Of the Causes of Improvement in the productive Powers of Labour, and of the Order according to which its Produce is naturally distributed among the different Ranks of the People

Book I, Chapter I

Of the Division of Labor

The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is any where directed, or applied, seem to have been the effects of the division of labour.

The effects of the division of labour, in the general business of society, will be more easily understood, by considering in what manner it operates in some particular manufactures. It is commonly supposed to be carried furthest in some very trifling ones; not perhaps that it really is carried further in them than in others of more importance: but in those trifling manufactures which are destined to supply the small wants of but a small number of people, the whole number of workmen must necessarily be small; and those employed in every different branch of the work can often be collected into the same workhouse, and placed at once under the view of the spectator. In those great manufactures, on the contrary, which are destined to supply the great wants of the great body of the people, every different branch of the work employs so great a number of workmen, that it is impossible to collect them all into the same workhouse. We can seldom see more, at one time, than those employed in one single branch. Though in such manufactures, therefore, the work may really be divided into a much greater number of parts, than in those of a more trifling nature, the division is not near so obvious, and has accordingly been much less observed.

To take an example, therefore, from a very trifling manufacture; but one in which the division of labour has been very often taken notice of, the trade of the pin-maker; a workman not educated to this business (which the division of labour has rendered a distinct trade), nor acquainted with the use of the machinery employed in it (to the invention of which the same division of labour has probably given occasion), could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire, another straights it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head; to make the head requires two or three distinct operations; to put it on, is a peculiar business, to whiten the pins is another; it is even a trade by itself to put them into the paper; and the
important business of making a pin is, in this manner, divided into about eighteen distinct operations, which, in some manufactories, are all performed by distinct hands, though in others the same man will sometimes perform two or three of them. I have seen a small manufactory of this kind where ten men only were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor, and therefore but indifferently accommodated with the necessary machinery, they could, when they exerted themselves, make among them about twelve pounds of pins in a day. There are in a pound upwards of four thousand pins of a middling size. Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But if they had all wrought separately and independently, and without any of them having been educated to this peculiar business, they certainly could not each of them have made twenty, perhaps not one pin in a day; that is, certainly, not the two hundred and fortieth, perhaps not the four thousand eight hundredth part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations.

In every other art and manufacture, the effects of the division of labour are similar to what they are in this very trifling one; though, in many of them, the labour can neither be so much subdivided, nor reduced to so great a simplicity of operation. The division of labour, however, so far as it can be introduced, occasions, in every art, a proportionable increase of the productive powers of labour. The separation of different trades and employments from one another, seems to have taken place, in consequence of this advantage. This separation too is generally carried furthest in those countries which enjoy the highest degree of industry and improvement; what is the work of one man in a rude state of society, being generally that of several in an improved one. In every improved society, the farmer is generally nothing but a farmer; the manufacturer, nothing but a manufacturer. The labour too which is necessary to produce any one complete manufacture, is almost always divided among a great number of hands. How many different trades are employed in each branch of the linen and woollen manufactures, from the growers of the flax and the wool, to the bleachers and smoothers of the linen, or to the dyers and dressers of the cloth! The nature of agriculture, indeed, does not admit of so many subdivisions of labour, nor of so complete a separation of one business from another, as manufactures. It is impossible to separate so entirely, the business of the grazer from that of the corn-farmer, as the trade of the carpenter is commonly separated from that of the smith. The spinner is almost always a distinct person from the weaver; but the ploughman, the harrower, the sower of the seed, and the reaper of the corn, are often the same. The occasions for those different sorts of labour returning with the different seasons of the year, it is impossible that one man should be constantly employed in any one of them. This impossibility of making so complete and entire a separation of all the different branches of labour employed in agriculture, is perhaps the reason why the improvement of the productive powers of labour in this art, does not always keep pace with their improvement in manufactures. The most opulent nations, indeed, generally excel all their neighbours in agriculture as well as in manufactures; but they are commonly more distinguished by their superiority in the latter than in the former. Their
lands are in general better cultivated, and having more labour and expence bestowed upon them, produce more in proportion to the extent and natural fertility of the ground. But this superiority of produce is seldom much more than in proportion to the superiority of labour and expence. In agriculture, the labour of the rich country is not always much more productive than that of the poor; or, at least, it is never so much more productive, as it commonly is in manufactures. The corn of the rich country, therefore, will not always, in the same degree of goodness, come cheaper to market than that of the poor. The corn of Poland, in the same degree of goodness, is as cheap as that of France, notwithstanding the superior opulence and improvement of the latter country. The corn of France is, in the corn provinces, fully as good, and in most years nearly about the same price with the corn of England, though, in opulence and improvement, France is perhaps inferior to England. The corn-lands of England, however, are better cultivated than those of France, and the corn-lands*23 of France are said to be much better cultivated than those of Poland. But though the poor country, notwithstanding the inferiority of its cultivation, can, in some measure, rival the rich in the cheapness and goodness of its corn, it can pretend to no such competition in its manufactures; at least if those manufactures suit the soil, climate, and situation of the rich country. The silks of France are better and cheaper than those of England, because the silk manufacture, at least under the present high duties upon the importation of raw silk, does not so well suit the climate of England as that of France.*24 But the hard-ware and the coarse woollens of England are beyond all comparison superior to those of France, and much cheaper too in the same degree of goodness.*25 In Poland there are said to be scarce any manufactures of any kind, a few of those coarser household manufactures excepted, without which no country can well subsist.

