**Adam Smith: Science and Human Nature**

**Emeritus Adam Smith Professor Andrew Skinner**

University of Glasgow

Glasgow, Scotland

**Introduction**

In a notable passage, *Nobel Peace Laureate* Muhammad Yunus once remarked that theeconomists’ view of ‘human nature’ was ‘one-dimensional’. Yunus contended that ‘People are not one-dimensional entities; they are exceedingly multi-dimensional. Their emotions, beliefs, priorities and behaviour patterns can best be compared to the millions of shades we can produce from the three primary colours’ (Yunus 2007, p19; cf Pp21 and 290). The article is about Adam Smith, but it is hoped that in expounding the elements of his system it will be possible to illustrate the point that Smith would have had every sympathy with Professor Yunus’s rejection.

In what follows, Smith’s system will be expounded in terms of the order of argument which he is known to have employed as a lecturer; namely, ethics, jurisprudence and economics. But it will be convenient to begin with his treatment and knowledge of the literature of science.

**Section I: The Literature of Science**

It should be recalled that each separate component of Smith’s system represents scientific work in the style of Newton, contributing to a greater whole which was conceived in the same image. Smith’s scientific aspirations were real, as was his consciousness of the methodological tensions which may arise in the course of such work.

Smith’s interest in mathematics dates from his time as a student in Glasgow (Stewart, 1.7). He also appears to have maintained a general interest in the natural and biological sciences, facts which are attested by his purchases for the University Library (Scott 1937, p182) and for his own collection (Mizuta 2000). Smith’s ‘Letter to the Authors of *Edinburgh Review’* (1756), where he warned against any undue preoccupation with Scottish literature, affords evidence of wide reading in the physical sciences, and also contains references to contemporary work in the French *Encyclopedie* as well as to the productions of Buffon, Daubenton and Reaumur. D D Raphael has argued that the Letter owes much to Hume (TMS, 10, 11).

The essay on astronomy, which dates from the same period (it is known to have been written before 1758 and may well date from the Oxford period) indicates that Smith was familiar with classical as well as with more modern sources, such as Galileo, Kepler and Tycho Brahe, a salutary reminder that an 18th century philosopher could work close to the frontiers of knowledge in a number of fields.

But Smith was also interested in science as a form of communication, arguing in the LRBL that the way in which this type of discourse is organized should reflect its purpose as well as a judgement as to the psychological characteristics of the audience to be addressed.

In a Lecture delivered on 24 January 1763 Smith noted that didactic or scientific writing could have one of two aims: either to ‘lay down a proposition and prove this, by the different arguments that lead to that conclusion’ or to deliver a system in any science. In the latter case Smith advocated what he called the Newtonian method, whereby we ‘lay down certain principles known or proved in the beginning, from whence we account for the several phenomena, connecting all together by the same Chain’ (LRBL, ii.133). Two points are to be noted. First, Smith makes it clear that Descartes rather than Newton was the first to use this method of exposition, even although the former was now perceived to be the author of ‘one of the most entertaining Romances that have ever been wrote’ (LRBL, ii.134; Letter 5). Secondly, his reference to the pleasure to be derived from the ‘Newtonian method’ (LRBL, ii, 134) draws attention to the problem of scientific motivation, a theme which was to be developed in the ‘Astronomy’ where Smith considered those principles ‘which lead and direct philosophical enquiry’.

Smith made extensive use of mechanistic analogies, sometimes derived from Newton, seeing in the universe ‘a great machine’ wherein we may observe ‘means adjusted with the nicest artifice to the ends which they are intended to produce’ (TMS, II.ii.3.5). In the same way he noted that ‘Human society, when we contemplate it is a certain abstract and philosophical light, appears like a great, an immense machine’ (TMS, VII.ii.1.2), a position which leads quite naturally to a distinction between efficient and final causes (TMS, II.ii.3.5), which is not inconsistent with the form of Deism associated with Newton himself. It is also striking that so sympathetic a thinker as Smith should have extended the mechanistic analogy to systems of thought.

Systems in many respects resemble machines, a machine is a little system created to perform, as well as to connect together, in reality, those different movements and effects which the artist has occasion for. A system is an Imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed (Astronomy, IV.19).

Each part of Smith’s contribution is in effect an ‘imaginary’ machine which conforms closely to his own stated rules for the organisation of scientific discourse. All disclose Smith’s perception of the ‘beauty of a systematical arrangement of different observations connected by a few common principles’ (WN, V.i.f.25). The whole reveals much as to Smith’s drives as a thinker, and throws an important light on his own marked (subjective) preference for system, coherence and order.

