization is not so complete. In towns of this description we find the shopkeeper, for example, a linen and woollen draper, a haberdasher, a grocer, a druggist, a patent medicine vender, a cheesemonger, a hat-seller, a hosier, a tallow-chandler, a watch-dealer, a hardwareman, a stationer, a bookseller and a farmer frequently in one. The doctor as they call him is an apothecary, man-midwife, surgeon, physician, farrier, and patent medicine seller. The lawyer is a pleader, a conveyancer, a steward, a gatherer of rents, a banker's agent, and so forth. As towns increase, and rise to 5000 and more, this mixture decreases; and the various classes of mechanics and dealers in a population of from 10,000 to 20,000 become, with some exceptions, pretty pure. In large cities containing 50,000 and upwards, the elementizing power is so strong, as to subdivide the portions of the same sort of labour. In sum, it uniformly holds, from the lowest to the highest amount, that the greater the number of inhabitants in a place, the more minute is the subdivision and the more complete the elementization of employment. In the immense population of London the shoemaking class, for instance, is divided into makers of men's shoes, makers of women's shoes, makers of children's shoes, boot-cutters, boot-closers, boot-makers: women's shoe-sellers, men's shoe-sellers, boot-sellers. Some tailors make coats only, others waistcoats, a great many breeches, and some gaiters: some confine themselves to jobbing or mending; and others make chiefly dress clothes. Among shopkeepers we find distinct subdivisions: grocers, cheesemongers, druggists, linen-drapers, woollen-drapers, haberdashers, hatters, hosiers, and so forth.

All this minute subdivision arises from the elementizing causes mentioned already. On the one hand, an increased demand for every

greater population divides the work into smaller parts

article from an increased population renders a given article sufficient to employ the supplier; and on the other, the supplier, besides perhaps having a greater liking to dealing in a particular article, finds it necessary, from the demand as well as his own convenience, to confine himself to it.

Populousness, and an increase of population tend also, by means of increasing the wealth of the great body, to introduce the use of many articles of comfort and luxury, which are unknown in thinly-peopled districts or small villages, and which few members of these can afford to purchase when they are known. Among articles of this description may be noticed expensive pieces of furniture, jewellery, services of plate, high-priced engravings and pictures. It is true, however, that large provincial towns are apt to borrow in these cases from the metropolis; smaller towns from these again, and villages from small towns, and sometimes all directly from the metropolis. Thinly-peopled states are apt to imitate more populous and rich ones in these cases also. Thus the use of articles of luxury, or of cheaper imitations of them, spreads with considerable rapidity through all classes, and even into districts thinly-peopled, or poor. But it is in large metropolises and the more populous countries, that articles of luxury are first introduced, because it is in these only that there is a demand for such articles to stimulate the suppliers of luxuries. Now from the nature of many of these, and the period of population and society, at which they are all introduced, which is when the elementizing principle is in full energy, as well as from the place of their introduction, their elementization is, in general, nearly complete from the beginning.

This division, or elementization of labour, which is the natural effect of the increase of population, tends to excellence in the work. By concentrating the attention of the workman on one species of work, it renders him more skilful in it, and by keeping him constantly employed on this, it gives him not only superior manual adroitness, but greater rapidity. When a manufacturer does the same thing over again every day, he acquires a mechanical neatness and cleverness without any particular effort of the mind.

The excellence thus produced, it is true, is for the most part rather in the appearance than the substance. What the all-work artificer makes, with all its clumsiness and coarseness, generally possesses substantiality, while the one-work artisan frequently sacrifices strength to show. Yet though this must be admitted with

respect to many articles, in others the latter combines superior excellence of fabric with a more finished style of execution.

This elementization of labour, and the excellence produced by it, were observed by the ancients; and, indeed, how could what is so obvious be overlooked? From it is derived, as will be hereafter more particularly noticed, the eminence of certain towns and districts for certain species of manufactures. It is even favourable to cheapness in production. Much higher wages, it is true, are commonly paid to those who work at certain branches only; but this confining of their attention and exertions to one thing, gives them such a rapidity added to masterliness in execution, that they produce a much greater quantity of it, and that well-finished, in a given time than the bungling all-work artificers; and, therefore, their employers are enabled to sell a better, or, at least, a more pleasing, article at a lower price.

