

## 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

### CHAPTER I

#### *Of the Division of Labour*

- I 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.<sup>1</sup>

<sup>a-a</sup> improvements I

<sup>1</sup> The first considered exposition of the term division of labour by a modern writer was probably by Sir William Petty: 'Those who have the command of the Sea Trade, may Work at easier Freight with more profit, than others at greater: for as Cloth must be cheaper made, when one Cards, another Spins, another Weaves, another Draws, another Dresses, another Presses and Packs; than when all the Operations above-mentioned, were clumsily performed by the same hand; so those who command the Trade of Shipping, can build long slight Ships for carrying Masts, Fir-Timber, Boards, Barks, etc.' (*Political Arithmetick* (London, 1690), 19, in C. H. Hull, *The Economic Writings of Sir William Petty* (Cambridge, 1899), i. 260). 'For in so vast a City *Manufactures* will beget one another, and each *Manufacture* will be divided into as many parts as possible, whereby the work of each *Artisan* will be simple and easie: As for Example. In the making of a *Watch*, If one Man shall make the *Wheels*, another the *Spring*, another shall Engrave the *Dial-plate*, and another shall make the *Cases*, then the *Watch* will be better and cheaper, than if the whole Work be put upon any one Man.' (*Another Essay in Political Arithmetick, concerning the Growth of the City of London* (London, 1683), 36-7, in C. H. Hull, ii.473.)

Later use was by Mandeville and Harris: 'There are many Sets of Hands in the Nation, that, not wanting proper Materials, would be able in less than half a Year to produce, fit out, and navigate a First-Rate [Man of War]: yet it is certain, that this Task would be impracticable, if it was not divided and subdivided into a great Variety of different Labours; and it is as certain, that none of these Labours require any other, than working Men of ordinary Capacities.' (B. Mandeville, *The Fable of the Bees*, pt. ii.149, ed. F. B. Kaye (Oxford, 1924), ii.142.) '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.' (*Ibid.*, pt. ii.335, ed. Kaye ii.284.) 'The advantages accruing to mankind from their betaking themselves severally to different occupations, are very great and

- 2 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 [7] 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 <sup>b</sup>in such manufactures,<sup>b</sup> 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.
- 3 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.<sup>2</sup> 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

<sup>b-b</sup> in them I

obvious: For thereby, each becoming expert and skilful in his own particular art; they are enabled to furnish one another with the products of their respective labours, performed in a much better manner, and with much less toil, than any one of them could do of himself.' (J. Harris, *An Essay upon Money and Coins*. (London, 1757), i. 16.)

The advantages of the division of labour are also emphasized by Turgot in sections III and IV of his *Reflections on the Formation and Distribution of Riches* (1766). The translation used is by R. L. Meek and included in his *Turgot on Progress, Sociology and Economics* (Cambridge, 1973).

<sup>2</sup> Cf. ED 2.4: 'to give a very frivolous instance, if all the parts of a pin were to be made by one man, if the same person was to dig the metall out of the mine, seperate it from the ore, forge it, split it into small rods, then spin these rods into wire, and last of all make that wire into pins, a man perhaps could with his utmost industry scarce make a pin in a year.' Smith added that even where the wire alone was furnished an unskilled man could probably make only about 20 pins a day. Similar examples occur in LJ (A) vi.29-30 and LJ (B) 213-14, ed. Cannan 163. It is remarked in LJ (A) vi.50 that the wire used in pin manufacture generally came from Sweden.

trades. One man draws out the wire, another straightens 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 [8] 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,<sup>3</sup> 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.<sup>4</sup> 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 [9] a proper division and combination of their different operations.

- 4 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

<sup>3</sup> Eighteen operations are described in the *Encyclopédie* (1755), v.804-7. See also *Chambers' Cyclopaedia* (4th ed. 1741), s.v. Pin.

<sup>4</sup> A very similar passage occurs in ED 2.4 which also concludes that where the processes of manufacture are divided among 18 persons, each should in effect be capable of producing 2,000 pins in a day. These figures are also cited in LJ (A) vi.30 and 51 and LJ (B) 214, ed. Cannan 163. In referring to the disadvantages of the division of labour in LJ (B) 329, ed. Cannan 255, the lecturer mentions the example of a person engaged on the 17th part of a pin or the 80th part of a button. See below, V.i.f.50.

farmer is generally nothing but a farmer; the manufacturer, nothing but a manufacturer.<sup>5</sup> 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.<sup>6</sup> It is impossible to separate so entirely, the business of [10] the grazier 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.<sup>7</sup> 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.<sup>8</sup> 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 [11] 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 1

<sup>5</sup> See below, I.x.b.52.

