

特集 Turgot 没後 200 年 (1781—1981)

## Turgot: Forerunner of Neo-Classical Economics?

P. D. Groenewegen

In his many, highly laudatory comments on the economics of Turgot, J. A. Schumpeter (1959) clearly indicated that he regarded Turgot as an economist writing in advance of his time because he anticipated much of what became important in the economic discussion of the period after the "marginal revolution." In particular, Turgot is argued to have close affinities to the Austrian variant of this "new" economics. For example, Turgot's description of the market mechanism is suggested to be "very similar to that of Bohm-Bawerk" (Schumpeter, 1959, p. 307), his interest and capital theory are argued to have "clearly foreshadowed much of the best thought in the last decades of the nineteenth" century<sup>1)</sup> (*ibid.*, p. 332) while last but not least, the use of marginal analysis is attributed to him in the context of his famous statement of the "Law of Variable Proportions" (*ibid.*, pp. 260–261). Finally, at the conclusion of his reader's guide to Turgot's *Reflections*, Schumpeter gives what can be regarded as his greatest praise: "..... there are practically no definite errors to be found in this first of all the treatises on Value and Distribution that were to become so popular in the later decades of the nineteenth century. It is not too much to say that analytic economics took a century to get where it could have got in twenty years after the publication of Turgot's treatise had its contents been properly understood and absorbed by an alert profession" (*ibid.* p. 249).

Schumpeter's views on the "modern" nature of Turgot's economics have been developed by a number of other authors, especially in the context of his theory of value. Kauder (1953) in his analysis of the genesis of the marginal utility theory, argued that Turgot's explanation of isolated exchange "is almost identical" with that presented over a century later by Menger and by Wicksell but that, as was the case with other writers of the Italo-French school of the eighteenth century, Turgot wrote on the subject of value "in vain" and his writings were "soon forgotten" (Kauder, 1953, pp. 646–667, 650). Similarly, Yamakawa (1959) described Turgot's "attempt to formulate value theory based on the subjective valuation" as "one of the most significant contributions" he made to the development of economic theory (p. 30). Further appraisals of Turgot's theory of value have drawn similar conclusions<sup>2)</sup>.

1) Half a dozen pages prior to the paragraph from which this quotation has been taken, Schumpeter states that Turgot's theory of capital and interest proved to be "unbelievably hardy," that it is "doubtful whether Alfred Marshall had advanced beyond it" and that, although Bohm-Bawerk added a new branch to it, he "substantially subscribed to Turgot's propositions" (Schumpeter, 1959, p. 325).

2) See, for example, Thurlings (1978), pp. 189–190 and my own re-appraisal of Turgot's value and price theory (Groenewegen, 1970, especially pp. 189–191, 196). Two errors in that paper have been pointed out to me since it was published. Finzi (1978, pp. lviii–lix) has correctly argued that my interpretation of Turgot's concept of 'valeur estimative' as a "purely subjective evaluation of a commodity by an individual" is incorrect since it ignores Turgot's attempts to incorporate scarcity as reflected

Although less has been published on Turgot's theory of capital and interest in recent years<sup>3)</sup>, its "modernity" was greatly appreciated at the end of the nineteenth century in the debate about Bohm-Bawerk's interpretation of Turgot's theory which was initiated by Cassel and drew interventions from Wicksell, Marshall and Bohm-Bawerk. The link between Turgot and Bohm-Bawerk on the subject of capital theory, which, as already noted, was emphasised by Schumpeter, can now be demonstrated by reference to Bohm-Bawerk's "youthful work" of 1876, which according to him (Bohm-Bawerk, 1959, Vol. II, p. 439) established the *basic features* of his capital theory but which in itself is essentially a detailed commentary on Turgot's interest theories as developed by him in the second half of the 1760s<sup>4)</sup>.

Aspects of Turgot's theory of production have also been interpreted in this 'modern' fashion. Thurlings (1978, pp. 177-179) heads his discussion of Turgot's theory of production with the title 'production functions,' and his interpretation of Turgot's statement of the "law of variable proportions" attributes to Turgot the view that net product (land rent) is *maximised* when the cost of marginal investment equals marginal product (*ibid.*, pp. 185-186)<sup>5)</sup>. Schumpeter, as was noted, likewise praised this contribution because it actually used "marginal analysis" and also emphasised that Turgot's formulation of the "law" was not surpassed until Edgeworth's clear and explicit formulation of the analytical differences between diminishing average and diminishing marginal returns at the beginning of the twentieth century (Schumpeter, 1959, pp. 260-261, and cf. Stigler, 1941, pp. 112-119).