This great increase of the quantity of work which, in consequence of the division of labour, the same number of people are capable of performing,*26 is owing to three different circumstances; first to the increase of dexterity in every particular workman; secondly, to the saving of the time which is commonly lost in passing from one species of work to another; and lastly, to the invention of a great number of machines which facilitate and abridge labour, and enable one man to do the work of many.*27

First, the improvement of the dexterity of the workman necessarily increases the quantity of the work he can perform; and the division of labour, by reducing every man's business to some one simple operation, and by making this operation the sole employment of his life, necessarily increases very much the dexterity of the workman. A common smith, who, though accustomed to handle the hammer, has never been used to make nails, if upon some particular occasion he is obliged to attempt it, will scarce, I am assured, be able to make above two or three hundred nails in a day, and those too very bad ones.*28 A smith who has been accustomed to make nails, but whose sole or principal business has not been that of a nailer, can seldom with his utmost diligence make more than eight hundred or a thousand nails in a day. I have seen several boys under twenty years of age who had never exercised any other trade but that of making nails, and who, when they exerted themselves, could make, each of them, upwards of two thousand three hundred
nails in a day. The making of a nail, however, is by no means one of the simplest operations. The same person blows the bellows, stirs or mends the fire as there is occasion, heats the iron, and forges every part of the nail: In forging the head too he is obliged to change his tools. The different operations into which the making of a pin, or of a metal button, is subdivided, are all of them much more simple, and the dexterity of the person, of whose life it has been the sole business to perform them, is usually much greater. The rapidity with which some of the operations of those manufactures are performed, exceeds what the human hand could, by those who had never seen them, be supposed capable of acquiring.

Secondly, the advantage which is gained by saving the time commonly lost in passing from one sort of work to another, is much greater than we should at first view be apt to imagine it. It is impossible to pass very quickly from one kind of work to another; that is carried on in a different place, and with quite different tools. A country weaver, who cultivates a small farm, must lose a good deal of time in passing from his loom to the field, and from the field to his loom. When the two trades can be carried on in the same workhouse, the loss of time is no doubt much less. It is even in this case, however, very considerable. A man commonly saunters a little in turning his hand from one sort of employment to another. When he first begins the new work he is seldom very keen and hearty; his mind, as they say, does not go to it, and for some time he rather trifles than applies to good purpose. The habit of sauntering and of indolent careless application, which is naturally, or rather necessarily acquired by every country workman who is obliged to change his work and his tools every half hour, and to apply his hand in twenty different ways almost every day of his life; renders him almost always slothful and lazy, and incapable of any vigorous application even on the most pressing occasions. Independent, therefore, of his deficiency in point of dexterity, this cause alone must always reduce considerably the quantity of work which he is capable of performing.

