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## Adam Smith on the Division of Labour: Two Views or One?

By NATHAN ROSENBERG<sup>1</sup>

Adam Smith's treatment of the division of labour has intrigued readers and commentators for many years. On the one hand it provided a masterful analysis of the gains from specialization and exchange upon which, it is no exaggeration to say, the discipline of economics was nurtured. On the other hand, Smith's apparent afterthoughts of Book V, where he refers to the deleterious effects of the division of labour upon the work force, constitute a major source of inspiration for the socialist critique of capitalist institutions, as Marx himself acknowledged. For Smith states here, in part:

In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, the great body of the people, comes to be confined to a few very simple operations, frequently to one or two. But the understandings of the greater part of men are necessarily formed by their ordinary employments. The man whose whole life is spent in performing a few simple operations, of which the effects too are, perhaps, always the same, or very nearly the same, has no occasion to exert his understanding, or to exercise his invention in finding out expedients for removing difficulties which never occur. He naturally loses, therefore, the habit of such exertion, and generally becomes as stupid and ignorant as it is possible for a human creature to become. . . . His dexterity at his own particular trade seems . . . to be acquired at the expense of his intellectual, social, and martial virtues. But in every improved and civilised society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it.<sup>2</sup>

The apparent contradiction between the views of Book I and Book V has often been commented upon. Marx observes in *Capital* that Adam Smith “. . . opens his work with an apotheosis on the division of labour. Afterwards, in the last book which treats of the sources of public revenue, he occasionally repeats the denunciations of the division of labour made by his teacher, A. Ferguson.”<sup>3</sup> More recently, in a reappraisal of this subject, Dr. E. G. West presents a confrontation of “Adam Smith's Two Views on the Division of Labour” which

<sup>1</sup> The author is indebted to his colleague, June Flanders, for helpful suggestions.

<sup>2</sup> Adam Smith, *Wealth of Nations*, Modern Library edition, edited by Edwin Cannan, pp. 734-5. All subsequent references are to this edition.

<sup>3</sup> Karl Marx, *Capital*, Foreign Languages Publishing House, Moscow, 1961, p. 123. Marx's curious notion, that Adam Smith was heavily indebted to Adam Ferguson in his analysis of the consequences of division of labour, will be dealt with in a later footnote.

he regards as “contradictory”, “incompatible”, and involving a “striking inconsistency”.<sup>1</sup> Since the issues involved are intrinsically important in addition to playing a seminal role both in the development of economic thought and in the critique of capitalist institutions and capitalist development, I propose to re-examine Smith’s treatment of division of labour primarily as it relates to one central issue: the determinants of inventive activity. I will show that Smith’s treatment of this problem is, in certain respects, considerably more complex and interesting than it has previously been made out to be. Furthermore, I hope to demonstrate that his analysis is free of the inconsistencies and contradictions which have been attributed to it. The issues at stake are of considerable importance, since Smith’s long-term prognosis for capitalism is centred upon its capacity for generating technical change and thus substantially raising *per capita* income. This capacity, in turn, is made by Smith to depend overwhelmingly—indeed one may almost say exclusively—upon the division of labour and the consequences flowing from it. As Schumpeter has stated, “. . . nobody, either before or after A. Smith, ever thought of putting such a burden upon division of labor. With A. Smith it is practically the only factor in economic progress.”<sup>2</sup>

A difficulty which most commentators seem to encounter with Smith’s views on division of labour results from interpreting the discussion in Book I to mean that invention is the sole product of workers’ intelligence.<sup>3</sup> Then, having shown by quotation from Book V that Smith believed that workers become increasingly “stupid and ignorant” as a result of division of labour, the inference is drawn that Smith is involved in a contradiction. This view of Smith is inadequate and misleading on several important counts.

We need, first, to enlarge the scope of our discussion by recognizing that Smith looks upon inventive activity as a process which has several dimensions. Increasing division of labour encourages invention in a variety of ways. It does this, first of all, by sharpening the attention of the worker and focusing it more forcefully than before upon a narrow range of processes. By narrowing down the range the worker is enabled to lavish greater care as well as curiosity upon his work. His mind is subjected to fewer distractions. In the absence of the need to make frequent readjustments by moving from one sort of activity to another, the worker proceeds in a spirit of “vigorous application”.<sup>4</sup>

<sup>1</sup> E. G. West, “Adam Smith’s Two Views on the Division of Labour”, *Economica*, February 1964, pp. 23–32.