At first sight, there seems therefore to be considerable evidence which supports Schumpeter's arguments about the modern and advanced nature of Turgot's economics, which were cited in the opening paragraphs of this paper. This interpretation of Turgot as essentially a forerunner of marginalist economics has, however, been challenged by Meek (1973a, 1973b) and by Finzi (1978, 1979). In the context of Turgot's theory of capital, Meek argued that such an interpretation abstracts the theory from its context, a procedure which not only makes comprehension of his analytical system virtually

by labour and other resource costs into utility. Darreau, a Ph. D. student at the University of Limoges has shown that my criticism of Turgot's solution to the determination of the midway price is wrong, and that Turgot's result of the 'valeur estimative moyenne' is in fact a proper solution to the price determined in an isolated exchange given his assumptions (Undated letter to the author, received in October, 1981).

3) See my reinterpretation of Turgot's theory of capital and interest (Groenewegen, 1971) and cf. R. L. Meek (1973a, pp. 19-25).

4) I have presented a detailed discussion of this subject in an as yet unpublished paper presented to the History of Economic Thought Conference held at Exeter College, Oxford, in September 1981, entitled 'Turgot's Place in the History of Economic Thought: A Bi-centenary Estimate.'

5) As Thurlings put it, "Turgot is zich bewust van het feit dat het samentreffen van marginale kosten en marginale opbrengsten het punt oplevert waar de totaliteit van de grondrente haar maximum bereikt" (p. 186). I cannot find any evidence for such a proposition in Turgot, although *with hindsight*, it can be inferred from Turgot's following remark: "I will mention that it would be mistaken to imagine that the point at which the advances yield the most is the most advantageous one which the cultivator can attain, for, although further increments in advances do not yield as much as the preceding increments, if they yield enough to increase the *net product* of the soil, there is an advantage in making them, and it will still be a good investment" (Turgot, Observations on a Paper by Saint-Péray, in Groenewegen, 1977, p. 112-I have used 'increments' to translate Turgot's 'augmentations').

impossible but also underestimates his achievements as a system builder. In a comment on Turgot's theory of value, Meek implies an inconsistency between such modern interpretations of Turgot's theory and the essentially classical nature of his economic system. "What is interesting is that Turgot's attempt to incorporate 'scarcity' into 'utility' was in fact made and that a man of his calibre should have believed that a utility-based theory of value was perfectly comparable with a 'paradigm' not essentially dissimilar from Smith's" (Meek, 1973b, p. 79). Finzi (1978, pp. xxviii-xxix, liii, lviii-lix) has criticised the 'neo-classical' interpretations of Turgot's theory of value, while the ahistorical nature of such exercises and their methodological difficulties are analysed in his (1979). Both Meek and Finzi emphasise the classical nature of Turgot's work, together with its relationship to Physiocracy.

In view of these different perspectives on Turgot's economics and its interpretation, an examination of whether Turgot can be properly regarded as a forerunner or precursor of neo-classical economics may be a useful contribution to a festschrift commemorating the bi-centenary of his death by clarifying a number of points relevant to the understanding of his work. A prerequisite for such an examination is to define the distinguishing characteristics of neo-classical and classical economics, while in this context the notion of precursor may also be investigated more fully. An examination of Turgot's system of economics, with special reference to his theory of value, may then provide an answer to the question posed in the title of this paper.

## I

The "new economics" of the post-1870s was defined *ex-post* by Robbins (1935, p. 16) as the "science which studies human behaviour between ends and scarce means which have alternative uses." The key aspects of this definition are ends, invariably defined in terms of present or future consumption, scarcity reflected in relative prices and alternative uses which make substitution possibilities a key feature of the process of economic activity. Robbins' definition can be seen as the generalisation of a Robinson Crusoe allocating a given stock of scarce grain among various alternative direct and indirect consumption uses which equate the marginal satisfaction (return) obtained in each use and thereby maximise aggregate satisfaction. The analysis can be extended by re-defining the means as a given stock of productive resources which can be combined in various ways to produce the desired set of consumption goods, thereby redefining the problem of production as a general problem of resource allocation. The more general, multi-individual, version of the theory preserves the maximising individual with a given stock of resources as the focal point of the analysis but the individual now maximises satisfactions through the exchange of resources with those of others or through production (the transformation of the resources) into the desired set of consumption goods, given the state of technological knowledge.

Efficient resource allocation is achieved in this general system through exchange in competitive markets so that the key feature of the new economic system are the relative prices which link the given endowments of resources (means) to the consumer tastes (ends) and thereby reflect their relative scarcity. Since consumer preferences are the ultimate yardstick for the ranking of ends, the prices of the productive services (endowment of

original resources) are derived and imputed from the prices of the final consumption goods whose production they aid, so that the problem of distribution (reinterpreted as the pricing of productive services) is solved as a corollary of the general determination of prices in a competitive economic system. The theory of production and distribution is therefore subsumed into a general theory of exchange based on the preferences (utility schedules) of consumers.