Thirdly, and lastly, every body must be sensible how much labour is facilitated and abridged by the application of proper machinery. It is unnecessary to give any example. I shall only observe, therefore, that the invention of all those machines by which labour is so much facilitated and abridged, seems to have been originally owing to the division of labour. Men are much more likely to discover easier and readier methods of attaining any object, when the whole attention of their minds is directed towards that single object, than when it is dissipated among a great variety of things. But in consequence of the division of labour, the whole of every man's attention comes naturally to be directed towards some one very simple object. It is naturally to be expected, therefore, that some one or other of those who are employed in each particular branch of labour should soon find out easier and readier methods of performing their own particular work, wherever the nature of it admits of such improvement. A great part of the machines made use of in those manufactures in which labour is most subdivided, were originally the inventions of common workmen, who, being each of them employed in some very simple operation, naturally turned their thoughts towards finding out easier and readier methods of performing it. Whoever has been much accustomed to visit such
manufactures, must frequently have been shewn very pretty machines, which were the inventions of such workmen, in order to facilitate and quicken their own particular part of the work. In the first fire-engines, a boy was constantly employed to open and shut alternately the communication between the boiler and the cylinder, according as the piston either ascended or descended. One of those boys, who loved to play with his companions, observed that, by tying a string from the handle of the valve which opened this communication, to another part of the machine, the valve would open and shut without his assistance, and leave him at liberty to divert himself with his play-fellows. One of the greatest improvements that has been made upon this machine, since it was first invented, was in this manner the discovery of a boy who wanted to save his own labour.

All the improvements in machinery, however, have by no means been the inventions of those who had occasion to use the machines. Many improvements have been made by the ingenuity of the makers of the machines, when to make them became the business of a peculiar trade; and some by that of those who are called philosophers or men of speculation, whose trade it is not to do any thing, but to observe every thing; and who, upon that account, are often capable of combining together the powers of the most distant and dissimilar objects. In the progress of society, philosophy or speculation becomes, like every other employment, the principal or sole trade and occupation of a particular class of citizens. Like every other employment too, it is subdivided into a great number of different branches, each of which affords occupation to a peculiar tribe or class of philosophers; and this subdivision of employment in philosophy, as well as in every other business, improves dexterity, and saves time. Each individual becomes more expert in his own peculiar branch, more work is done upon the whole, and the quantity of science is considerably increased by it.

It is the great multiplication of the productions of all the different arts, in consequence of the division of labour, which occasions, in a well-governed society, that universal opulence which extends itself to the lowest ranks of the people. Every workman has a great quantity of his own work to dispose of beyond what he himself has occasion for; and every other workman being exactly in the same situation, he is enabled to exchange a great quantity of his own goods for a great quantity, or, what comes to the same thing, for the price of a great quantity of theirs. He supplies them abundantly with what they have occasion for, and they accommodate him as amply with what he has occasion for, and a general plenty diffuses itself through all the different ranks of the society.

Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part, though but a small part, has been employed in procuring him this accommodation, exceeds all computation. The woollen coat, for example, which covers the day-labourer, as coarse and rough as it may appear, is the produce of the joint labour of a great multitude of workmen. The shepherd, the sorter of the wool, the wool-comber or carder,
the dyer, the scribbler, the spinner, the weaver, the fuller, the dresser, with many others, must all join their different arts in order to complete even this homely production. How many merchants and carriers, besides, must have been employed in transporting the materials from some of those workmen to others who often live in a very distant part of the country! how much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! What a variety of labour too is necessary in order to produce the tools of the meanest of those workmen! To say nothing of such complicated machines as the ship of the sailor, the mill of the fuller, or even the loom of the weaver, let us consider only what a variety of labour is requisite in order to form that very simple machine, the shears with which the shepherd clips the wool. The miner, the builder of the furnace for smelting the ore, the feller of the timber, the burner of the charcoal to be made use of in the smelting-house, the brick-maker, the brick-layer, the workmen who attend the furnace, the millwright, the forger, the smith, must all of them join their different arts in order to produce them. Were we to examine, in the same manner, all the different parts of his dress and household furniture, the coarse linen shirt which he wears next his skin, the shoes which cover his feet, the bed which he lies on, and all the different parts which compose it, the kitchen-grate at which he prepares his victuals, the coals which he makes use of for that purpose, dug from the bowels of the earth, and brought to him perhaps by a long sea and a long land carriage, all the other utensils of his kitchen, all the furniture of his table, the knives and forks, the earthen or pewter plates upon which he serves up and divides his victuals, the different hands employed in preparing his bread and his beer, the glass window which lets in the heat and the light, and keeps out the wind and the rain, with all the knowledge and art requisite for preparing that beautiful and happy invention, without which these northern parts of the world could scarce have afforded a very comfortable habitation, together with the tools of all the different workmen employed in producing those different conveniencies; if we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that without the assistance and co-operation of many thousands, the very meanest person in a civilized country could not be provided, even according to what we very falsely imagine, the easy and simple manner in which he is commonly accommodated. Compared, indeed, with the more extravagant luxury of the great, his accommodation must no doubt appear extremely simple and easy; and yet it may be true, perhaps, that the accommodation of an European prince does not always so much exceed that of an industrious and frugal peasant, as the accommodation of the latter exceeds that of many an African king, the absolute master of the lives and liberties of ten thousand naked savages.*40