<sup>2</sup> Joseph A. Schumpeter, *History of Economic Analysis*, New York, 1954, p. 187.

<sup>3</sup> In his opening paragraph, for example, West states: “The reader is first reminded of the discussion in Book I of the economic effects of the division of labour, and of its favourable moral and intellectual effects on the workers” (*West, loc. cit.*, p. 23). And later: “The argument of Book I clearly suggests that the division of labour enhances man’s mental stature as it increases the quantity of goods produced” (p. 25).

<sup>4</sup> *Wealth of Nations*, pp. 8–9.

The division of labour no doubt first gave occasion to the invention of machines. If a man's business in life is the performance of two or three things, the bent of his mind will be to find out the cleverest way of doing it; but when the force of his mind is divided it cannot be expected that he should be so successful.<sup>1</sup>

The worker's perception of mechanical deficiencies and of possibilities for improving the efficiency of an operation is heightened by the unrelieved intensity in the focus of his attention. Smith's apocryphal story of the young boy who, anxious to get off and give vent to his youthful exuberance with his playfellows, invented a device which opened and closed the valves of a steam engine without his assistance, is surely compelling evidence that Smith regarded the invention as a consequence of a narrow focusing of interest and attention rather than of a mature or developed intelligence.

A further important aspect of Smith's view of inventive activity, as his story of the boy and the steam engine makes clear, is motivation. One of the major themes of the *Wealth of Nations*, of course, is its exhaustive examination of the manner in which institutional arrangements structure the decision-making of the individual, sometimes in a manner which harmonizes private interest and social interest, and sometimes in a manner which disrupts them.<sup>2</sup> Smith has a great deal to say, for example, on the impact of different systems of land ownership on the introduction of agricultural improvements. Although his reference here is primarily to capital formation, rather than invention, the importance of motivation in stimulating certain types of economic behaviour shows up clearly, and is applicable to the issue of the determinants of invention and innovation as well.

On the one hand the large landowner is corrupted by his easy and luxuriant style of life:

To improve land with profit, like all other commercial projects, requires an exact attention to small savings and small gains, of which a man born to a great fortune, even though naturally frugal, is very seldom

<sup>1</sup> *Lectures on Justice, Police, Revenue and Arms delivered in the University of Glasgow by Adam Smith*, edited by Edwin Cannan, 1896, p. 167 (subsequently referred to as *Lectures*). Cf. also *Wealth of Nations*, pp. 9-10, and an early draft of the *Wealth of Nations*, which appears in W. R. Scott, *Adam Smith as Student and Professor*, Glasgow 1937, p. 336 (subsequently referred to as *Early Draft*). West recognizes the effect of increasing division of labour in performing these functions. My objection to his treatment is in his insistence that the progressive division of labour increases intelligence as well as alertness. "It is, however, in the third proposition, that invention and mechanization are encouraged by the division of labour, where we find Smith's most philosophical and conclusive case for favourable effects upon intelligence and alertness." West, *op. cit.*, p. 25. I find no evidence, either in the quotations cited by West, or in my own reading of Book I of the *Wealth of Nations* or elsewhere in Smith's writings, to support the interpretation that increasing division of labour improves either the worker's intelligence or understanding. Dexterity, certainly; alertness, yes; intelligence, no.

<sup>2</sup> This problem has been examined in some detail in Nathan Rosenberg, "Some Institutional Aspects of the *Wealth of Nations*", *Journal of Political Economy*, December 1960, pp. 557-70.

capable. The situation of such a person naturally disposes him to attend rather to ornament which pleases his fancy than to profit for which he has so little occasion.<sup>1</sup>

On the other hand, the varying forms of tenantry had, historically, discouraged improvement on the part of the cultivator. "It could never . . . be the interest even of this last species of cultivators [metayers] to lay out, in the further improvement of the land, any part of the little stock which they might save from their own share of the produce, because the lord, who laid out nothing, was to get one-half of whatever it produced."<sup>2</sup>

Where a system of farmers developed, as in England, with legal protections and security of tenure, considerable improvements might be undertaken.<sup>3</sup> For the motivation of the farmer is strengthened by the reasonable assurance that he will himself enjoy the fruits of his own initiative, ingenuity and industry. In fact, "after small proprietors . . . rich and great farmers are, in every country, the principal improvers".<sup>4</sup> Small proprietors are, however, unsurpassed.