Excellence, both in the worker and the work, is much promoted by the regular and systematic application of the grand directing principle of Intention. This principle seems so obvious, that we should be apt to expect to find it regularly resorted to as the uniform practical rule in every species of work or art from the beginning. What is the intention of the instrument or machine which I am going to make, or of the article which I am preparing to fabricate; and how shall I most effectually, and yet, at the same time, with the greatest ease to myself, as well as at the cheapest rate, execute that intention? Nothing appears more natural than for a workman to ask himself this question. It seems level to the capacity even of the savage. Yet how seldom is it ever regularly asked in the early and less populous stages of society. It is only in a high state of population, and chiefly amid the crowded masses of great towns, that it is asked expressly at all. The truth is, one generation of workmen quietly succeed another, and as quietly adopt the instruments and machines, and imitate the manners of the former, without giving themselves the trouble to inquire whether these be the best, or most suited to the purpose: indeed, perhaps, without ever bestowing a thought on the matter. It requires some eminent artist or some leading genius in a certain line, assisted by the stimulating influence of a crowded population, to make the workers in that line think of consulting what the intention dictates. Even in Britain, high as it has reached in populousness and the effects of populousness, with respect to how many things has the question, What is the intention?

excellence required
+ stimulus influence of a crowded population

never yet been regularly asked. Of this we are furnished with abundance of proofs wherever we cast our eyes. The clumsy inefficient instruments and machines which are used by most classes of workmen, and the unsuitedness of so many works of every kind to the purposes for which they are intended, show us, that the artificers either never considered what was the intention of the instruments which they used, or of the works at which they laboured, or had very indistinct ideas on the subject.

These effects spring out of the old inveterate habits produced in less populous periods. As population increases and approaches nearer to its complement, they gradually disappear. The increasing capital and demand, with the higher cultivation of mind, which are the products of this increase and movement, make the question of the intention be more generally asked in the execution of all kinds of work. Mutual emulation, and, indeed, necessity compel artisans of every class seriously to put it to themselves, in order to get beyond, or even to keep pace with their neighbours, and thus acquire, or retain, a share of the public favours. The natural effects of this are progressive improvements in the various instruments and machines that are retained, the rejection of those that are inadequate, the introduction of more effective ones, and a greater simplicity, and suitedness, as well as a superior masterliness of execution, in every work that is attempted. . . .

In the early periods of mankind, only the more necessary and simple machines were thought of, as being felt wanting. In proportion as men advance in population, and, consequently, civilization, their wants become more numerous, their works more various and on a grander scale, their ingenuity more acute, or at least more employed, and their capital, or circulatory ability to execute their ideas, more extensive. The advantage of machines is then distinctly seen, and the opportunities of inventing increase yearly. In the works of peace, as well as of war (and, perhaps, in the case of the latter, to the disgrace of mankind, their ingenuity has been more keen, and their attention more alive), the various mechanical powers were gradually adopted, and combined in various ways. The progress in machinery, after the more necessary was invented, seems to have been very slow; and during the dark ages, perhaps, it was rather retrograde. But among the many great and advantageous effects, which the reformation, assisted by that wonderful machine, the press, produced by rousing the human mind out of its torpid

*incentive to
invent*

state through the means of free inquiry, we may reckon the vast progress made since the time of Luther in the grand art of shortening labour by machines. This has been particularly conspicuous during the last 150 years. Perhaps, in this period, more has been done to shorten labour and execute various useful purposes by machinery, than had been achieved before it, since the commencement of the human race. And this noble art, far from being neglected, is still more eagerly pursued than ever: scarcely a month elapses, but some machine or other is introduced. Indeed this age may be justly characterized as the age of machines. And no country has stood more eminently forward here, as usual, than Great Britain.

It is in populous and well-employed, and, of course, rich countries, that machines principally originate: at least, those of the less necessary sort. Countries, however, connected with these, though but thinly peopled, and not so fully employed, may borrow, and use them prematurely, or before the period of society, in which their natural circumstances would have urged them to invent similar ones themselves. The United States of North America afford an example of this. From the British habits and character of the great mass of people throughout those states, as well as their connexion with this island, they have adopted many things before the natural time. And they have all the predilection of the present race of Britons for machines, without having such a real need of them. Travellers among them inform us, that they frequently meet with very extensive machinery, which the circumstances do not require. The apparatus is vast; but the result is trifling.

VI

G. K. Rickards, *Population and Capital. Being a course of lectures delivered before the University of Oxford in 1853-4*, London, 1854, pp. 155-6, 162-3, 166-9.