Notes for this chapter

16. [This phrase, if used at all before this time, was not a familiar one. Its presence here is probably due to a passage in Mandeville, *Fable of the Bees*, pt. ii. (1729), dial. vi., p. 335: ‘CLEO. . . . When once men come to be governed by written laws, all the rest comes on apace. . . No number of men, when once they enjoy quiet, and no man needs to fear his neighbour, will be long without learning to divide and subdivide their labour. HOR. I don't]
understand you. CLEO. Man, as I have hinted before, naturally loves to imitate what he sees others do, which is the reason that savage people all do the same thing: this hinders them from meliorating their condition, though they are always wishing for it: but if one will wholly apply himself to the making of bows and arrows, whilst another provides food, a third builds huts, a fourth makes garments, and fifth utensils, they not only become useful to one another, but the callings and employments themselves will, in the same number of years, receive much greater improvements, than if all had been promiscuously followed by every one of the five. HOR. I believe you are perfectly right there; and the truth of what you say is in nothing so conspicuous as it is in watch-making, which is come to a higher degree of perfection than it would have been arrived at yet, if the whole had always remained the employment of one person; and I am persuaded that even the plenty we have of clocks and watches, as well as the exactness and beauty they may be made of, are chiefly owing to the division that has been made of that art into many branches. The index contains, 'Labour, The usefulness of dividing and subdividing it'. Joseph Harris, Essay upon Money and Coins, 1757, pt. i. § 12, treats of the 'usefulness of distinct trades,' or 'the advantages accruing to mankind from their betaking themselves severally to different occupations,' but does not use the phrase 'division of labour'.

17. [Ed. 1 reads 'improvements'.]
18. [Ed. 1 reads 'Though in them'.]
19. [Another and perhaps more important reason for taking an example like that which follows is the possibility of exhibiting the advantage, of division of labour in statistical form.]
20. [This parenthesis would alone be sufficient to show that those are wrong who believe Smith did not include the separation of employments in 'division of labour'.]
21. [In Adam Smith's Lectures p. 164, the business is as here, divided into eighteen; operations. This number is doubtless taken from the Encyclopédie, tom. v. (published in 1755), s.v. Épingle. The article is ascribed to M. Delaire, 'qui décrit la fabrication de l'épingle dans les ateliers même des ouvriers,' p. 807. In some factories the division was carried further. E. Chambers, Cyclopædia, vol. ii., 2nd ed., 1738, and 4th ed., 1741, s.v. Pin, makes the number of separate operations twenty-five.]
22. [Ed. 1 reads 'the'.]
23. [Ed. 1 reads 'the lands' here and line preceding.]
24. [Ed. 1 reads 'because the silk manufacture does not suit the climate of England'.]
25. [In Lectures, p. 164, the comparison is between English and French 'toys,' i.e., small metal articles.]
26. [Ed. 1 places 'in consequence of the division of labour' here instead of in the line above.]
27. ['Pour la célérité du travail et la perfection de l'ouvrage, elles dépendent entièrement de la multitude des ouvriers rassemblés. Lorsqu'une manufacture est nombreuse, chaque opération occupe un homme différent. Tel ouvrier ne fait et ne fera de sa vie qu'une seule et unique chose; tel autre une autre chose: d'où il arrive que chacune s'exécute bien et promptement, et que l'ouvrage le mieux fait est encore celui qu'on a à meilleur marché. D'ailleurs le goût et la façon se perfectionnent nécessairement entre un grand nombre d'ouvriers, parce qu'il est difficile qu'il ne s'en rencontre quelquesuns capables de réfléchir, de combiner, et de trouver enfin le seul moyen qui puisse les mettre audessus de leurs semblables; le moyen ou d'épargner la matière, ou d'allonger le temps, ou de surfaire l'industrie, soit par une machine nouvelle, soit par une manœuvre plus commune.'—Encydopédie, tom. i. (1751), p. 717, s.v. Art. All three advantages mentioned in the text above are included here.]
28. [In Lectures, p. 166, 'a country smith not accustomed to make nails will work very hard for three or four hundred a day and those too very bad'.]
29. [In Lectures, p. 166, 'a boy used to it will easily make two thousand and those incomparably better'.]
30. [In Lectures, p. 255, it is implied that the labour of making a button was divided among eighty persons.]
31. [The same example occurs in Lectures, p. 166.]
This division of labour, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual, consequence of a
certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter, and exchange one thing for another.