A small proprietor . . . who knows every part of his little territory, who views it all with the affection which property, especially small property, naturally inspires, and who upon that account takes pleasure not only in cultivating but in adorning it, is generally of all improvers the most industrious, the most intelligent, and the most successful.<sup>5</sup>

Perhaps the most extreme example of the impairment of the incentive to invent is the case of slavery. For here the individual is deprived of all possibility of "bettering his condition" and has scarcely any motive for improving his productivity. "A person who can acquire no property, can have no other interest but to eat as much, and to labour as little as possible."<sup>6</sup> Interestingly enough, Smith seems to have vacillated a good deal on the precise handling of this issue. In the *Early Draft* he tentatively attributes an invention to a slave.

Some miserable slave, condemned to grind corn between two stones by the meer strength of his arms, pretty much in the same manner as painters bray their colours at present, was probably the first who thought

<sup>1</sup> *Wealth of Nations*, p. 364. In *Lectures* Smith had stated (p. 228): "Great and ancient families have seldom either stock or inclination to improve their estates, except a small piece of pleasure-ground about their house."

<sup>2</sup> *Wealth of Nations*, p. 367.

<sup>3</sup> ". . . The yeomanry of England are rendered as secure, as independent, and as respectable as law can make them". *Ibid.*, p. 394.

<sup>4</sup> *Ibid.*, p. 371.

<sup>5</sup> *Ibid.*, p. 392. Elsewhere Smith heaps praise upon successful merchants who have turned country gentlemen. "Merchants are commonly ambitious of becoming country gentlemen, and when they do, they are generally the best of all improvers" (p. 384). For the successful merchant has been subjected to the rigours and discipline of commercial life and has acquired the values and habits essential to the successful introduction of improvements. "The habits . . . of order, oeconomy and attention, to which mercantile business naturally forms a merchant, render him fitter to execute, with profit and success, any project of improvement" (p. 385).

<sup>6</sup> *Ibid.*, p. 365. Cf. *Lectures*, p. 225: "When lands . . . are cultivated by slaves, they cannot be greatly improven, as they have no motive to industry."

of supporting the upper stone by a spindle and of turning it round by a crank or handle which moved horizontally, according to what seems to have been the original, rude form of hand mills. . . .<sup>1</sup>

In the *Lectures*, however, he at one point repeats the "probable" attribution of the upper spindle to a slave<sup>2</sup> while later in the volume he asserts that "... slaves . . . can have no motive to labour but the dread of punishment, and can never invent any machines for facilitating their business".<sup>3</sup> Finally, in the *Wealth of Nations*, although Smith does not much modify his basic scepticism toward slaves, he hedges his statement, in characteristic Smithian fashion, with qualifying phrases: "Slaves . . . are *very seldom* inventive; and all the *most important* improvements, either in machinery, or in the arrangement and distribution of work, which facilitate and abridge labour, have been the discoveries of freemen."<sup>4</sup>

This quotation suggests our next point, which is of considerable importance to Smith's understanding of the relationship between division of labour and invention. Adam Smith clearly recognised the existence of a hierarchy of inventions involving varying degrees of complexity, and requiring differing amounts of technical competence, analytical sophistication and creative and synthesizing intellect. Similarly, he distinguished between the ingenuity required to produce any particular invention on the one hand, and to modify it, improve it, or to apply it to new uses on the other. Interestingly enough, Smith's most detailed treatment is in the *Early Draft*; less appears in the *Lectures* and in the *Wealth of Nations*.<sup>5</sup> With the only slight exception of his treatment of slavery, however, there is no internal evidence that Smith altered his position between the *Early Draft* and the *Wealth of Nations*.

It should be noticed, first of all, that although Smith's attempt to reconstruct the past with respect to the invention of machines takes the form, in his exposition, of conjectural history, he nevertheless shows a clear awareness of the evolutionary process in the development of

<sup>1</sup> *Early Draft*, pp. 336-37.

<sup>2</sup> "Some miserable slave who had perhaps been employed for a long time in grinding corn between two stones, probably first found out the method of supporting the upper stone by a spindle". *Lectures*, p. 167.