Although, as is well known, there are considerable variations in the manner in which the new vision of the operation of an economic system was presented during the 1870s, the essentials of that new vision are captured in the previous two paragraphs<sup>6)</sup>. In the Walrasian general equilibrium version, for example, there was greater emphasis on the efficient operation of competitive product and factor markets which through the supply and demand determination of equilibrium (market clearing) prices ensured (or at least, this was what Walras believed) maximum satisfaction for the consumer. In the Austrian variant, provided by Menger, von Wieser and Bohm-Bawerk, the focus is more on unifying the theory of production and distribution into a general theory of exchange with marginal utility as the central principle but with less emphasis on general solutions to price determination via general equilibrium supply and demand analysis. Jevons, although he explicitly regarded the allocation problem of the maximising individual as the core of economic analysis, did not fully succeed in reducing the problem of distribution to the general pricing problem in the manner of Menger and the Austrians.

This system of thought can be strongly differentiated from the older classical political economy, particularly when defined in the manner of Marx<sup>7)</sup>. The major question for the classical political economists was the explanation of economic progress and prosperity, that is, to use the title of Smith's famous treatise, to elucidate the nature and causes of the wealth of nations. The answer to this question was invariably found in the analysis of the surplus product or net product of the society in question which involved discussion of the origins, definition and the determinants of the size of this surplus as well as of its distribution and disposal. In the short hand of the definition of classical political economy which Robbins (1935, pp. 64, 67) explicitly sought to replace, it saw as the task of scientific political economy to analyse the production and distribution of *disposable* wealth<sup>8)</sup>.

The notion of a *disposable* surplus focuses on a very important characteristic of classical political economy: the representation of the economic process as continuous reproduction (with or without growth) in which part of the reproduced wealth (product or revenue) has to be set aside to ensure the continuation of the economic system. This part is equivalent to the necessary expenses which constitute *non-disposable* wealth, and which

6) Cf. Bharadwaj (1978), pp. 36-37, who lists the salient features of what she calls the new 'supply and demand' theories as the reduction of distribution theory into general price theory, the emphasis on the 'individual' making maximising decisions in response to relative prices, and the shift to exchange and the importance of relative prices as the basic factor in change.

7) K. Marx (1971, p. 52) defines classical political economy as beginning with Petty and Boisguillebert in the second half of the seventeenth century and ending with Ricardo and Sismondi at the 1820s. Conventional definitions of classical political economy see the beginnings in Adam Smith and its conclusion with John Stuart Mill. See O'Brien (1975).

8) Cf. Walsh and Gram (1980, p. 5) who see explanation of the "production, extraction and accumulation of surplus" as the main theme of classical political economy.

cannot be utilised for other purposes without causing the decline of the economy in question. Such a view of the economic system highlights the interrelationship between production, prices and distribution. Both exchange and distribution play a crucial role in ensuring that at the end of the production period (say, a year) the output is distributed in such a way that the required inputs are available to producers in the right proportion to start the production process afresh. To allow reproduction, these exchanges must take place at necessary prices which are necessary in the sense that they at least cover costs so that producers can obtain the required resources for continuing the production process and in a competitive surplus producing economy, they must ensure a profit for all producers at a uniform rate. This vision of the production process is in sharp contrast to the neoclassical production function which views production as the transformation of productive services into final consumption goods and thereby neglects the reproductive features of the system.

Within this schema of reproduction a number of other features of classical political economy stand out. Surplus is created within the sphere of production, it cannot arise in exchange as a general phenomenon nor can it be satisfactorily explained in terms of restrictions on trade or other monopolistic practices. Its growth is therefore strongly associated with improvements in labour productivity, caused by the division of labour as in Smith, for example, or by the increased application of machines and other aids to labour. Distribution of the surplus is analysed in terms of social classes, which each play *distinctive* roles in the production, distribution and disposal of the social product. Distribution and disposal of the product are seen as key factors in accumulation and growth and are in turn related to the behavioural characteristics of social classes rather than of individuals.

As already indicated, the role of prices in this analysis also has characteristic features. Classical political economists from Petty onwards strongly distinguished between necessary (or natural or fundamental) prices, essential to ensure the reproduction of the system, and market prices which reflected the more superficial vagaries of sudden changes in supply (harvest failure) or demand. Costs, in the sense of necessary inputs required for reproduction, were therefore regarded as fundamental in the determination of prices; usefulness and scarcity were not generally seen as determinants of prices, only as necessary attributes (prerequisites) for commodities to become economically relevant.

As in the case of the founders of marginalist (neo-classical) economics, the major features of classical political economy outlined in the previous paragraphs were present in differing degrees in the writings of the period, such differences frequently reflecting the different economic conditions of the society they were discussing. For example, although the dichotomy of market and natural prices is present in the work of Petty, its nature was gradually refined and made more explicit in the succeeding century and a half. On the other hand, in the analysis of social classes, the earlier predominant role of the landlords (Cantillon, the Physiocrats) shifted gradually to that of the capitalists (Smith and Ricardo). Although the degree of homogeneity in the views of the classical school should therefore not be exaggerated, there is a greater danger in only stressing differences and peculiar features in the analysis of particular authors and thereby eliminating the possibility of any general classification in the construction of dividing lines in the devel-

opment of economics.