Whether this propensity be one of those original principles in human nature, of which no further account can be given; or whether, as seems more probable, it be the necessary consequence of the faculties of reason and speech, it belongs not to our present subject to enquire. It is common to all men, and to be found in no other race of animals, which seem to know neither this nor any other species of contracts. Two greyhounds, in running down the same hare, have sometimes the appearance of acting in some sort of concert. Each turns her towards his companion, or endeavours to intercept her when his companion turns her towards himself. This, however, is not the effect of any contract, but of the accidental concurrence of their passions in the same object at that particular time. Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog. Nobody ever saw one animal by its gestures and natural cries signify to another, this is mine, that yours; I am willing to give this for that. When an animal wants to obtain something either of a man or of another animal, it has no other means of persuasion but to gain the favour of those whose service it requires. A puppy fawns upon its dam, and a spaniel endeavours by a thousand attractions to engage the attention of its master who is at dinner, when it wants to be fed by him. Man sometimes uses the same arts with his brethren, and when he has no other means of engaging them to act according to his inclinations, endeavours by every servile and fawning attention to obtain their good will. He has not time, however, to do this upon every occasion. In civilized society he stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons. In almost every other race of animals each individual, when it is grown up to maturity, is entirely independent, and in its natural state has occasion for the assistance of no other living creature. But man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favour, and show them that it is for their own advantage to do for him what he requires of them. Whoever offers to another a bargain of any kind, proposes to do this. Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we stand in need of. It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages. Nobody but a beggar chuses to depend chiefly upon the benevolence of his fellow-citizens. Even a beggar does not depend upon it entirely. The charity of well-disposed people, indeed, supplies him with the whole fund of his subsistence. But though this principle ultimately provides him with all the necessaries of life which he has occasion for, it neither does nor can provide him with them as he has occasion for them. The greater part of his occasional wants are supplied in the same manner as those of other people, by treaty, by barter, and by purchase. With the money which one man gives him he purchases food. The old cloaths which another bestows upon him he exchanges for
other old cloaths which suit him better, or for lodging, or for food, or for money, with
which he can buy either food, cloaths, or lodging, as he has occasion.*44

As it is by treaty, by barter, and by purchase, that we obtain from one another the greater
part of those mutual good offices which we stand in need of, so it is this same trucking
disposition which originally gives occasion to the division of labour. In a tribe of hunters
or shepherds a particular person makes bows and arrows, for example, with more
readiness and dexterity than any other. He frequently exchanges them for cattle or for
venison with his companions; and he finds at last that he can in this manner get more
cattle and venison, than if he himself went to the field to catch them. From a regard to his
own interest, therefore, the making of bows and arrows grows to be his chief business,
and he becomes a sort of armourer. Another excels in making the frames and covers of
their little huts or moveable houses. He is accustomed to be of use in this way to his
neighbours, who reward him in the same manner with cattle and with venison, till at last
he finds it his interest to dedicate himself entirely to this employment, and to become a
sort of house-carpenter. In the same manner a third becomes a smith or a brazier; a fourth
a tanner or dresser of hides or skins, the principal part of the clothing of savages. And
thus the certainty of being able to exchange all that surplus part of the produce of his own
labour, which is over and above his own consumption, for such parts of the produce of
other men's labour as he may have occasion for, encourages every man to apply himself
to a particular occupation, and to cultivate and bring to perfection whatever talent or