**Section II**

Smith’s teaching from the Chair of Moral Philosophy (1752- 64) was divided into four parts. It is known that he lectured on natural theology, ethics, jurisprudence, and economics in that order and in a style which confirms his debt to his old teacher, Francis Hutcheson, under whom he studied between 1737 and 1740. It is also clear that the lectures on ethics formed the basis of *The Theory of Moral Sentiments* (TMS) and that the subjects covered in the last part of the course were further to be developed in *The Wealth of Nations* (WN).

Adam Smith had a very definite research programme in mind from an early date; a point to which he made reference in the concluding passages of the first edition of the *Theory of Moral Sentiments*. The point was also repeated in the advertisement to the sixth and last edition of the work (1790) where Smith indicated that his two great works were two parts of a plan which he hoped to complete by giving “an account of the general principles of law and government, and of the different revolutions which they had undergone in the different ages and periods of society”.

Smith did not live to complete his plan partly as a result of his appointment, in 1778, as Commissioner of Customs. But the shape of the study may well be reflected in the *Lectures on Jurisprudence* (1896, 1978).

The three parts of Smith’s great plan are highly systematic; each discloses a debt to contemporary scientific work especially in the fields of biology and Newtonian physics, all are interdependent.

The TMS, which builds upon the analyses of Hutcheson and David Hume is primarily concerned with the way in which we form moral judgements. It was also designed to explain the emergence, by natural as district from artificial means, of those barriers which control our self-regarding and un-social passions. The argument gives prominence to the emergence of general rules of conduct, based upon experience, which include the rules of law. The analysis also confirms that accepted standards of behaviour are related to environment and that they may vary in different societies at the same point in time and in a given society over time.

The lectures on jurisprudence on the other hand, help to explain the emergence of government and its changing structure in terms of an analysis which features the use of four distinct types of socio-economic environment; the celebrated stages of hunting, pasture, agriculture and commerce.

Smith’s work on ethics was closely linked with the economic analysis which was to follow. For example, if Smith gave prominence to the role of self-interest in this context, auditors of his lecture course and readers of the TMS would be aware that the basic drive to better our condition was subject to a process of moral scrutiny. It would also be appreciated that economic aspirations had a social reference in the sense that it is chiefly from a regard “to the sentiments of mankind, that we pursue riches and avoid poverty” (TMS, I.iii.2.1). Later in the book the position was further clarified when Smith noted that we tend to approve the means as well as the ends of ambition: “Hence ... that eminent esteem with which all men naturally regard a steady perseverance in the practice of frugality, industry, and application” (TMS, IV.2.8).

The lectures on jurisprudence helped Smith to specify the nature of the system of positive law which might be expected in the stage of commerce and also threw some light on the form of government which might conform to it together with the political pressures to which it may be subject.

The treatment of jurisprudence is also important in that it helps to explain the origins of the modern economy and the emergence of an institutional structure where all goods and services command a price. It is in this context that “Every man ...... Lives by exchanging, or becomes in some measure a merchant” (WN, I.iv.1); a position which leads to Smith’s famous judgement that:

 “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 chooses to depend chiefly upon the benevolence of his fellow Citizens. Even the beggar does not depend upon it entirely” (WN, I.ii.2).

Economic Analysis and Economic Liberalism

As far as the purely economic analysis is concerned, it is sufficient to be reminded that in *The Wealth of Nations* the theory of price and allocation was developed in terms of a model which made due allowance for distinct factors of production (land, labour, capital) and for the appropriate forms of return (rent, wages, profit). This point, now so obvious, was an innovation of genius by Smith and permitted him to develop an analysis of the allocative mechanism which ran in terms of inter-related adjustments in both factor and commodity markets. The resulting version of general interdependence also allowed Smith to move from the discussion of “micro” to that of “macro” economic issues, and to develop a model of the “circular flow” which relies heavily on the distinction, already established by the contemporary French economists, between fixed and circulating capital.

But these terms, which were applied to the activities of individual undertakers, were transformed in their meaning by their application to society at large. Working in terms of period analysis where all magnitudes are dated, Smith in effect represented the working of the economic process as series of activities and transactions which linked the main socio-economic groups (proprietors, capitalists, and wage-labour) and productive sectors. In Smith’s terms, current purchases in effect withdrew consumption and investment goods from the circulating capital of society; goods which were in turn replaced by virtue of productive activity in the same time period.