The foundation for the distinction between classical political economy and the later marginalist (neo-classical) school presented in this section is the interpretation of the core of the analysis in what are seen here as two quite distinct schools of thought. This emphasis on the core as the distinguishing feature has a number of implications which should be made explicit. First, if the identification of the particular core in question is successfully challenged or disputed, then the basis for the distinction is destroyed<sup>9</sup>. Secondly, concentration on the core implies necessarily less attention to the periphery, consequently in the analysis of the views of any particular author, a distinction must be made between major and minor works and between the essential and less essential features of the system constructed by the author in question. Thirdly, and of particular importance in the context of the aims of this paper, the emphasis on core implies that a precursor of a school of thought must have anticipated the essentials of the analysis and not some of its peripheral features.

Some further comments on the notion of a precursor are in order. This notion is essentially an *ex-post* one since precursors can only be identified when the systems of thought or ideas which they are said to have anticipated have been themselves discovered and elaborated. This attribute of a precursor frequently encourages the a-historical search for what are described as "neglected economists" whose views have something in common with the current school of thought. This is done by selecting and concentrating on those parts of their thought which bear some resemblance to those of the new "orthodoxy." Both the "marginal" and the "Keynesian revolutions" have inspired such searches for predecessors and precursors, many of which on closer inspection turn out to be misleading if not exactly wrong because of their concentration on some superficial similarities which ignore the essentials of the systems of thought which are to be compared. It is argued in this paper that this has been the case with some of the interpretations of Turgot, and that the continual rewriting of the history of economic thought to which it leads is misleading in many respects, largely by making the interpretation of the author's views dependent on *current* views on the subject.

## II

An examination of Turgot's general economic system is made difficult by the fact that, apart from the seemingly hurriedly composed theoretical sketch in the *Reflections* completed in 1766<sup>10</sup>, no general view of the scope of political economy embodied in a treatise was left by him. However, in the introduction to his *Eloge de Gournay*, written

9) For example, the dichotomy between classical and marginalist economics is challenged in a statement such as the following: "Smith's postulate of the maximising individual in a relatively free market and the successful application of this postulate to a wide variety of specific questions is our basic paradigm" (Gordon, 1965, p. 123). On this basis a number of authors, of whom Hollander (1973, chapter 1, 1979, chapter 9) is the most recent and prominent example, argue that the development of economics since Adam Smith has been a steady refinement of the study of the competitive market as a mechanism which efficiently allocates resources via the signals of relative (market) price changes. Such a view rejects a separate core for classical economics and leaves pre-Smithian authors in some sort of limbo.

10) This neglects the juvenile plan for a work on commerce, circulation, interest and wealth, which he prepared at the age of 25 (reprinted in Schelle (1913-23) I pp. 376-387).

in 1759, there is a short description of the essential qualities which such a science should have if it is approached from the point of view of the philosopher and the statesman<sup>11</sup>. This passage is worth quoting in full, since it has been rarely commented on in works on Turgot.

Through diligence and alertness he [i. e. Gournay] found time to enrich his mind with a mass of useful knowledge, without yet neglecting that higher literature, but it was, above all, to the science of commerce that he felt himself drawn and to which he directed his mind in all its vigour. To compare the products of nature and those of the arts in man in different climes, to arrive at the value of these different products, or, in other words, their relationship with the needs and the wealth of people at home and abroad, the costs of transport which vary according to the nature of the commodities and the diversity of the routes, the many duties to which they are subject, etc., etc.; in short, to comprehend in its full scope, and to follow in its continual upheavals, the condition of natural production, of industry, of population, of wealth, of finance, of the needs and even the vagaries of fashion in all the nations that are united by commerce, in order to theorise profitably on the basis of a thorough study of all these details this is to be concerned with the science of trade, as a merchant and constitutes only a part of the science of commerce. But to discover the causes and effects of that multitude of upheavals in all their diversity, to search out the elemental forces whose action, always in combination with, and sometimes disguised by, local circumstances, directs all the transactions of commerce; to recognise those special and basic laws, founded in Nature itself, by which all the values existent in commerce are balanced against each other and settle at a certain value, just as bodies left to themselves take their place, unaided, according to their specific gravity; to discern those complicated relations which link commerce with all the branches of political economy; to perceive the interdependence of commerce and agriculture, the influence of the one and the other on the wealth, the population, and the strength of states, their intimate connection with the laws and customs, and with all the processes of the government, especially with the distribution of its finances; to weigh the assistance which commerce receives from the Navy and that which it renders to it in return, the changes it produces in the respective interests of States, and the weight it places in the political balance of nations: in fine, to select, from among chance events and principles of administration adopted by the different nations of Europe, the true causes of their progress or of their decline in commerce, this is to approach the subject as a philosopher and a statesman.