<sup>6</sup> The same point is made at IV.ix.35. The limitation imposed on the division of labour in agriculture is stated to require greater knowledge on the part of the workman at I.x.c.24. At the same time, agriculture was regarded by Smith as the most productive form of investment, II.v.12.

<sup>7</sup> LJ (A) vi.30-1 comments that: ‘Agriculture however does not admit of this separation of employment in the same degree as the manufactures of wool or lint or iron work. The same man must often be the plougher of the land, sower, harrower, reaper and thresher of the corn (tho’ here there may be some distinctions.)’ Similar points are made in LJ (B) 214, ed. Cannan 164.

<sup>8</sup> The two preceding sentences follow the text of ED 2.5 very closely.

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 <sup>d</sup>‘corn-lands’ of England, however, are better cultivated than those of France, and the <sup>e</sup>‘corn-lands’ 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, <sup>f</sup>‘at least under the present high duties upon the importation of raw silk,’ does not <sup>g</sup>‘so well’ suit the climate of England <sup>h</sup>‘as that of France.’ 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.<sup>9</sup> 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.

5 This great increase <sup>i</sup>‘of’ the quantity of work, which, <sup>j</sup>‘in consequence of the division of labour,’ [12] the same number of people are capable of performing, <sup>k</sup> 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.<sup>10</sup>

6 First, the improvement of the dexterity of the workman necessarily

<sup>d-d</sup> lands 1      <sup>e-e</sup> lands 1      <sup>f-f</sup> 2-6      <sup>g-g</sup> 2-6      <sup>h-h</sup> 2-6      <sup>i-i</sup> in 6  
<sup>j-j</sup> 2-6      <sup>k</sup> in consequence of the division of labour, 1

<sup>9</sup> ED 2.5 ends with the statement that: ‘The corn of France is fully as good and in the provinces where it grows rather cheaper than that of England, at least during ordinary seasons. But the toys of England, their watches, their cutlery ware, their locks & hinges of doors, their buckles and buttons are in accuracy, solidity, and perfection of work out of all comparison superior to those of France, and cheaper too in the same degree of goodness.’ A précis of this argument appears in LJ (A) vi.31-2, and LJ (B) 214, ed. Cannan 164; and see below, I.xi.o.4, where Smith states that manufactures which use the coarser metals have probably the greatest scope for the division of labour.

ED 2.6 and 7 are omitted from the WN. In these passages Smith elaborated on the advantages of the division of labour in pin making and added that these advantages were such as to suggest that any rich country which faced a loss of markets in international trade to a poor one ‘must have been guilty of some great error in its police.’ There is no corresponding passage in LJ (B), but a similar argument occurs in LJ (A) vi.34.

<sup>10</sup> This paragraph is evidently based on ED 2.8. Similar points appear in LJ (A) vi.38; LJ (B) 215-16, ed. Cannan 166. The ‘advantages’ are also cited in the *Encyclopédie* (1755), i.713-17.

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. 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 [13] 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.<sup>11</sup>

- 7 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

<sup>11</sup> This whole paragraph follows ED 2.9, save that the boy is there said to have been 19 years old. A similar argument occurs in LJ (A) vi.38, where a nailsmith of 15 is said to be capable of producing 3,000-4,000 nails in a day. See also LJ (B) 216, ed. Cannan 166:

A country smith not accustomed to make nails will work very hard for 3 or 400 a day, and these too very bad. But a boy used to it will easily make 2000 and these incomparably better; yet the improvement of dexterity in this very complex manufacture can never be equal to that in others. A nail-maker changes postures, blows the bellows, changes tools etca. and therefore the quantity produced cannot be so great as in manufactures of pins and buttons, where the work is reduced to simple operations.

(The manufacture of nails was common in central and east Scotland. In the village of Pathhead and Gallatown near Kirkcaldy a number of nailers worked domestically, using iron supplied by merchants from Dysart. The growth of the iron industry in central Scotland provided local supplies later.)