I observed in my opening remarks upon Mr. Malthus' work, that the main defect of this theory is that it is entirely one-sided. He has considered the increase of numbers in a community solely with reference to the increase of consumption which it involves disregarding the natural effect of the same cause upon production. An increase of population is, indeed, as he says, an effect of natural prosperity; but it is a cause also. It is the consequence no doubt but it is at the same time the prolific source of the wealth of nations. Its operation in the latter point of view Mr. Malthus has almost wholly overlooked. The tendency of the density of population to make industry more productive is a chapter omitted in his essay. Writing under the influence of a panic fear not altogether unwarranted by the then circumstances of this country sinking deeply as it appeared to be into a gulf of pauperism he depicted the principle of human fecundity as a gigantic power encroaching continually with rapid strides upon the limited fund of human subsistence. But he omitted to display the reverse side of the picture which represents the prolificness of mankind as the great motive power of society—the prime stimulant to industry and enterprise—the incentive of art and commerce of invention and improvement—the means by which the burthen of toil is lightened and its reward increased—by which the earth is replenished with inhabitants and the powers of nature are made subservient to human necessities and enjoyment. . . .

Now to apply these statements to the subject of population—labour being the instrument of all wealth of every nation increasing in direct proportion to the effectiveness or in other words the economy of its labour this economy is incompatible with a scanty population and is naturally promoted and facilitated by a large and dense one. I have pointed out the three principal modes by which the smallest amount of labour is made to conduce to the largest

result of profit. I shall proceed to show how each of these three pregnant sources of wealth requires an ample population, in order to its due development. That powerful lever of industry, the division of employments, is limited, as Adam Smith has clearly explained, by the extent of the market. It depends simply on the measure of the demand whether it will answer or not to carry on the business of production or trade upon that system of separation of employments, which is always, wherever it is practicable, the best economy. It is obvious that what can be done with great advantage in a large town is impracticable in a small village. Consequently, in the former the division, in the latter the concentration, of occupations, is observed to take place. In the crowded and wealthy city you find a great variety and subdivision of trades. Many businesses of a cognate kind, such as those of the haberdasher and the linendraper, the watchmaker and the silversmith, the baker and the confectioner, the bookseller and the stationer, are carried on in separate establishments. In a rural village, on the other hand, a single emporium, familiarly known as the shop, supplies all the wants of the little community.

Wearing apparel and household utensils, tea and tobacco, bread and shoes, stationery and drugs, with numberless other articles of the most multifarious kind, form the promiscuous assortment of the village shopkeeper. While his returns from the miscellaneous collection of wares are far less than those of the wealthy town tradesmen, whose dealings are confined to one sort of commodities, his customers nevertheless pay at a higher rate than in the larger market, and usually get an inferior article for their money. In a like manner, as Adam Smith remarks "a country carpenter deals in every sort of work that is made of wood: a country smith in every sort of work that is made of iron. The former is not only a carpenter, but a joiner, a cabinet-maker, and even a carver in wood, as well as a wheelwright, a ploughwright, a cart and waggon maker". Again, "there are some sorts of industry", as the same writer observes, "even of the lowest kind, which can be carried on nowhere but in a great town. A porter, for example, can find employment and subsistence in no other place. A village is by much too narrow a sphere for him; even an ordinary market-town is scarce large enough to afford him constant occupation". . . .

It is therefore evidently, as Adam Smith says, the extent of the market which limits the division of labour. A large consuming power

is an essential element in the economy of production. The larger the population, *coeteris paribus*, the more complete the organisation of industry will be. As the market expands, occupations will become more and more subdivided; if, on the contrary, the demand contracts, they will relapse into their pristine state of concentration.

2. Of the combination of labour as an advantage depending on the condition of a populous community I need say little. The fact speaks for itself. The great operations and improvements by which the wealth of nations is rapidly increased—the construction of railways, canals, piers, breakwaters, and harbours—the drainage and redemption of extensive tracts of land—the intersection or removal of natural obstacles to communication—can only be accomplished in the maturity of rich and well-peopled societies; because such works require the combined labour of large masses of men on a given point, which, in a small community, it is impossible to procure. For the execution of great works there must be a well-supplied labour-market: it is not only the command of a large capital, but the power at any moment to bring together and set in motion a small army of workmen, that enables the great contractors in this country at the present time to undertake, and rapidly to execute, those prodigious operations, which no natural impediments, or “engineering difficulties”, as they are called, are now capable of arresting. On the other hand, in the Australian colonies, previously to the late gold discoveries, population was so thin, and labour consequently so dear, that one of the first requisites of civilisation and chief sources of wealth—the formation of roads and bridges—had long been obstructed and postponed for no other cause than the want of hands to make them.