<sup>3</sup> *Ibid.*, p. 231. Smith was surely a bit unreasonable concerning the motivation of a slave to undertake inventions. When the only consequence is to reduce his master's costs, the slave may be assumed to be uninterested; but when the invention improves the conditions of work in some respect, surely the slave has such a motive. It is obviously in the personal interest of the slave to devise inventions which eliminate the most irksome and backbreaking varieties of work typically performed by slaves—such as the early methods of grinding corn. See *Early Draft*, pp. 336-37.

<sup>4</sup> *Wealth of Nations*, p. 648. Emphasis added. The quotation continues: "Should a slave propose any improvement of this kind, his master would be very apt to consider the proposal as the suggestion of laziness, and of a desire to save his own labour at the master's expense. The poor slave, instead of reward, would probably meet with much abuse, perhaps with some punishment. In the manufactures carried on by slaves, therefore, more labour must generally have been employed to execute the same quantity of work, than in those carried on by freemen."

<sup>5</sup> The most relevant passages are pp. 336-8 of the *Early Draft*, pp. 167-8 of the *Lectures*, and pp. 9-10 of the *Wealth of Nations*.

human artifacts. After surveying some of the basic inventions in agriculture and in grinding mills, he states: "These different improvements were probably not all of them the inventions of one man, but the successive discoveries of time and experience, and of the ingenuity of many different artists." Also: "We have not, nor cannot have, any complete history of the invention of machines, because most of them are at first imperfect, and receive gradual improvements and increase of powers from those who use them."<sup>1</sup>

At the rudest and lowest level, some simple inventions were, as indicated earlier, within the capacity of a common slave to invent. In the past many inventions of not too great complexity were made by common workmen. "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>2</sup>

Reverting to the operation of the grinding mill, Smith is prepared to concede that the simpler inventions (he cites the feeder and shoe) might have been developed by the miller himself. However, the more complex inventions were probably beyond the limited vision and capacity of the miller. Here Smith suggests that such sophisticated innovations as the cogwheel and the trundle were probably the work of millwrights. For these inventions ". . . bear the most evident marks of the ingenuity of a very intelligent artist". Smith shows here<sup>3</sup> an awareness of the vital role to be played by the capital-goods industries as a source of technological change. Such possibilities, he argues, however, are limited by the size of the market for capital goods which, in turn, determines when (and whether) capital-goods production can be undertaken as a specialized trade. "All the improvements in machinery . . . 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. . . ."<sup>4</sup>

<sup>1</sup> *Early Draft*, p. 337, and *Lectures*, p. 167. Smith's evolutionist position here is strongly reminiscent of Mandeville: ". . . We often ascribe to the Excellency of Man's Genius, and the Depth of his Penetration, what is in Reality owing to length of Time, and the Experience of many Generations, all of them very little differing from one another in natural Parts and Sagacity". *Fable of the Bees*, ed. F. B. Kaye, 1924, volume II, p. 142. Also ". . . the Works of Art and human Invention are all very lame and defective, and most of them pitifully mean at first: Our knowledge is advanced by slow Degrees, and some Arts and Sciences require the Experience of many Ages, before they can be brought to any tolerable Perfection". *Ibid.*, pp. 186-7. For further discussion of Mandeville's evolutionist views of social development, see Nathan Rosenberg, "Mandeville and Laissez-faire", *Journal of the History of Ideas*, April-June 1963, pp. 183-96.

<sup>2</sup> *Wealth of Nations*, p. 9.

<sup>3</sup> *Early Draft*, p. 337. Smith's preoccupation with technological change in milling operations is shared by Marx, who states that "the whole history of the development of machinery can be traced in the history of the corn mill". *Capital*, p. 348.

<sup>4</sup> *Wealth of Nations*, p. 10.