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.<sup>12</sup> The [14] habit of sauntering and of indolent careless application, which is naturally, or rather necessarily<sup>13</sup> 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.<sup>14</sup>

8 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.<sup>15</sup> I shall ' only observe, "therefore,"

' therefore, r            m-m 2-6

<sup>12</sup> Cf. ED 2.10: 'A man of great spirit and activity, when he is hard pushed upon some particular occasion, will pass with the greatest rapidity from one sort of work to another through a great variety of businesses. Even a man of spirit and activity, however, must be hard pushed before he can do this.'

<sup>13</sup> Smith often juxtaposes the terms 'naturally' and 'necessarily'. See, for example, I.viii.57, III.i.3, IV.i.30, IV.ii.4, 6, IV.vii.c.80, V.i.b.12, V.i.f.24, V.i.g.23.

<sup>14</sup> The preceding two sentences follow the concluding passages of ED 2.10 very closely. Similar arguments appear in LJ (A) vi.39-40 and LJ (B) 216-17, ed. Cannan 166-7.

<sup>15</sup> Smith cites three major improvements apart from the fire engines mentioned below, in I.xi.o.12, and see also II.ii.7. The 'condensing engine' and 'what is founded upon it, the wind gun' are cited as 'ingenious and expensive machines' in External Senses, 16. Cf. ED 2.11: 'By means of the *plough* two men, with the assistance of three horses, will cultivate more ground than twenty could do with the spade. A miller and his servant, with a wind *or* water mill, will at their ease, grind more corn than eight men could do, with the severest labour, by hand mills.' A similar example occurs in LJ (B) 217, ed. Cannan 167, save that it is said that the miller and his servant 'will do more with the water mill than a dozen men with the hand mill, tho' it too be a machine'. LJ (B) does not mention the windmill and it is also interesting to note that the example provided at LJ (A) vi.40 is exactly the same as that provided in ED. It is stated at I.xi.o.12 that neither wind nor water mills were known in England at the beginning of the sixteenth century.

Cf. Montesquieu, *Esprit des Lois*, trans. Thomas Nugent, ed. F. Neumann (New York, 1959), XXIII.xv.3, where it is stated that machines are not always useful, for example, in cases where their effect is to reduce employment. He added that 'if water-mills were not everywhere established, I should not have believed them so useful as is pretended'. In commenting on this remark Sir James Steuart confirmed that the advantages of using machines were 'so palpable that I need not insist upon them', especially in the current situation of Europe. He did, however, agree that the introduction of machines could cause problems of employment in the very short run, and that they might have adverse consequences in an economy incapable of further growth. See especially the *Principles of Political Oeconomy* (London, 1767), I.xix.

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 [15] improvement.<sup>16</sup> 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.<sup>17</sup> 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.<sup>18</sup> In the first fire-engines,<sup>19</sup> 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,

<sup>16-17</sup> employed *r*      <sup>18-19</sup> common *r*

<sup>16</sup> Exactly these views are expressed in ED 2.11 and LJ (B) 217, ed. Cannan 167. The brief statement in LJ (A) vi.41 reads that 'When one is employed constantly on one thing his mind will naturally be employed in devising the most proper means of improving it.'

<sup>17</sup> It is stated at IV.ix.47 that invention of this kind is generally the work of freemen. On the other hand Smith argues at V.i.f.50 that the mental faculties of the workers are likely to be damaged by the division of labour, thus affecting the flow of invention from this source.

<sup>18</sup> Cf. LJ (A) vi.54: 'if we go into the workhouse of any manufacturer in the new works at Sheffield, Manchester, or Birmingham, or even some towns in Scotland, and enquire concerning the machines, they will tell you that such or such an one was invented by some common workman.' See also Astronomy, II.11: 'When we enter the work-houses of the most common artizans; such as dyers, brewers, distillers; we observe a number of appearances, which present themselves in an order that seems to us very strange and wonderful.'