Consider, also, the numerous forms of association, the natural growth of a populous society, but impossible in a small one, which conduce to the enjoyment of life, to intellectual improvement, to habits of economy and prudence, to the advancement of science; and, by these various means, more or less directly to the increase of national wealth; such as colleges, museums, libraries, clubs, benefit societies, savings banks, insurance companies, and the like. It is by the power of numbers that these institutions subsist; it is on the principle that “many a little makes a mickle”, that their benefits are founded.

Lastly, let us see how the increase of population bears upon the

production of wealth by means of commercial exchange. To recapitulate briefly what I before stated, the benefit of exchange is in effect this—that it enables every man to get whatever he wants best and cheapest in return for that which he does best and cheapest himself. The American gives the Englishman that which, for local reasons, has cost America little labour, but which would cost England much; and the Englishman gives in return that which has cost him little labour, but in America could not be had without a great deal. Thus, each gets the advantage of the other’s facilities of production, minus only the cost of conveyance. Now what, if we go to the root of the matter, is the object and effect of all those improvements in the means of communication by which we are incessantly striving to abridge distance, and to bring countries and provinces of each other? It is simply this—to produce an artificial condensation of population. It is a good thing, no doubt, to find customers for our cottons, woollens, and hardware, and dealers in corn and breadstuffs, on the opposite side of the Atlantic. It has become a greater advantage since we have virtually brought the United States within less than half their former distance by means of steam-navigation. It would be better still if we could further reduce, by one-third or one-half, the time and cost of the voyage; but it would be best of all,—I mean, of course, in a commercial point of view,—if such things were possible, to get rid of the marine impediment altogether. The distance which now separates us from our customers is evidently a mercantile loss; and, under that conviction, we are striving to diminish it more and more every year by mechanical improvements. Suppose, now, we add, in the course of a century, to our domestic population a number of persons equal in consuming power to that of the American market at present; such an addition will be equivalent, in point of national gain, to the accomplishment of the desideratum we are now straining after, *viz.*, to make England and America, commercially, one continent. In this hypothesis I am, of course, assuming that wealth increases in England *pari passu* with the increase of population. You will observe, that I have all along been speaking of the effect of increased populousness on a country, *coeteris paribus*; my argument being that, *per se*, populousness is a cause of wealth. Compare a country having ten millions of people with another having twenty millions on an equal surface, the relation of the numbers to the capital and to the means of subsistence in each case being, at a given time, the same. I say that, starting from this

point, with equal advantages in other respects, the more populous country must outstrip the less populous in the accumulation of wealth, because, for the reasons pointed out, the concentration of numbers necessarily makes labour more productive; and, as the larger community affords twice as good a market for the productions of industry, the benefit derived from exchange (in other words, the profits of its trade) will be, in a more than twofold proportion, greater than in the other case. In fact, all the gain which the smaller country might derive from trading with a foreign neighbour equally wealthy and populous with itself, is reaped by its more populous rival, minus the deduction of freight, risk, insurance, customs' duties and other expenses of transport.

VII

T. R. Malthus, *Principles of Political Economy*, 2nd ed., London 1836, Reprinted, Frank Cass & Co., London 1951. pp. 311-14.

Section II—Of the Increase of Population considered as a Stimulus to the continued Increase of Wealth

Many writers have been of opinion that an increase of population is the sole stimulus necessary to the increase of wealth, because population, being the great source of consumption, must in their opinion necessarily keep up the demand for an increase of produce, which will naturally be followed by a continued increase of supply.

That a continued increase of population is a powerful and necessary element of increasing demand, will be most readily allowed; but that the increase of population alone, or more properly speaking the pressure of the population hard against the limits of subsistence, does not furnish an effective stimulus to the continued increase of wealth is not only evident in theory but is confirmed by universal experience. If want alone or the desire of the labouring classes to possess the necessaries and conveniences of life, were a sufficient stimulus to production, there is no state in Europe, or in the world, which would have found any other practical limit to its wealth than its power to produce; and the earth would probably before this period have contained at the very least, ten times as many inhabitants as are supported on its surface at present.

But those who are acquainted with the nature of effectual demand, will be fully aware that, where the right of private property is established, and the wants of society are supplied by industry and barter, the desire of any individual to possess the necessaries, conveniences and luxuries of life, however intense, will avail nothing towards their production, if there be no where a reciprocal demand for something which he possesses. A man whose only possession is his labour has, or has not, an effective demand for produce according as his labour is, or is not, in demand by those who have the disposal of produce. And no productive labour can ever be in demand with a