Continuing up the scale of complexity and sophistication, invention at the highest levels involves acts of insight, creative synthesis, and the capacity to draw upon diverse fields of knowledge. The most important inventions of all are the works of philosophers, who perceive and exploit new relationships and natural phenomena to human advantage.<sup>1</sup> A philosopher or "meer man of speculation" is

one of these people whose trade it is, not to do any thing but to observe every thing, and who are upon that account capable of combining together the powers of the most opposite and distant objects. To apply in the most advantageous manner those powers, which are already known and which have already been applied to a particular purpose, does not exceed the capacity of an ingenious artist. But to think of the application of new powers, which are altogether unknown, and which have never before been applied to any similar purpose, belongs to those only who have a greater range of thought and more extensive views of things than naturally fall to the share of a meer artist.<sup>2</sup>

The loftiest pinnacles of inventive activity, then, are occupied by philosophers, and the less rarefied heights are inhabited by artists whose activities involve less novelty and creative insight and who engage also in improving upon the inventions of more illustrious men.

It was a real philosopher only who could invent the fire engine,<sup>3</sup> 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 after wards discover more happy methods of applying that power than those first made use of by its illustrious inventor. It must have been a philosopher who, in the same manner first invented, those now common and therefore disregarded, machines, wind and water mills. Many inferior artists may have afterwards improved them.<sup>4</sup>

In short, the "capacity to invent" cannot be assessed or measured in absolute terms; the concept is meaningful only in relation to the complexity of the existing technology and the degree of creative imagination required in order for new "breakthroughs" to occur. Presumably, then, even if the alertness and intellectual capacity of the common labourer remained constant, or increased somewhat, it would be inadequate to perform the increasingly complicated intellectual feats required of an inventor in a technically progressive society.

<sup>1</sup> In his "History of Astronomy" Smith defines philosophy as "... the science of the connecting principles of nature . . . as in those sounds, which to the greater part of men seem perfectly agreeable to measure and harmony, the nicer ear of a musician will discover a want, both of the most exact time, and of the most perfect coincidence: so the more practised thought of a philosopher, who has spent his whole life in the study of the connecting principles of nature, will often feel an interval betwixt two objects, which, to more careless observers, seem very strictly conjoined." Adam Smith, "History of Astronomy", in *Essays on Philosophical Subjects*, pp. 19 and 20. It is this ability to perceive gaps and to formulate problems which, for Smith, constitutes the critical step in scientific inquiry and also in the discovery and application of useful knowledge.

<sup>2</sup> *Early Draft*, pp. 337-8.

<sup>3</sup> i.e., steam engine.

<sup>4</sup> *Early Draft*, p. 338. Cf. also *Lectures*, pp. 167-8.



A strategic determinant, within Smith's framework, of the *capacity* to invent is now clear. Major inventions involve the ability to draw upon diverse areas of human knowledge and experience and to combine them in a unique fashion to serve some specific purpose. The ideal intellectual equipment for such synthesis is possessed by ". . . 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>1</sup> This is, of course, precisely the talent which workmen become progressively *less* capable of exerting as the increasing division of labour continually narrows the range of the worker's activities (and therefore, since ". . . the understandings of the greater part of men are necessarily formed by their ordinary employments",<sup>2</sup> of his comprehension). Although, therefore, division of labour strengthens the force of a worker's attention upon a narrow range of activities and perhaps as a result increases his capacity for instituting small improvements, it is likely to disable him completely for the task of undertaking major inventions which involve drawing upon ranges of knowledge and experience to which he is less and less likely to be exposed. Originally, therefore, when production involved a relatively simple technology, increasing division of labour, by sharpening and concentrating the focus of a worker's attention, made it easier for him to invent and to institute non-fundamental improvements within the existing technology. As technology becomes increasingly complex, however, and as the solutions to problems require the ability to draw upon sources of knowledge and experience from a wide range of areas or disciplines, the worker is likely to be increasingly inadequate because of the exceedingly narrow repertory of materials from which he can draw.

But though Smith visualized the worker as becoming increasingly stupid and ignorant as a result of further division of labour, there is no reason to believe that this was necessarily inconsistent or incompatible with the possibilities for continuing technical progress and invention. This, in fact, brings us to a major point of this article. Smith looked upon the growing division of labour as a process which had not only an historical but necessarily also an important social dimension. Therefore, to concentrate solely on the impact of the division of labour upon the working class leads to the adoption of a very partial and misleading view of the economic and social consequence of division of labour. This can be seen most forcefully if we look at the changing structure of the social division of labour as a society moves from a primitive to a civilized condition.

The movement from a primitive to a civilized society is characterized by an enormous proliferation in the number of productive activities performed in society. In a primitive—i.e., unspecialized—economy each worker is, in general, obliged to perform a significant fraction

<sup>1</sup> *Wealth of Nations*, p. 10.