<sup>19</sup> In the Fourth Dialogue, Cleo refers to 'those Engines that raise Water by the Help of Fire; the Steam you know, is that which forces it up.' Mandeville, *The Fable of the Bees*, pt. ii.181-2, ed. Kaye ii.167. Fire engine was the name for the earliest steam engines. The story that follows seems untrue. See T. K. Derry and T. I. Williams, *A Short History of Technology* (Oxford, 1960), 316-19.

since it was first invented, was in this manner the discovery of a boy who wanted to save his own labour.<sup>20</sup>

- 9 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 [16] to make them became the business of a peculiar trade;<sup>21</sup> 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.<sup>22</sup> 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

<sup>20</sup> In general, Smith concluded that machines would tend to become simpler as the result of improvement; a point made in *Astronomy*, IV.19 and *First Formation of Languages*, 41. He also commented in *LRBL* i.v.34, ed. Lothian 11, that 'machines are at first vastly complex but gradually the different parts are more connected and supplied by one another.' In *ED* 2.11 Smith ascribes the invention of the Drill Plow to the farmer while claiming that some 'miserable slave' probably produced the original hand-mill (cf. below, IV.ix.47). On the other hand, some improvements were ascribed to those who made the instruments involved, as distinct from using them, and to the 'successive discoveries of time and experience, and of the ingenuity of different artists'. This subject is briefly mentioned in *LJ* (B) 217-18, ed. Cannan 167. *LJ* (A) vi.42-3 provides a more elaborate illustration of the kind found in *ED*, while stating that the inventions of the mill and plough are so old that history gives no account of them (54).

<sup>21</sup> The 'fabrication of the instruments of trade' is described as a specialized function at IV.viii.1.

<sup>22</sup> Cf. *ED* 2.11. Smith here suggests that it was probably a philosopher who first thought of harnessing both wind and water, especially the former, for the purposes of milling. Smith added that while the application of powers already known was not beyond the ability of the ingenious artist, innovation amounting to 'the application of new powers, which are altogether unknown' is the contribution of the philosopher (i.e. scientist):

When an artist makes any such discovery he shows himself to be not a meer artist but a real philosopher, whatever may be his nominal profession. It was a real philosopher only who could invent the fire-engine, and first form the idea of producing so great an effect by a power in nature which had never before been thought of. Many inferior artists, employed in the fabric of this wonderful machine, may afterwards discover more happy methods of applying that power than those first made use of by its illustrious inventor.

In a note to the passage just cited W. R. Scott suggested that Smith was probably referring to James Watt. Similar points regarding the role of the philosopher are made in *LJ* (A) vi.42-3, and more briefly in *LJ* (B) 218, ed. Cannan 167-8.

Mandeville (*The Fable of the Bees*, pt. ii.152, ed. Kaye ii.144) was more sceptical with regard to the rôle of the philosopher: 'They are very seldom the same Sort of People, those that invent Arts, and Improvements in them, and those that enquire into the Reason of Things: this latter is most commonly practis'd by such, as are idle and indolent, that are fond of Retirement, hate Business, and take delight in Speculation: whereas none succeed oftener in the first, than active, stirring, and laborious Men, such as will put their Hand to the Plough, try Experiments, and give all their Attention to what they are about.'

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.<sup>23</sup>

10 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.<sup>24</sup> 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 quan-[17]tity 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.

11 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.<sup>25</sup> 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.

<sup>23</sup> The last two paragraphs are considered in ED 2.11, but in a form which suggests that this section of the WN was considerably redrafted, although the preceding three sentences correspond very closely to the concluding sentences of ED 2.11. In the ED Smith provides examples drawn from the separate trades of 'mechanical, chemical, astronomical, physical, metaphysical, moral, political, commercial, and critical philosophers'. LJ (A) vi.43 includes a shorter list, but mentions 'ethical' and 'theological' philosophers.

<sup>24</sup> This sentence corresponds to the opening sentence of ED 2.6 save that Smith there refers to an 'immense multiplication' and 'all civilised societies'. He also alluded to 'the great inequalities of property' in the modern state. See below, p. 24 n. 29.