We should note in this context that Smith was greatly influenced by a specific model of the economy which he came across during a visit to Paris in 1766. The model was designed to explain the operation of an economic system treated as an organism. It was first produced by Francois Quesnay, a medical doctor, and developed by A R J Turgot (Meek 1962, 1973). The significance of the analogy of the circulation of the blood would not be lost on Smith – and nor would be the link with William Harvey, a distinguished member of the medical school of Padua and a notable exponent of a methodological approach which held that “the way to understand something is to take it apart, in deed or in thought, ascertain the nature of its parts and then re-assemble it – resolve and recompose it” (Watkins 1965, p52).

Looked at from one point of view, the analysis taken as a whole provides one of the most dramatic examples of the doctrine of “unintended social outcomes”, or the working of the “invisible hand”. The individual entrepreneur, seeking the most efficient allocation of resources, contributes to overall economic efficiency; the merchant’s reaction to price signals helps to ensure that the allocation of resources accurately reflects the structure of consumer preferences; the drive to better our condition contributes to economic growth. Looked at from another perspective, the work can be seen to have resulted in a great conceptual system linking together logically separate, yet inter-related, problems such as price, allocation, distribution, macro-statics and macro-dynamics.

If such a theory enabled Smith to isolate the causes of economic growth with the emphasis now on the supply side, it was also informed throughout by what Terence Hutchison has described as the “powerfully fascinating idea and assumption of beneficent self-adjustments and self-equilibration” (Hutchison 1988, p68).

Smith’s prescriptions, with regard to economic policy, followed directly on this analysis. In a system which depended on the efforts of individuals, if it was to function efficiently, Smith argued that the sovereign should discharge himself from a duty:

 “in the attempting to perform which he must always be exposed to innumerable delusions, and for the proper performance of which no human wisdom or knowledge could ever be sufficient, the duty of superintending the industry of private people, and of directing it towards the employments most suitable to the interest of the society” (WN, IV.ix.51).

In a further passage Smith drew attention to that “security which the laws in Great Britain give to every man that he shall enjoy the fruits of his own labour” and attributed the country’s contemporary performance to the fact that the “natural effort to every individual to better his own condition, when suffered to exert itself with freedom and security, is so powerful a principle, that it is alone, and without any assistance, not only capable of carrying on the society to wealth and prosperity, but of surmounting a hundred impertinent obstructions with which the folly of human laws too often encumbers its operations” (WN, IV.v.b.43). But within this general frame, Smith’s views on economic and social policy were often subtle, surprising and illuminating.

#### Section III: Mercantilism and America

It will come as no surprise to find so much of *The Wealth of Nations* devoted to a very violent attack on what Smith called the mercantile system, a system which was best understood in our own country and in our own times” (WN, IV.2). As Smith describes it, the system was based upon regulation in the interests of a positive balance of trade. In intention such a policy was restrictive and therefore liable to that “general objection which may be made to all the different expedients of the mercantile system; the objection of forcing some part of the industry of the country into a channel less advantageous than that in which it would run of its own accord” (WN, IV,v.a.24).

Smith’s treatment of the Colonial relationship with America, the centrepiece of British policy, provides an interesting and often topical example.

On Smith’s account, the Regulating Acts of Trade and Navigation in effect confined the American Colonies to primary products while Great Britain concentrated on more refined manufactures – with trade carried on in British ships. The net result was a subtle system of complementary markets which benefited both parties. Smith perceived, however, that the policy was fundamentally flawed in the sense that the relationship could not in the long-run be sustained.

The problem as Smith saw it lay in the fact that the rates of growth in the two countries would be different. Such differences could be explained in a number of ways. As Smith argued, there were differences in institutional arrangements, factor endowments and in the degree of maturity of the two economies. But in practice he placed most emphasis on the fact that the Regulating Acts would themselves cause significant variations in performance.

In the case of America, Smith contended that the fact that the country was confined to primary products created the optimal conditions for growth in an undeveloped economy. While he believed that these restrictions were a “manifest violation of one of the most sacred rights of mankind” he also pointed out that the restrictions were unlikely to be burdensome in the “present state of improvement” of the colonies (WN, IV.vii.b.44). But in the longer run, the potential for economic growth in America must come into conflict with current policy and require or force a change.

In the case of Great Britain, Smith emphasised that the rate of growth was attributable to Britain’s concentration on manufactured products and on the fact that she had become increasingly dependent on the distant trade with America as distinct from developing European links. But above all else he emphasised the point that the whole burden of the costs of maintaining the Empire fell upon the British economy with consequent effects on public debt and on the level of taxation.

Smith’s solution was dramatic but entirely consistent with the general tenor of his critique of the mercantile system. He recommended that Britain should dismantle the Regulating Acts of Trade and Navigation and create a single, gigantic, *free trade area* – an Atlantic Economic Community. Smith advocated the creation of a single state with a harmonised system of taxation possessing all the advantages, as he saw them, of a common language and culture.