<sup>2</sup> *Ibid.*, p. 734.

of the total number of activities. As society progresses toward a more civilized state the number of separate activities grows prodigiously but the number performed by each individual worker declines. In an advanced society, then, there are many more activities going on in the economy but the individual worker is confined to a very narrow range. While the structure of the social division of labour becomes more complex, the individual worker's rôle becomes more simple. In the extreme case, and in contemporary jargon, the individual worker becomes the cheapest non-linear servo-mechanism. This was the prospect over which Smith (and later Marx) was so much exercised.<sup>1</sup> There are, however, important forces working in the opposite direction, for the collective intelligence of society grows *as a result of the very process* which causes the understanding of the "inferiour ranks of people" to become increasingly defective.<sup>2</sup> For the increased productivity resulting from specialization and division of labour is evident too in those trades which are concerned with the production of new knowledge.

<sup>1</sup> "The knowledge, the judgment, and the will, which, though in ever so small a degree, are practised by the independent peasant or handicraftsman, in the same way as the savage makes the whole art of war consist in the exercise of his personal cunning—these faculties are now required only for the workshop as a whole. Intelligence in production expands in one direction, because it vanishes in many others. What is lost by the detail labourers, is concentrated in the capital that employs them. It is a result of the division of labour in manufactures that the labourer is brought face to face with the intellectual potencies of the material process of production, as the property of another, and as a ruling power. This separation begins in simple co-operation, where the capitalist represents to the single workman, the oneness and the will of the associated labour. It is developed in manufacture which cuts down the labourer into a detail labourer. It is completed in modern industry, which makes science a productive force distinct from labour and presses it into the service of capital". Karl Marx, *Capital*, p. 361.

<sup>2</sup> Adam Ferguson had some striking observations on this same process: "It may even be doubted, whether the measure of national capacity increases with the advancement of arts. Many mechanical arts, indeed, require no capacity; they succeed best under a total suppression of sentiment and reason; and ignorance is the mother of industry as well as of superstition. Reflection and fancy are subject to err; but a habit of moving the hand, or the foot, is independent of either. Manufactures, accordingly, prosper most where the mind is least consulted, and where the workshop may, without any great effort of imagination, be considered as an engine, the parts of which are men. . . . But if many parts in the practice of every art, and in the detail of every department, require no abilities, or actually tend to contract and to limit the views of the mind, there are others which lead to general reflections, and to enlargement of thought. Even in manufacture, the genius of the master, perhaps, is cultivated, while that of the inferior workman lies waste. . . . The practitioner of every art and profession may afford matter of general speculation to the man of science; and thinking itself, in this age of separations, may become a peculiar craft." Adam Ferguson, *An Essay on the History of Civil Society*, sixth edition, London, 1793, pp. 305-6. In his discussion of the division of labour in *Capital*, Marx suggests (p. 362) that Adam Smith learned about "the disadvantageous effects of division of labour" from Ferguson, and that he merely "reproduces" Ferguson in Book V of the *Wealth of Nations*. Earlier (p. 354) Marx even refers to "A. Ferguson, the master of Adam Smith". Presumably Marx had in mind the fact that the first edition of Ferguson's *An Essay on the History of Civil Society* was published in 1767, nine years before the *Wealth of Nations*. The discovery of the 1763 *Lectures*, however, sufficiently establishes Smith's priority in this matter. Cf. also Karl Marx, *The Poverty of Philosophy*, Foreign Languages Publishing House, Moscow, no date, pp. 129-30.

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 sub-divided 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.<sup>1</sup>

We can express this in an admittedly over-simplified chronological sequence. In all societies antecedent to the development of an extensive division of labour in manufactures, the level of knowledge and understanding of the majority of the population is "considerable", but the dispersion is small, and there are few individuals with attainments and abilities far above the average.