genius he may possess for that particular species of business.*45

The difference of natural talents in different men is, in reality, much less than we are
aware of; and the very different genius which appears to distinguish men of different
professions, when grown up to maturity, is not upon many occasions so much the cause,
as the effect of the division of labour.*46 The difference between the most dissimilar
characters, between a philosopher and a common street porter, for example, seems to
arise not so much from nature, as from habit, custom, and education. When they came
into the world, and for the first six or eight years of their existence, they were
perhaps,*47 very much alike, and neither their parents nor playfellows could perceive
any remarkable difference. About that age, or soon after, they come to be employed in
very different occupations. The difference of talents comes then to be taken notice of, and
widens by degrees, till at last the vanity of the philosopher is willing to acknowledge
scarce any resemblance. But without the disposition to truck, barter, and exchange, every
man must have procured to himself every necessary and conveniency of life which he
wanted. All must have had the same duties to perform, and the same work to do, and
there could have been no such difference of employment as could alone give occasion to
any great difference of talents.*48

As it is this disposition which forms that difference of talents, so remarkable among men
of different professions, so it is this same disposition which renders that difference useful.
Many tribes of animals acknowledged to be all of the same species, derive from nature a
much more remarkable distinction of genius, than what, antecedent to custom and education, appears to take place among men. By nature a philosopher is not in genius and disposition half so different from a street porter, as a mastiff is from a greyhound, or a greyhound from a spaniel, or this last from a shepherd's dog. Those different tribes of animals, however, though all of the same species, are of scarce any use to one another. The strength of the mastiff is not in the least supported either by the swiftness of the greyhound, or by the sagacity of the spaniel, or by the docility of the shepherd's dog. The effects of those different geniuses and talents, for want of the power or disposition to barter and exchange, cannot be brought into a common stock, and do not in the least contribute to the better accommodation and conveniency of the species. Each animal is still obliged to support and defend itself, separately and independently, and derives no sort of advantage from that variety of talents with which nature has distinguished its fellows. Among men, on the contrary, the most dissimilar geniuses are of use to one another; the different produces of their respective talents, by the general disposition to truck, barter, and exchange, being brought, as it were, into a common stock, where every man may purchase whatever part of the produce of other men's talents he has occasion for.

Notes for this chapter

41. [I.e., it is not the effect of any conscious regulation by the state or society, like the 'law of Sesotris,' that every man should follow the employment of his father, referred to in the corresponding passage in Lectures, p. 168. The denial that it is the effect of individual wisdom recognising the advantage of exercising special natural talents comes lower down, 1.2.3-4.]
42. [It is by no means clear what object there could be in exchanging one bone for another.]
43. [Missprinted 'intirely' in eds. 1-5. 'Entirely' occurs a little lower down in all eds.]
44. [The paragraph is repeated from Lectures, p. 169. It is founded on Mandeville, Fable of the Bees, pt. ii. (1729), dial. vi., pp. 421, 422.]
45. [Lectures, pp. 169-170.]
46. [This is apparently directed against Harris, Money and Coins, pt. i., § 11, and is in accordance with the view of Hume, who asks readers to 'consider how nearly equal all men are in their bodily force, and even in their mental powers and faculties, ere cultivated by education.'—'Of the Original Contract,' in Essays, Moral and Political, 1748, p. 291.]
47. ['Perhaps' is omitted in eds. 2 and 3, and restored in the errata to ed. 4.)
48. [Lectures, pp. 170-171.]

End of Notes
That the Division of Labour is Limited by the Extent of the Market

As it is the power of exchanging that gives occasion to the division of labour, so the extent of this division must always be limited by the extent of that power, or, in other words, by the extent of the market. When the market is very small, no person can have any encouragement to dedicate himself entirely to one employment, for want of the power to exchange all that surplus part of the produce of his own labour, which is over and above his own consumption, for such parts of the produce of other men's labour as he has occasion for.