In passages which remind us of Smith’s interest in constitutional and political issues, he pointed out that such a solution would require Great Britain to admit American deputies to the House of Commons, prompting the thought that:

 “in the course of little or more than a century, perhaps, the produce of American might exceed that of British taxation. The seat of empire would then naturally remove itself to that part of the empire which contributed most to the general defence and support of the whole” (WN, IV.vii.c.70): Philadelphia rather than London.

By 1776 the opportunity, as he saw it, had been lost and military defeat was the most likely outcome:

 “The plan which, if it would be executed, would certainly tend most to the prosperity, to the splendour, and to the duration of the empire, if you except here and there a solitary philosopher like myself, seem scarce to have a single advocate” (Corr, 382.)

But even here Smith contemplated the loss of America with equanimity, believing as he did that Great Britain had opportunities to exploit in Europe – and that trade with America would resume in due course, provided always that a more liberal policy was adopted.

Domestic Policy

Smith’s treatment of domestic policy shows evidence of the same pre-occupation with an environment which would best release individual effort and maximise both incentive and efficiency. For example, he recommended that the statutes of apprenticeship and the privileges of corporations be repealed on the ground that they adversely affect the working of the allocative mechanism. In the same chapter Smith pointed to barriers to the movement of labour represented by the Poor Laws and Laws of Settlement (cf WN, I.x.c; IV.ii.42).

Smith’s basic objection was to positions of privilege, such as monopoly powers, as being both unjust and impolitic; unjust in that a position of monopoly is a position of unfair advantage and impolitic in that the prices of goods so controlled are “upon every occasion the highest that can be got”. But at the same time Smith advocated a series of policies – all catalogued by Jacob Viner (1927) – which range from government control of the coinage to regulation of mortgages and the legal enforcement of contracts.

Four broad areas of intervention recommended by Smith are of particular interest, in the sense that they involve issues of general principle. First, he advised governments that, where they were faced with taxes imposed by their competitors in trade, retaliation could be in order especially if such an action had the effect of ensuring the “repeal of the high duties or prohibitions complained of” (cf Winch 1983, p509). Secondly, Smith advocated the use of taxation, not simply as a means of raising revenue, but as a means of controlling certain activities, and of compensating for what would now be known as a defective telescopic faculty, i.e. a failure to perceive our long-run interest (cf WN, V.ii.g.4; V.ii.k.50; V/ii.g.12), commonly now referred to as “short-termism”.

Smith was also well aware that the modern version of the “circular flow” depended on paper money and on credit; in effect a system of “dual circulation” involving a complex of transactions linking producers and merchants, dealers and consumers (WN, II.ii.88); transactions that would involve cash (at the level of the household) and credit (at the level of the firm). It is in this context that Smith advocated control over the rate of interest, set in such a way as to ensure that “sober people are universally preferred, as borrowers, to prodigals and projectors” (WN, II.iv.15). He was also willing to regulate the small note issue in the interests of a stable banking system.

Although Smith’s monetary analysis is not regarded as amongst the strongest of his contributions, it should be remembered that he witnessed the collapse of major banks in the 1770s (may even have been personally a victim of one such) and was acutely aware of the problems generated by a sophisticated credit structure. It was in this context that he articulated a very general principle, namely, that “those exertions of the natural liberty of a few individuals, which might endanger the security of the whole society, are, and ought to be restrained by the laws of all governments; of the most free, as well as of the most despotical” (WN, II.ii..94).

Emphasis should be given, finally, to Smith’s contention that a major responsibility of government must be the provision of certain public works and institutions for facilitating the commerce of the society which were “of such a nature, that the profit could never repay the expence to any individual or small number of individuals, and which it, therefore, cannot be expected that any individual or small number of individuals should erect or maintain” (WN, V,i.c.1). In short, he was concerned to point out that the state would have to organise services or public works which the profit motive alone could not guarantee.

The examples of public works which Smith provided include such items as roads, bridges, canals and harbours – all thoroughly in keeping with the conditions of the time and with Smith’s emphasis on the importance of transport as a contribution to the effective operation of the market and to the process of economic growth.

The theme is continued in his treatment of another important service, namely education; a subject which is developed in the course of Smith’s discussion of the social and psychological costs of economic growth.

**Section IV: Education - The Costs of Economic Growth**

It will be recalled that for Smith moral judgement depends on our capacity for acts of imaginative sympathy and that such acts can only take place within the context of some social group (TMS, III.i.3). However, Smith also observed that these mechanisms might break down in the context of the modern economy, due in part to the size of some manufacturing units and of the cities which housed them.