In such a society indeed, no man can well acquire that improved and refined understanding, which a few men sometimes possess in a more civilized state. Though in a rude society there is a good deal of variety in the occupations of every individual, there is not a great deal in those of the whole society. Every man does, or is capable of doing, almost every thing which any other man does, or is capable of doing. Every man has a considerable degree of knowledge, ingenuity, and invention; but scarce any man has a great degree. The degree, however, which is commonly possessed, is generally sufficient for conducting the whole simple business of the society.<sup>2</sup>

In an advanced society with an extensive division of labour, however, the intellectual attainments of the "labouring poor" are hopelessly stultified and corrupted by the monotony and uniformity of the work process. On the other hand, such a society is made up of an endlessly variegated number of such activities, and although the worker's own personal assignment may be unchallenging and lacking in significant opportunities, the sum total of the occupations in society presents extraordinary opportunities for the detached and contemplative philosophers.<sup>3</sup> Although then the *modal* level of understanding is very

<sup>1</sup> *Wealth of Nations*, p. 10. Smith had expressed this same view as far back as the writing of the *Early Draft* (p. 338): "Philosophy or speculation, in the progress of society, naturally becomes, like every other employment, the sole occupation of a particular class of citizens. Like every other trade it is subdivided into many different branches, and we have mechanical, chemical, astronomical, physical, metaphysical, moral, political, commercial and critical philosophers. In philosophy, as in every other business, this subdivision of employment improves dexterity and saves time. Each individual is more expert at his particular branch. More work is done upon the whole and the quantity of science is considerably increased by it." More succinctly, Smith stated a few pages later (p. 344): "In opulent and commercial societies . . . to think or to reason comes to be, like every other employment, a particular business, which is carried on by a very few people, who furnish the public with all the thought and reason possessed by the vast multitudes that labour."

<sup>2</sup> *Wealth of Nations*, p. 735.

<sup>3</sup> At this point Smith parts company with Mandeville who, characteristically, is reluctant to attribute a beneficent social rôle to the man of pure knowledge;

low, the *highest* levels of scientific attainment permitted by the extensive specialization in the production of knowledge are quite remarkable. The *collective* intelligence of the civilized society, then, is very great and presents unique and unprecedented opportunities for further technical progress.

In a civilized state . . . though there is little variety in the occupations of the greater part of individuals, there is an almost infinite variety in those of the whole society. These varied occupations present an almost infinite variety of objects to the contemplation of those few, who, being attached to no particular occupation themselves, have leisure and inclination to examine the occupations of other people. The contemplation of so great a variety of objects necessarily exercises their minds in endless comparisons and combinations, and renders their understandings, in an extraordinary degree, both acute and comprehensive.<sup>1</sup>

We can now complete our analysis by calling attention to two further points, both of which reinforce the interpretation of Smith presented here. First of all, the more extreme debilitating consequences of the division of labour do not make themselves felt upon those employed in agriculture. This is owing to the fact that the dependence of agriculture upon the changing of the seasons imposes constraints upon the extent to which division of labour can be carried in that sector.<sup>2</sup> Precisely because the division of labour has failed to make the extensive inroads upon agricultural practices that it did upon manufacturing, Smith insists that the understanding of the inhabitants of the countryside is superior to that of their counterparts in manufacturing. Indeed, "after what are called the fine arts, and the liberal professions . . . there is perhaps no trade which requires so great a variety of knowledge and experience".<sup>3</sup> Smith contrasts invidiously the knowledge, judgment and experience required in the common mechanic trades with that required in agriculture. Furthermore, "not only the art of the farmer, the general direction of the operations of husbandry, but many inferior branches of country labour, require much more skill and experience than the greater part of mechanic trades".<sup>4</sup> Smith clearly believes that the agricultural worker avoids the "drowsy stupidity" of his urban cousins because the changing requirements of his work are continually imposing demands upon his judgment and

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" . . . 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". Mandeville, *op. cit.*, vol. II, p. 144.

<sup>1</sup> *Wealth of Nations*, pp. 735-6.

<sup>2</sup> *Ibid.*, p. 6; *Lectures*, p. 164; *Early Draft*, pp. 329-30.

<sup>3</sup> *Wealth of Nations*, p. 126.