(Eloge de Gournay, in Groenewegen(1977, p. 21))

This passage is instructive since it reveals first of all the breadth of vision which Turgot desired in a science of political economy fit for philosophers and statesmen. It is also interesting because by implication it illustrates some of the imperfections and omissions from his sketch on the production and distribution of wealth. The *Reflections*, albeit briefly, covers the laws of value, the interdependence of commerce and the other branches of political economy (particularly with regard to agriculture, industry, and commerce), its effects on wealth, but it largely ignores its effects on population, the strength of the state, its connection with laws and customs<sup>12</sup>, the distribution and disbursement of state finances, and so on. The *Reflections* contains brief comments but

11) The addition of statesman is interesting, since it associates the science of political economy with practical policy in the manner also done by Smith(1976, Book IV, introduction, p. 428).

12) The interconnection of economic activity with customs and laws is traced in Turgot's works on the successive advances of the human mind and in his fragment on universal history. For a discussion, see Meek(1973a, introduction pp. 27-33) and Meek(1976, pp. 68-76).

no systematic discussion of the causes of the progress or decline of commerce. In some instances, such as taxation, interest, value, money, production and reproduction, the contents of the *Reflections* can be supplemented from that of his other economic works<sup>13)</sup>.

On examining the actual contents of the *Reflections*, it is easily seen that its major thrust is classical in the sense in which that was defined in the previous section. This is already apparent from the opening paragraph which highlights the importance of economic surplus for general economic progress by demonstrating the severely limited possibilities for such progress inherent in a hypothetical subsistence economy. The implications of the existence of a surplus are then directly and indirectly examined in the remainder of the work, first in the setting of an agricultural society (sections 2–28), and then in that of a commercial (capitalist) society (sections 29–101). In the first part, surplus is related to exchange, the division of labour and labour productivity (sections 2–5); agricultural surplus also creates the first wages fund for the hiring of propertyless wage earners (sections 5–6) after the general appropriation of land as private property (sections 9–10), although Turgot is careful to point out that there are historical variations in this use of labour in cultivation which allowed landlords to draw the surplus product from their property (sections 19–28). The last of these methods, capitalist farming with long term leases and fixed money rents (sections 26–27) introduces capital to the discussion, the implications of which are then analysed in considerable detail. Original accumulation of capital is associated with agricultural surplus, and the necessity of capital in manufacturing, agriculture, and commerce is discussed in detail. The *Reflections* concludes with a discussion of interest, saving-investment analysis and an analysis of the components of national wealth<sup>14)</sup>.

Turgot's distinction in the *Reflections* between an agricultural society and a capitalist society is shown to have particularly important consequences for the analysis of social classes and the distribution of wealth. The characteristics of agricultural society analysed in the first part of the *Reflections* demonstrate the validity of the Physiocratic class structure of proprietors, who own the land and hence its surplus product; the cultivators, who produce the agricultural surplus; and thirdly, an artisan class maintained from the surplus through exchanging their products for the revenue of the other two classes (sections 8, 13, 15). With the explicit introduction of capital as an additional form of surplus income (section 29) and after the analysis of capital in agricultural, manufacturing (no longer described as carried out by artisans but by entrepreneurs) and commerce, a further subdivision occurs within the producing classes in agriculture (the productive class) and in the stipendiary class of manufacturers and traders: that of "the Entrepreneurs or capitalists who make all the advances, and that of the mere wage-earning workman" (section 65). The emergence of a new class structure and new income shares

13) As Turgot himself wrote to Du Pont shortly after he had completed the *Reflections*, many questions had been left out and the only subjects which he explicitly regarded as thoroughly treated were the formation and movement of capitals and the interest of money (Turgot to Du Pont, 9/12/1766, in Schelle (1913–23) III p. 519).

14) References to the *Reflections* in this and the succeeding paragraphs are to my edition and translations (Groenewegen, 1977). Since the section numbering of the various editions of the *Reflections* differs, this gives only an approximate indication of the references provided in the text for most other editions. A concordance of the major French and English editions is given in Groenewegen (1977), Appendix.

is a qualitative change induced by the transformation of society through an accelerated rate of capital accumulation and the associated increased capital intensity of industry.

What was identified as one of the key features of classical political economy—the representation of the economic process as continuous reproduction with or without growth—is also strongly emphasised by Turgot in the *Reflections*. For example, the description of the need for capital in manufacturing, agricultural and commercial enterprises (sections 60, 62, 66, 67) all stress the continuous nature of production and the requirement that the sale of the product should enable the return of the capital to be used afresh “for new purchases to furnish and maintain [the] manufactory by this continuing circulation [of products]” (section 60). Turgot therefore implicitly recognises that exchanges (sales by the entrepreneur) must take place at prices which allow the continuation of production through the replacement of the capital used up, and that such prices must allow a return on advances sufficient for the capitalist not to withdraw his investment. In this analysis, Turgot also emphasises the interdependence of manufacturing, agriculture and trade in keeping the process going. This is summarised in the following quotation:

From what has just been said it can be seen that the cultivation of estates, manufactures of all kinds, and all the branches of trade, depend upon the mass of capitals, or of moveable, accumulated wealth, which, having been first advanced by the Entrepreneurs in each of these different classes of work, must return to them again every year with a steady profit; that is, the capital to be again invested and advanced in the continuation of the same enterprises, and the profits for the more or less comfortable living of the Entrepreneurs. It is this advance and this continual return which constitutes *what ought to be called the circulation of money*; this useful and fruitful circulation, which gives life to all the labour of society, which maintains all the movement and life of the body politic, and which is correctly compared to the circulation of the blood in the animal body. For if, by any disorder whatsoever in the sequence of expenditure of the different classes of society, the Entrepreneurs cease to get back their advances with such profit as they have a right to expect, it is evident that they will be obliged to reduce their enterprises; that the amount of labour, of the consumption of the fruits of the earth, of the production and of the revenue would be equally diminished; that poverty will take the place of wealth, and that the common Workman, ceasing to find employment, will fall into the deepest misery.

(*Reflections*, Section 68)

This summing up of the interdependence of production, circulation and distribution (and its interrelationship with the prosperity of society) as illustrated in the section of the *Reflections* quoted above, is not an isolated instance in Turgot's writings but a recurring feature of much of his economic work. For example, in 1763, in his *Plan for a Paper on Taxation in General*, Turgot had briefly but clearly indicated the importance of the distinction between gross and net product, the role of the profit motive and the interrelationship between exchange value, net revenue and the process of reproduction. These innovations are correctly attributed to Quesnay (in Groenewegen, 1977, pp. 102–103). A similar set of observations is provided in his commentary on Graslin written in 1767 but which in some ways even further develops the interrelationship between exchange value, reproduction, net product, capital accumulation, social classes and distribution of the product (in Groenewegen, 1977, pp. 123–127). Similar arguments were presented in his fifth letter to l'Abbé Terray on the grain trade, written at the end of 1770. All three

versions of the argument referred to in this paragraph were utilised to illustrate the validity of the Physiocratic analysis of the incidence of taxation.

It is now time to examine the role of the theory of value and price in Turgot's theory of the interdependent process of production, circulation and distribution since as has already been indicated, Turgot's views on this subject can only be inferred from the passages already cited. Unfortunately, the material on value in the *Reflections* is not of much assistance here. This discussion of value is largely confined to the determination of a current value through competition in the market, that is, some brief elucidation of the supply and demand determination of market price (sections 31, 32) followed by a lengthy examination of the measure of value and money. Turgot warns the reader at the end of this discussion (section 46) that the treatment of the *causes* of value in the *Reflections* is far from complete. Fortunately, there are both contemporary, and later, discussions of value in Turgot's writings which shed further light on the matter and which at the same time allow some comments on the consistency of his value theory with his general model of reproduction in a capitalist society and on the neo-classical features which some commentators have observed in that value theory.

The major additional source for Turgot's theory of value is his unfinished paper, possibly written in 1769, entitled 'Value and Money'<sup>15</sup>. This paper contains what has been described as Turgot's subjective theory of value as well as his models of isolated exchange and price determination based on his notions of esteem value and appreciative value derived therefrom. It is undoubtedly true that the tone of this paper is subjective, as is shown by Yamakawa (1959) and by Meek (1973b)<sup>16</sup>. It is equally clear that the exchange models contained therein bear resemblance to those of the Austrians, particularly Bohm-Bawerk but also Menger and Wicksell. However, it is not easy to interpret the status of the views on value contained in this essay, because of its clearly unfinished nature, and because of the very specific limitations placed by Turgot on the analysis contained therein.

What are these specific limitations of the analysis in 'Value and Money'? First, this analysis is totally confined to considerations of exchange in the complete absence of any considerations of production. In addition, the analysis appears to be confined to isolated individuals in a *primitive* state of society. For example, the definition and meaning of esteem value is presented for an *isolated savage* while the examples of isolated exchange are similarly confined to "savages." The choice of commodities used as illustrations in the exchange analysis suggests savages in the Americas, representing the standard form of the *society of hunters*. It can therefore be reasonably inferred that the development of society, and in particular, the development of organised production, modify the causes influencing value, as analysed in 'Value and Money' to a considerable extent. But even if, following the *Reflections* (sections 32, 33) these principles inherent in exchanges and price formation are applicable to more modern forms of society, the analysis remains limited to the determination of market price only<sup>17</sup>.

15) There is considerable ambiguity about the purpose and time during which this paper was written. For a discussion see Groenewegen (1977, pp. xxv-xxvii) and Meek (1973b, p. 77). The most likely time, however, seems 1769.

16) See also Kauder (1953) and my own (1970).