If the problems of solitude and isolation consequent on the growth of cities explain Smith’s first group of points, a related trend in the shape of the division of labour helps to account for the second. In discussing this important source of economic benefit (which is emphasised to an extraordinary degree in *The Wealth of Nations*) Smith noticed that it could involve costs. Or, as Smith put it in one of the most famous passages in his major work:

 “In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, of 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” (WN, V.i.f.50).

It is the fact that the “labouring poor, that is the great body of the people” must necessarily fall into the state outlined that makes it necessary for government to intervene.

Smith’s justification for intervention is, as before, market failure, in that the labouring poor, unlike those of rank and fortune, lack the leisure, means, or (by virtue of their occupations) the inclination to provide education for their children (WN, V.i.f.53). In view of the nature and scale of the problem, Smith’s programme seems rather limited, but he did argue that the poor could be taught “the most essential parts of education…to read, write, and account” together with the “elementary parts of geometry and mechanics” (WN, V.i.f.54,55).

It is interesting to observe in this context that Smith was prepared to go so far as to infringe the natural liberty of the subject, at least where the latter is narrowly defined, in recommending that the “public can impose upon almost the whole body of the people the necessity of acquiring those most essential parts of education, by obliging every man to undergo an examination or probation in them before he can obtain the freedom in any corporation, or be allowed to set up any trade either in a village or town corporate” (WN, V.i.f.57).

 Distinct from the above, although connected with it, is Smith’s concern with the decline of martial spirit which is the consequence of the nature of the fourth, or commercial stage. *In The Wealth of Nations* Smith seems to have had in mind the provision of some kind of military education which he supported as a contribution to the well-being of the individual (WN, V,i.f.60).

Smith also sought to encourage an informed “middling rank” and suggested that government should act “by instituting some sort of probation, even in the higher and more difficult sciences, to be under gone by every person before he was permitted to exercise any liberal profession, or before he could be received as a candidate for any honourable office of trust or profit” (WN, V.i.g.14).

**The Organisation of Public Services**

Smithnot only identified the various services which the state was expected to provide; he also gave a great deal of attention to the forms of organisation which would be needed to ensure and to induce efficient delivery.

In the discussion of defence, for example, he expressed a preference for a standing army to a militia because the former would be more specialised and therefore more efficient (WN, V.i.a.14).

In the case of justice, Smith contended that the sovereign has the duty “of protecting, as far as possible, every member of the society from the injustice or oppression of every other member of it” (WN, V.i.b.1). Here he argued that effective provision of so central a service depended crucially on a clear separation of the judicial from the executive power (WN, V.i.b.23).

As Alan Peacock (1975) has pointed out, Smith’s efficiency criteria are distinguished from this basic issue of organisation, the argument being, in effect, that the services provided by attorneys, clerks, or judges should be paid for in such a way as to encourage productivity. Smith also ascribed the “present admirable constitution of the courts of justice in England” to the use of a system of court fees which had served to encourage competition between the courts of King’s of King’s Bench, Chancery and Exchequer (WN, V.i.b.20.21).

The theme was continued in the discussion of public works where he suggested that the main problems to be addressed were those of equity and efficiency.

With regard to *equity,* Smith argued that public works such as highways, bridges, and canals should be paid for by those who use them and in proportion to the wear and tear occasioned. He also defended the principle of direct payment on the ground of efficiency. Only by this means, he argued in a section of powerful present relevance, would it be possible to ensure that services are provided where there is a recognisable need; only in this way would it be possible to avoid building roads through a desert for the sake of some private interest; or a great bridge “thrown over a river at a place where nobody passes, or merely to embellish the view from the windows of a neighbouring palace: things which sometimes happen, in countries where works of this kind are carried on by any other revenue than that which they themselves are capable of affording” (WN, V.i.d.6).

Smith also tirelessly emphasized the point, already noticed in the discussion of justice, namely, that in every trade and profession “the exertion of the greater part of those who exercise it, is always in proportion to the necessity they are under of making that exertion” (WN, V.i.f.4). On this ground, for example, he approved of the expedient used in France, whereby a construction engineer was made a present of tolls on a canal for which he had been responsible, thus ensuring that it was in his interest to keep the canal in good repair.