<sup>4</sup> *Ibid.*, p. 127.

discretion, and therefore keeping alive those mental capacities which the urban worker eventually loses through sheer desuetude.<sup>1</sup> Even

the common ploughman, though generally regarded as the pattern of stupidity and ignorance, is seldom defective in this judgment and discretion. He is less accustomed, indeed, to social intercourse than the mechanic who lives in a town. His voice and language are more uncouth and more difficult to be understood by those who are not used to them. His understanding, however, being accustomed to consider a greater variety of objects, is generally much superior to that of the other, whose whole attention from morning till night is commonly occupied in performing one or two very simple operations. How much the lower ranks of people in the country are really superior to those of the town, is well known to every man whom either business or curiosity has led to converse much with both.<sup>2</sup>

Our final point is that Smith sees the upper ranks of society as a group which is thoroughly insulated from the ravages of the division of labour. Whereas the agricultural population is exempted from the worst ravages of division of labour by inherent limits upon the extent to which such division can be carried in agriculture, people "of some rank or fortune" are exempted by virtue of the simple fact that they are not compelled to earn their livelihoods through prolonged drudgery and exertions at relatively menial activities.

The employments . . . in which people of some rank or fortune spend the greater part of their lives, are not, like those of the common people, simple and uniform. They are almost all of them extremely complicated, and such as exercise the head more than the hands. The understandings of those who are engaged in such employments can seldom grow torpid for want of exercise. The employments of people of some rank and fortune, besides, are seldom such as harass them from morning to night. They generally have a good deal of leisure, during which they may perfect themselves in every branch either of useful or ornamental knowledge of which they may have laid the foundation, or for which they may have acquired some taste in the earlier part of life.<sup>3</sup>

It is clear, then, that although the division of labour has potentially disastrous effects upon the moral and intellectual qualities of the labour force, and although Smith was seriously concerned with these

<sup>1</sup> Smith may well have been prejudiced against urban life, as West has suggested, but it should now be clear that it is not necessary to resort to such a *deus ex machina* in order to account for Smith's views. West states: ". . . it seems likely that Smith's complaint of moral and intellectual degeneration was directed more against town life as such than against the factory which was only one aspect of it" (West p. 30). In the light of the interpretation set forward here, it seems much easier to regard Smith's complaints as a logical consequence of the differential incidence of division of labour upon rural and urban populations. Furthermore, of course, Smith objects to towns because, in large measure as a result of geographic concentration, the spirit of monopoly and restraints upon the competitive process develop much more readily in urban than in rural areas. See *Wealth of Nations*, pp. 126-7.

<sup>2</sup> *Ibid.*, p. 127.

<sup>3</sup> *Ibid.*, pp. 736-7.

effects, he did not fear that such developments would constitute a serious impediment to continued technological change.<sup>1</sup>

Thus Smith shows an acute perception of the social and human as well as the economic consequences of the division of labour in society. Whatever merit or demerit his analysis may have (it is my opinion that it has considerable merit) it is certainly free of serious contradictions. The main thrust of his analysis, as I have argued, is that, as a direct result of increasing division of labour, the creativity of society as a whole grows while that of the labouring poor (“ . . . that is, the great body of the people ”) declines. Marx was deeply appreciative of the nice dialectic of Smith’s analysis, and certainly learned a good deal from it, although he referred scornfully to Smith’s modest proposals for educating the workers as consisting only of the administration of “ homoeopathic doses ”.<sup>2</sup> Be that as it may, there are many who would contend that the broader aspects of the process with which Smith was attempting to come to grips—the causes and the consequences of technical progress—still constitute some of the most serious problems of industrializing societies.

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<sup>1</sup> Smith, perhaps somewhat optimistically, regarded philosophical inquiries as a natural development among leisured classes of societies which had achieved some minimum degree of order, stability and wealth. “ Those of liberal fortunes, whose attention is not much occupied either with business or with pleasure, can fill up the void of their imagination, which is thus disengaged from the ordinary affairs of life, no other way than by attending to that train of events which passes around them. While the great objects of nature thus pass in review before them, many things occur in an order to which they have not been accustomed. Their imagination, which accompanies with ease and delight the regular progress of nature, is stopped and embarrassed by those seeming incoherences; they excite their wonder and seem to require some chain of intermediate events, which, by connecting them with something that has gone before, may thus render the whole course of the universe consistent and of a piece. Wonder, therefore, and not any expectation of advantage from its discoveries, is the first principle which prompts mankind to the study of Philosophy, of that science which pretends to lay open the concealed connexions that unite the various appearances of nature; and they pursue this study for its own sake, as an original pleasure or good in itself, without regarding its tendency to procure them the means of many other pleasures ”. “ History of Astronomy ”, *op. cit.*, pp. 33–4.

<sup>2</sup> *Capital*, p. 362.