There are some sorts of industry, even of the lowest kind, which can be carried on no where 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. In the lone houses and very small villages which are scattered about in so desert a country as the Highlands of Scotland, every farmer must be butcher, baker and brewer for his own family. In such situations we can scarce expect to find even a smith, a carpenter, or a mason, within less than twenty miles of another of the same trade. The scattered families that live at eight or ten miles distance from the nearest of them, must learn to perform themselves a great number of little pieces of work, for which, in more populous countries, they would call in the assistance of those workmen. Country workmen are almost every where obliged to apply themselves to all the different branches of industry that have so much affinity to one another as to be employed about the same sort of materials. 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. The employments of the latter are still more various. It is impossible there should be such a trade as even that of a nailer in the remote and inland parts of the Highlands of Scotland. Such a workman at the rate of a thousand nails a day, and three hundred working days in the year, will make three hundred thousand nails in the year. But in such a situation it would be impossible to dispose of one thousand, that is, of one day's work in the year.

As by means of water-carriage a more extensive market is opened to every sort of industry than what land-carriage alone can afford it, so it is upon the sea-coast, and along the banks of navigable rivers, that industry of every kind naturally begins to subdivide and improve itself, and it is frequently not till a long time after that those improvements extend themselves to the inland parts of the country. A broad-wheeled waggon, attended by two men, and drawn by eight horses, in about six weeks time carries and brings back between London and Edinburgh near four ton weight of goods. In about the same time a ship navigated by six or eight men, and sailing between the ports of London and Leith, frequently carries and brings back two hundred ton weight of goods. Six or eight men,
therefore, by the help of water-carriage, can carry and bring back in the same time the same quantity of goods between London and Edinburgh, as fifty broad-wheeled waggons, attended by a hundred men, and drawn by four hundred horses.*49 Upon two hundred tons of goods, therefore, carried by the cheapest land-carriage from London to Edinburgh, there must be charged the maintenance of a hundred men for three weeks, and both the maintenance, and, what is nearly equal to the maintenance, the wear and tear of four hundred horses as well as of fifty great waggons. Whereas, upon the same quantity of goods carried by water, there is to be charged only the maintenance of six or eight men, and the wear and tear of a ship of two hundred tons burthen, together with the value of the superior risk, or the difference of the insurance between land and water-carriage. Were there no other communication between those two places, therefore, but by land-carriage, as no goods could be transported from the one to the other, except such whose price was very considerable in proportion to their weight, they could carry on but a small part of that commerce which at present subsists*50 between them, and consequently could give but a small part of that encouragement which they at present mutually afford to each other's industry. There could be little or no commerce of any kind between the distant parts of the world. What goods could bear the expence of land-carriage between London and Calcutta?*51 Or if there were*52 any so precious as to be able to support this expence, with what safety could they be transported through the territories of so many barbarous nations? Those two cities, however, at present carry on a very considerable commerce with each other,*53 and by mutually affording a market, give a good deal of encouragement to each other's industry.

Since such, therefore, are the advantages of water-carriage, it is natural that the first improvements of art and industry should be made where this conveniency opens the whole world for a market to the produce of every sort of labour, and that they should always be much later in extending themselves into the inland parts of the country. The inland parts of the country can for a long time have no other market for the greater part of their goods, but the country which lies round about them, and separates them from the sea-coast, and the great navigable rivers. The extent of their market, therefore, must for a long time be in proportion to the riches and populousness of that country, and consequently their improvement must always be posterior to the improvement of that country. In our North American colonies the plantations have constantly followed either the sea-coast or the banks of the navigable rivers, and have scarce any where extended themselves to any considerable distance from both.

The nations that, according to the best authenticated history, appear to have been first civilized, were those that dwelt round the coast of the Mediterranean sea. That sea, by far the greatest inlet that is known in the world, having no tides, nor consequently any waves except such as are caused by the wind only,*54 was, by the smoothness of its surface, as well as by the multitude of its islands, and the proximity of its neighbouring shores, extremely favourable to the infant navigation of the world; when, from their ignorance of the compass, men were afraid to quit the view of the coast, and from the imperfection of the art of ship-building, to abandon themselves to the boisterous waves of the ocean. To
pass beyond the pillars of Hercules, that is, to sail out of the Streights of Gibraltar, was, in the antient world, long considered as a most wonderful and dangerous exploit of navigation. It was late before even the Phenicians and Carthaginians, the most skilful navigators and ship-builders of those old times, attempted it, and they were for a long time the only nations that did attempt it.