The “incentive” argument is also eloquently developed in Smith’s treatment of universities where he argued, notably in correspondence with his old friend and colleague William Cullen, that degrees can be likened to the statutes of apprenticeship (Corr, 177) and protested against the idea of universities having a monopoly of higher education (Corr, 174) on the ground that this would inhibit private teachers (eg of medicine) such as the Hunters, William Hewson and Sir William Fordyce. In particular Smith objected to a situation where professors enjoyed high incomes irrespective of competence or industry (WN, V.i.f.7): the Oxford, rather than the Glasgow model. In the same context he argued in favour of free movement of students between teachers and institutions (WN, V.i.f.12,13) as a means of inducing teachers to provide appropriate services.

While it is impossible adequately to do justice to Smith’s treatment of public finance in these few pages, some general principles do emerge which may be of interest to the modern reader. In general, Smith believed that state should ensure that services are provided indirectly, rather than centrally, that such services should be self-financing wherever possible and especially that they should be so “structured as to engage the motives and interests of those concerned” (Rosenberg 1960, 68; cf Ricketts 1978). Once again, the fundamental appeal is to self-love, even if Smith did recognise that many services would be adequately performed as much from a sense of moral obligation as monetary reward.

#### Section V: Liberty, Citizen and State

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Lord Robbins once remarked that Smith bequeathed to his successors in the classical school an opposition to conscious paternalism; a belief that “central authority was incompetent to decide on a proper distribution of resources”. Above all Smith developed an important argument to the effect that economic freedom “rested on a two-fold basis: belief in the desirability of freedom of choice for the consumer and belief in the effectiveness, in meeting this choice, of freedom on the part of producers” (1953, p12). If we add a dynamic dimension to this theme we have a true reflection of Smith’s position; a position which helps to explain the world’s continuing interest in his work.

Yet even given this, the list of government functions is, as we have seen, quite impressive. It is also important to recall the need to distinguish between the *principles* which justify intervention (which may be of universal validity) and the specific *agenda* which Smith offered (and which may reflect his understanding of the situation which he actually confronted at the time of writing).

The principles which justify intervention are, after all, wide-ranging in their implications. On Smith’s argument, the state should regulate activity to compensate for the imperfect knowledge of individuals; it is the state which must continuously scrutinise the relevance of particular laws and institutions; the state which has a duty to regulate and control the activities of individuals which might otherwise prove damaging to the interests of society at large; it is the state which must make adequate provision for public works and services (including education) in cases where the profit motive is likely to prove inadequate. Such basic principles are open to wide application notably in the circumstances of a modern society.

It is not difficult to find in Smith a liberal thinker: what is much more difficult is to determine where a man of his principles would be found today in the broad spectrum of opinion which the term embraces. On the other hand it is ironically true that those modern authorities who make use of his work in the context of *policy* may find themselves on stronger ground. Smith did after all insist that where possible public services should be responsive to need and that they should be so structured as to induce people to deliver them efficiently. What is unambiguously true is that Smith sought to establish an *economic* environment or environments within which individual initiative would flourish and by which it would be harnessed.

The last reference serves to remind us that there is a further dimension to his work which is essentially *moral* and which is illustrated by his concern with the social costs of economic growth. As we have seen, Smith made much of the point that the division of labour could induce a form of mental mutilation; a degree of “torpor” which could render the individual “incapable of bearing a part in any rational conversation” or of conceiving “any just judgement concerning many even of the ordinary duties of private life” (WN, V.i.f.50).

Smith identified the possibility that measurable increased in economic welfare might be offset by the psychological damage which they entail – unless steps are taken to avoid this outcome through a programme of compulsory education and the cultivation of the arts (WN, V.i.g.15).

The implicit distinction is between negative and positive freedom where the former may be described as freedom from restraint and the latter as a “power of capacity of doing or enjoying something worth doing or enjoying” (Green 1906, iii.370-71).

In passages which also recall his wider interests Smith drew attention to the issue of education in a context which was essentially political. As he put it, an “instructed and intelligent people … are always more decent and orderly than an ignorant and stupid one … They are more disposed to examine, and more capable of seeing through, the interested complaints of faction and sedition” (WN, V.i.f.61).

This is not idle rhetoric. Smith’s historical analysis made him well aware of the significance of the form of Government which had emerged in Great Britain and sensitive to the fact that such a Government gave scope to political ambition – another competitive game with, as its object, the “prizes which sometimes come from the wheel of the great state lottery of British politics” (WN, IV.vii.c.75). He also recognised that the same economic forces which had raised the House of Commons to what he called a superior degree of influence (as compared to the House of Lords) also made it a focal point for business and commercial interests. He noted that such power could be used to disadvantage particular groups (cf WN, I.x.c.61) and made the general point that the legislative proposals emanating from commercial interests.