<sup>25</sup> Related arguments occur in LJ (A) vi.16-17; LJ (B) 211-12, ed. Cannan 161-3. The example of the 'coarse blue woollen coat' is cited in ED 2.1, LJ (A) vi.21 and LJ (B) 211, ed. Cannan 161. Cf. Mandeville (*The Fable of the Bees*, pt. i.182-3, ed. Kaye i.169-70): 'A Man would be laugh'd at, that should discover Luxury in the plain Dress of a poor Creature that walks along in a thick Parish Gown and a coarse Shirt underneath it; and yet what a number of People, how many different Trades, and what a variety of Skill and Tools must be employed to have the most ordinary *Yorkshire* Cloth? What depth of Thought and Ingenuity, what Toil and Labour, and what length of Time must it have cost, before Man could learn from a Seed to raise and prepare so useful a Product as Linen.' Cf. *ibid.*, part i.411, ed. Kaye i.356: 'What a Bustle is there to be made in several Parts of the World, before a fine Scarlet or crimson Cloth can be produced, what Multiplicity of Trades and Artificers must be employ'd!'

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.<sup>26</sup> 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 mill-wright, 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 [19] 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.<sup>27</sup> Compared, indeed, with the more extravagant luxury of the

<sup>26</sup> ED 2.1 refers to the variety of labour needed to 'produce that very simple machine, the shears of the clipper'.

<sup>27</sup> 'tis obvious that for the support of human life, to allay the painful cravings of the appetites, and to afford any of those agreeable external enjoyments which our nature is capable of, a great many external things are requisite; such as food, cloathing, habitations, many utensils, and various furniture, which cannot be obtained without a great

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,<sup>28</sup> 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.<sup>29</sup>

deal of art and labour, and the friendly aids of our fellows.' (Francis Hutcheson, *A System of Moral Philosophy* (London, 1755), i.287). John Locke (*Essay on Civil Government* (3rd ed. 1698), *Works* (London, 1823), v.363) also noted that:

'Twould be a strange catalogue of things, that industry provided and made use of, about every loaf of bread, before it came to our use, if we could trace them; iron, wood, leather, bark timber, stone, bricks, coals, lime, cloth, dyeing, drugs, pitch, tar, masts, ropes, and all the materials made use of in the ship, that brought any of the commodities used by any of the workmen, to any part of the work: all which it would be almost impossible, at least too long, to reckon up. See also Thomas Mun, *England's Treasure by Forraigne Trade* (London, 1664), iii.12.

<sup>28</sup> Cf. Mandeville (*The Fable of the Bees*, pt. i.181, ed. Kaye i.169): 'If we trace the most flourishing Nations in their Origin, we shall find that in the remote Beginnings of every Society, the richest and most considerable Men among them were a great while destitute of a great many Comforts of Life that are now enjoy'd by the meanest and most humble Wretches.'

<sup>29</sup> The phrase 'absolute master' occurs in ED 2.1 in contrasting the luxury of the common day-labourer in England with that of 'many an Indian prince, the absolute master of the lives and liberties of a thousand naked savages'. The same paragraph also contains a contrast with the 'chief of a savage nation in North America'. LJ (A) vi.21, 23 repeats the former example. Cf. LJ (B) 212, ed. Cannan 162. It is also remarked at 287, ed. Cannan 223, that one explanation of the contrast is to be found in the fact that 'An Indian has not so much as a pick-ax, a spade, nor a shovel, or any thing else but his own labour.'

There is a considerable difference in the order in which the argument of ED and this part of the WN develops. For example, ED opens chapter 2 with an analysis which is very similar to that set out in the last two paragraphs of this chapter. It is then argued that while it cannot be difficult to explain the contrast between the poor savage and the modern rich (i.e. by reference to the division of labour), yet 'how it comes about that the labourer and the peasant should likewise be better provided is not perhaps so easily understood'. Smith further illustrates the difficulty by reference to the 'oppressive inequality' of the modern state; a theme which is developed at considerable length (mainly in 2.2,3) before the paradox is resolved by reference to arguments similar to those developed in the first nine paragraphs of this chapter. In LJ (A) and (B) the argument follows a similar order to that found in ED, save that the discussion opens in each case with an account of the 'natural wants of mankind', introducing by this means the general point that even the simplest wants require a multitude of hands before they can be satisfied. The 'natural wants' thesis would, presumably, have figured in the (missing) first chapter of ED. See LJ (A) vi.8-18; LJ (B) 206-13, ed. Cannan 157-63. The link between the development of productive forces and the natural wants of man also features in Hume's essays 'Of Commerce' and 'Of Refinement in the Arts'.