17) Unlike Yamakawa (1959, pp. 30-31, 47) I see no essential difference between the determination

If it is argued then that the analysis of price determination in both the *Reflections* and 'Value and Money' is confined to market price determination then Turgot's theory of value can be completed by the distinction between current (market) price and fundamental price which he drew in a letter to Hume (25/3/1767) and in his observations on a paper by Saint-Pérvay, written at about the same time (reprinted in Groenewegen, 1977, p. 120 and note). These comments clearly establish the overall classical nature of Turgot's value theory, by demonstrating his firm adherence to this dichotomy in prices, and all its implications, while they also suggest that market value depends on fundamental value rather than the other way round<sup>18</sup>). Since both these comments are clearly intended to apply to value relations in contemporary society, that is, in a developed commercial society, the status of this distinction appears to me to more general than the incomplete analysis in 'Value and Money,' where the completed text relates to primitive society only. It also fits far better the price analysis implicit in the model of circulation in section 68 of the *Reflections* which has already been quoted<sup>19</sup>).

### III

On the interpretation of classical political economy presented here, Turgot's economics is clearly in the classical mould, because the main parts of his economic system are essentially concerned with the conditions for reproduction, the importance of economic surplus for capital accumulation, economic growth and progress and its effects on the whole of society. If his economic system is compared with the core of the post-1870 neo-classical analysis little resemblance can be found between them, since the resource allocation problem as such is not considered by Turgot at all.

Even in the examination of some of the details of Turgot's theory and in particular the features to which Schumpeter drew attention, the resemblance between Turgot's views and that of the post-1870 authors is not nearly as close as appears at first sight. In the case of his value theory, the subjective elements which appeared in his paper on 'Value and Money' (Turgot, 1769) were largely designed to illuminate the problem of exchange and market price determination and do not conflict with the dichotomy between market price and fundamental price to which he adhered. Furthermore, there is no attempt, as of current price (market price) in the *Reflections* and the elaboration of the argument in 'Value and Money,' cf. my (1970, p. 194, n. 70). This destroys in my opinion any suggestion that Turgot's thinking on value was substantially transformed between 1766 and 1769. Meek speculates that the paper may have been abandoned because Turgot could not solve the analytical difficulties inherent in his exchange models (Meek, 1973b, p. 79) but he presents no evidence, while I have speculated that Turgot's paper may have in fact been the foundation for Morellet's paper on money, etc. printed in the *Prospectus* for the *Dictionary* in 1769. See Groenewegen (1977, pp. xxvi-xxvii and notes 77, 80-86).

18) "But we must distinguish two kinds of price level: the *current price* which is established by the relationship of supply and demand, and the *fundamental price*, which for a piece of merchandise what the item costs the artisan.....Now, although the fundamental price is not the immediate basis of the current value, it is nevertheless a minimum beneath which the latter cannot sink.....You increase the fundamental value: the circumstances which previously fixed the ratio of the current value to this fundamental value must up the current value to the point where the ratio is re-established." Turgot to Hume, 25/3/1767, reprinted and translated in Rotwein (1955), pp. 211-212.

19) Continuous reproduction implies a sale price sufficient to cover all costs including the replacement of capital and the profit necessary to induce the entrepreneur to maintain his investment in the industry, that is, the fundamental value. It is clearly the analytical equivalent of Smith's concept of natural price.

in the case of the Austrians, to base the whole of the problem of valuation on utility considerations while the notion of *marginal* utility as sole determinant of value is conspicuously absent from his analysis. In fact, the notion of marginal utility which allows value measurement of a single commodity in terms of its utility at the margin appears to be implicitly rejected (Turgot, 1769, pp. 137-138). Finally, the models of isolated exchange which most resemble the work of the post-1870 economists, as has been indicated (by Kauder, 1953; Groenewegen, 1970), were in all probability derived by him from scholastic thought and designed to illustrate the similarities and differences between the determination of an exchange ratio in an isolated and primitive exchange and that of a current price in a competitive market in modern society (cf. Thurlings, 1978, p. 12).

Similarly, in the case of capital theory, Turgot's "modernity" can be exaggerated and its proximity to neo-classical thought over-emphasised<sup>20</sup>. Although Turgot's analysis of interest is essentially market oriented and determines the rate of interest by supply and demand, the problem of capital itself is closely associated with production and the creation of an economic surplus, with class distribution and economic growth. However, as Meek (1973c, pp. v-vii, xliii-xliv) has pointed out, there is at least one aspect of Turgot's analysis of capital and interest which distinguishes it from that of Adam Smith and that of later classical economists. This is Turgot's explicit equilibrium model of interdependence between the returns on capital in both its active employment in agriculture, manufacturing and commerce, and its passive use in loan contracts at interest and in the purchase of a landed estate (See Turgot, 1766, sections 83-90). This feature of his analysis was favourably commented on by both Cassel (1903, pp. 21-22) and Bohm-Bawerk (1959, III, pp. 6-7, 18). Nevertheless, as Meek also indicates (1973c, p. vii) this aspect of Turgot's thought is "quite comparable with the specification of the particular institutional data and class relationships upon which Smith was concerned to lay emphasis" and does by no means imply that class incomes are solely determined by competition in the market. Although the stress on interdependence and competition in the analysis does suggest some of the qualities associated with Walrasian general equilibrium in Turgot's work it does not weaken the causal chain which goes from profit (surplus product) to accumulation and investment and then to interest (Turgot, 1766, esp. sections 82, 90).