 “Ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention. It comes from the order of men, whose interest is never exactly the same with that of the public, who have generally an interest to deceive and even to oppress the public, and who accordingly have, upon many occasions, both deceived and oppressed it” (WN, I.xi.10).

As Donald Winch has recently pointed out in an unpublished paper, if Smith emphasised the importance of the pursuit of self interest within the law, he was acutely aware of the problems presented by the pursuit of *collective* self-interest and less confident of the result.

In this context he complained that Britain’s policy towards America had been dictated by the “sneaking arts of underling tradesmen” (Section III) and noted, in a passage which may have caught the attention of Napoleon, that:

 “To found a great empire for the sole purpose of raising up a people of customers, may at first sight appear a project fit only for a nation of shopkeepers. It is, however, a project altogether unfit for a nation of shopkeepers; but extremely fit for a nation whose government is influenced by shopkeepers” (WN, IV.vii.c.63).

In Smith’s view, the tragic (but sustainable) loss of opportunity in America was to be explained in terms of the combination of collective self-interest on the part of mercantile groups and political prejudice on the part of the state and its citizens. Smith thus identified yet another problem of modern relevance: that of government (as distinct from market) failure.

#### Section VI

J S Mill, the archetypal economist, of a later period, is known to have remarked that ‘*The Wealth of Nations* is in many parts obsolete and in all, imperfect’. Writing in 1926, Edwin Cannan observed.

Very little of Adam Smith’s scheme of economics has been left standing by subsequent enquirers. No one now holds his theory of value, his account of capital is seen to be hopelessly confused, and his theory of distribution is explained as an ill-assorted union between his own theory of prices and the Physiocratic fanciful Economic Table’ (1926, 123).

In view of authoritative judgements such as these, it is perhaps appropriate to ask what elements in his story should command the attention of the modern historian or economist. A number of points might be suggested.

First, there is the issue of *scope*. As we have seen, Smith’s approach to the study of political economy was through the examination of history and ethics. The historical analysis is important in that he set out to explain the origins of the commercial stage. The ethical analysis is important to the economist because it is here that Smith identifies the human values which are appropriate to the modern situation. It is here that we confront the emphasis on the desire for status (which is essentially Veblenesque) and the qualities of mind which are necessary to attain this end: industry, frugality, prudence.

But the TMSalso reminds us that the pursuit of economic ends takes place with a *social* context, and that men maximise their chances of success by respecting the rights of others. In Smith’s sense of the term, ‘prudence’ is essentially rational self-love. In a famous passage from the TMS (II.ii.2.1) Smith noted, with regard to the competitive individual, that:

“In the race for wealth, and honours, and preferments, he may run as hard as he can, and strain every nerve and muscle, in order to outstrip all his competitors. But if he should justle, or throw down any of them, the indulgence of the spectators is entirely at an end. It is a violation of fair play, which they cannot admit of”.

Smith’s emphasis upon the fact that self-interested actions take place within a social setting and that men are motivated (generally) by a desire to be approved of by their fellows, raises some interesting questions of continuing relevance. For example, in an argument which bears upon the analysis of the TMS, Smith noted in effect that the rational individual may be constrained in respect of economic activity or choices by the reaction of the spectator of his conduct – a much more complex case than that which more modern approaches may suggest. Smith made much of the point in his discussion of Mandevilles ‘licentious system’ which supported the view that private vices were public benefits, in suggesting that the gratification of desire should be consistent with observance of the rules of propriety- as defined by the spectator, i.e. by an external agency. In an interesting variant on this theme, Etzioni has recently noted that we need to recognise ‘at least two irreducible sources of valuation or utility: pleasure and morality’ (1988, 21-4; cf Oakley 2002).

Secondly, there are a series of issues which arise from Smith’s interest in political economy as a system. The idea of a single – all-embracing conceptual system, whose parts should be mutually consistent, is not easily attainable in an age where the division of labour has increased the quantity of science through specialisation. Smith was aware of the division of labour in different areas of sciences, and of the fact that specialisation often led to systems of thought which were inconsistent with each other (Astronomy,IV, 35, 52, 67). But the division of labour within a *branch* of science, eg economics, has led to a situation where sub-branches of a single subject may be inconsistent with one another.

To take a third point, it may be noted that one of the most significant features of Smith’s vision of the economic process lies in the fact that it has a significant time dimension. For example, in dealing with the problem of value in exchange, Smith made due allowance for the fact that the process involves judgements with regard to the utility of the commodities to be acquired, and the disutility involved in creasing the goods to be exchanged. In the manner of his predecessors - Hutcheson, Carmichael and Pufendorf, Smith was aware of the distinction between utility (and disutility) anticipated and realised, and, therefore, of the process of adjustment which would inevitable take place through time.