Of all the countries on the coast of the Mediterranean sea, Egypt seems to have been the first in which either agriculture or manufactures were cultivated and improved to any considerable degree. Upper Egypt extends itself nowhere above a few miles from the Nile and in Lower Egypt that great river breaks itself into many different canals,\(^55\) which, with the assistance of a little art, seem to have afforded a communication by water-carriage, not only between all the great towns, but between all the considerable villages, and even to many farm-houses in the country; nearly in the same manner as the Rhine and the Maese do in Holland at present. The extent and easiness of this inland navigation was probably one of the principal causes of the early improvement of Egypt.

The improvements in agriculture and manufactures seem likewise to have been of very great antiquity in the provinces of Bengal in the East Indies, and in some of the eastern provinces of China; though the great extent of this antiquity is not authenticated by any histories of whose authority we, in this part of the world, are well assured. In Bengal the Ganges and several other great rivers form a great number of navigable canals\(^56\) in the same manner as the Nile does in Egypt. In the Eastern provinces of China too, several great rivers form, by their different branches, a multitude of canals, and by communicating with one another afford an inland navigation much more extensive than that either of the Nile or the Ganges, or perhaps than both of them put together. It is remarkable that neither the antient Egyptians, nor the Indians, nor the Chinese, encouraged foreign commerce, but seem all to have derived their great opulence from this inland navigation.

All the inland parts of Africa, and all that part of Asia which lies any considerable way north of the Euxine and Caspian seas, the antient Scythia, the modern Tartary and Siberia, seem in all ages of the world to have been in the same barbarous and uncivilized state in which we find them at present. The sea of Tartary is the frozen ocean which admits of no navigation, and though some of the greatest rivers in the world run through that country,\(^57\) they are at too great a distance from one another to carry commerce and communication through the greater part of it. There are in Africa none of those great inlets, such as the Baltic and Adriatic seas in Europe, the Mediterranean and Euxine seas in both Europe and Asia, and the gulphs of Arabia, Persia, India, Bengal, and Siam, in Asia, to carry maritime commerce into the interior parts of that great continent: and the great rivers of Africa are at too great a distance from one another to give occasion to any considerable inland navigation. The commerce besides which any nation can carry on by means of a river which does not break itself into any great number of branches or canals, and which runs into another territory before it reaches the sea, can never be very
considerable; because it is always in the power of the nations who possess that other territory to obstruct the communication between the upper country and the sea. The navigation of the Danube is of very little use to the different states of Bavaria, Austria and Hungary, in comparison of what it would be if any of them possessed the whole of its course till it falls into the Black Sea.*

Notes for this chapter

49. [The superiority of carriage by sea is here considerably less than in Lectures, p. 172, but is still probably exaggerated. W. Playfair, ed. of Wealth of Nations, 1805, vol. i., p. 29, says a waggon of the kind described could carry eight tons, but, of course, some allowance must be made for thirty years of road improvement.]

50. [Ed. 1 reads 'which is at present carried on'.]

51. [Playfair, op. cit., p. 30 says that equalising the out and home voyages goods were carried from London to Calcutta by sea at the same price (12s. per cwt.) as from London to Leeds by land.]

52. [Ed. 1 reads 'was'.]

53. [Ed. 1 reads 'carry on together a very considerable commerce'.]

54. [This shows a curious belief in the wave-producing capacity of the tides.]

55. [It is only in recent times that this word has become applicable especially to artificial channels; see Murray, Oxford English Dictionary, s.v.]

56. [Ed. 1 reads 'break themselves into many canals'.]

57. [The real difficulty is that the mouths of the rivers are in the Arctic Sea, so that they are separated. One of the objects of the Siberian railway is to connect them.]

58. [Ed. 1 reads 'any one' here.]

59. [The passage corresponding to this chapter is comprised in one paragraph in Lectures, p. 172.]

End of Notes