Smith’s theory of price, which allows for a wide range of changes in taste, is also distinctive in that it allows for competition *among* and *between*buyers and sellers, while presenting the allocative mechanism as one which involves simultaneous and inter-related adjustments in *both*factor and commodity markets.

As befits a writer who was concerned to address the problems of change, and adjustment to change, Smith’s position was also distinctive in that he was not directly concerned with the phenomenon of *equilibrium*.For Smith the (supply) price was, as it were:

“The central price, to which the prices of all commodities are continually gravitating whatever may be the obstacles which hinder them from settling in this centre of response and continuance, they are constantly tending towards it” (WN,I.viii.15).

But perhaps the most intriguing feature of the *macro* model is to be found in the way in which it was linked to the analytics of Book 1 and in the way in which it was specified. As noted earlier, Smith argued that incomes were generated as a result of productive activity, thus making it possible for commodities to be withdrawn from the ‘circulating’ capital of society. As he pointed out, the consumption goods withdrawn from the existing stock may be used up in the present period, or added to the stock reserved for immediate consumption; or used to replace more durable goods which had reached the end of their lives in the current period. In a similar manner, entrepreneurs and merchants may also add to their stocks of materials, or to their holding of fixed capital, while replacing the plant which had reached the end of its operational life. It is equally obvious that entrepreneurs and merchants may add to, or reduce their *inventories* in ways which will reflect the changed patterns of demand for consumption and investment goods, and their past and current levels of production. Variation in the level of inventories has profound implications for the conventional theory of the allocative mechanism.

Smith’s emphasis upon the point that different ‘goods’ have different life-cycles also means that the pattern of purchase and replacement may vary continuously as the economy moves through different time periods, and in ways which reflect the various age profiles of particular products as well as the pattern of demand for them. If Smith’s model of the circular flow is to be seen as a spiral, rather than a circle, it soon becomes evident that this spiral is likely to expand (and possibly *contract*) through time at variable rates. This point does not seem to have attracted much attention.

**Conclusions**

Mark Blaug has commented on Smith’s distinctive and sophisticated grasp of the economic *process* and the need to distinguish this from his contribution to particular *areas* of economic analysis. It has been argued above that Smith’s approach to the study of political economy has some distinctive features which deserve the attention of the modern student of the discipline, but which do not seem to loom large in modern teaching. But nor can it be said that the classical system which was to follow Smith, adequately addressed his wider concerns. Indeed, it has been pointed out that the early part of the 19th century saw the emergence of political economy as a separate, autonomous discipline, free of the earlier association with ethics and history. As Terence Hutchison once remarked, Smith was led as if by *an invisible hand* to promote a result which was no part of the original intention, thus paving the way for the development which Professor Muhammad Yunus deplored.

Finally, Adam Smith would have had every happy feeling over Prof Yunus’s untiring engagement in practically addressing such a crucial concern as his - “What improves the circumstances of the greater part can never be regarded as an inconveniency to the whole.No society can surely be flourishing and happy, of which by far the greater part of the numbers are poor and miserable" (*The Wealth of Nations* 1776).

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**Abbreviations**

References to Smith’s works employ the usages of the Glasgow edition: WN = *The Wealth of Nations*; TMS = *Theory of Moral Sentiments*; Astronomy = “The History of Astronomy”; *Essays on Philosophical Subjects* (EPS); Stewart = Dugald Stewart, “Account of the Life and Writings of Adam Smith”; LJ (A) = *Lectures on Jurisprudence,* Report dated 1762-63; LRBL = *Lectures on Rhetoric and Belles Letters*;Corr = Correspondence of Adam Smith; EAS = *Essays on Adam Smith,* ed A S Skinner and T Wilson (1975).

In the Glasgow edition, WN was edited by R H Campbell, A S Skinner and W B Todd (1976); TMS by D D Raphael and A L Macfie (1976); Corr, by E C Mossner and I S Ross (1977); EPS, by W P D Wightman (1980); LJ (A) and LJ (B) by R L Meek, D D Raphael and P G Stein (1978), and LRBL by J C Bryce (1983), Oxford University Press.

References to Corr: Give page number.

References to LJ and LRBL give volume and page number from the MS. All other references provide section, chapter, and paragraph number in order to facilitate the use of different editions. For example:

Stewart, I.12 = Dugald Stewart “Account”, Section I, Para 12.

TMS, I.i.5.5 = TMS, Part I, Section I, Chapter 5, Para 5.

WN, V. i.f.26 = WN, Book V, Chapter I, Section 6, Para 26.

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