In this context it should also be emphasised that the approach to the theory of distribution which Turgot takes in the *Reflections* is class oriented in the sense that the problem is conceived in terms of the division of the total product among the various classes of society and the principles by which this distribution is effected. The division of classes itself depends on the specific role assigned to the various members of society in the production of wealth, that is, whether as propertyless persons they have to earn their living by selling their labour or whether as owners of property they derive an income without working from either landed property or from capital. The distinct determination of the incomes of these three classes reflects their separation in society and there is no hint in Turgot's work that this problem is a mere corollary of the determination of prices of final consumption goods, which is one of the hallmarks of neo-classical

20) This does not eliminate the possibility that Turgot's views on this subject may have influenced the work of the young Bohm-Bawerk, as I have suggested (Groenewegen, 1977, p. xxix, n. 99; and for an elaboration, my as yet unpublished, 1981).

economics<sup>21</sup>). This important aspect of Turgot's work is therefore also firmly within the classical tradition.

The significance of the "marginalist" features of Turgot's statement of the "law of variable proportions" can also be easily exaggerated as indeed they have been<sup>22</sup>). Although Turgot did distinguish in this discussion between what was to be called the intensive and the extensive margin of cultivation no inferences of significance for marginalist economics are drawn from this distinction. Furthermore, although his analysis is conducted in terms of increments of product and increments of advances, there is no direct application of the analysis to demonstrate marginalist principles of optimal resource allocation. In fact, Turgot used the analysis for the quite specific purpose of demonstrating the invalidity of the widely used Physiocratic assumption that advances yielded gross returns in a fixed proportion and that therefore the specific effects of the imposition of indirect taxes on agricultural production cannot be determined with any precision (Turgot, 1767a, pp. 111-113).

Generally speaking, therefore, it must be concluded that the resemblance between Turgot's economics and that of post-1870 writers is superficial and that the similarities which exist should not be taken as a sign that Turgot was in any real sense a precursor of this type of economics. Although in some ways, there is no real harm in commenting on, or pointing to, such resemblances, this practice becomes more dangerous if it is used to draw spurious inferences about the development of economic thought. Such ahistorical inferences, for example, appear in the work of Kauder (1953, p. 650) where Turgot and other eighteenth century economists are argued to have written "in vain" and where there is talk of "missed chances" in starting "correct" value theory earlier than actually occurred. Schumpeter's statements on Turgot imply similar hindsight conclusions of a counter-factual nature<sup>23</sup>).

The major point to which this paper wishes to draw attention is that Turgot is essentially an economist of the classical school whose work contains all the basic characteristics of that school of thought. He was therefore a man of his own time, a product of the eighteenth century but one who liked to "be himself and not somebody else" as he wrote to Du Pont in connection with the latter's "corrections" of the text of his *Reflections*<sup>24</sup>). It is therefore not surprising that he attempted to move beyond the accepted view on a number of subjects which he regarded as inadequately explained while staying

21) In this context I cannot refrain from commenting on the remark by Schumpeter on the *Reflections* which I quoted at the end of the first paragraph of this paper. This comment on the "first of all the treatises on Value and Distribution" is misleading on two grounds: first, because it misquotes the title as value and distribution rather than as the correct production and distribution of wealth; secondly, because it implies a link between value and distribution in the style of "the later decades of the nineteenth century" which just cannot be found. As indicated in part II, Turgot explicitly stated that the problem of value was not thoroughly explored in his *Reflections*, so that an emphasis on value in the description of its contents, as Schumpeter gives, is misplaced.

22) Cf. my comments on Thurlings (1978) in this context in note 5 above.

23) Since Turgot's work was readily available in the early part of the nineteenth century and was studied by a significant number of economists, who in general did not appear to see in his writings the foundations for a new theory of value and so on, it is difficult to speak of "missed chances." The merit of such ideas, or rather, the apparent merit, was not recognised until the new theories were fully developed.

24) Turgot to Du Pont, 2/2/1770, in Schelle (1913-23), III p. 374.

within the classical framework of the subject and all the more the pity that many of these novel approaches to aspects of the subject were not elaborated or completed. These features of his economic thought continue to provide challenges to its interpretation and if this paper has corrected some former misinterpretations of that thought it stands as a fitting tribute to the living thought of this great Frenchman whose death two hundred years ago is being commemorated.

(Department of Economics, The University of Sydney)

#### Bibliography

- [ 1 ] Bharadwaj, Krishna(1978), *Classical Political Economy and Rise to Dominance of Supply and Demand Theories*, Orient Longman Limited, New Delhi.
- [ 2 ] Bohm-Bawerk, E. von(1959), *Capital and Interest*, Three volumes in one, Libertarian Press, South Holland, Illinois.
- [ 3 ] Cassel, G.(1903), *The Nature and Necessity of Interest*, Macmillan and Company, London.
- [ 4 ] Finzi, Roberto(1978), Introduction to *Turgot, Le Ricchezza, Il Progresso e la Storia Universale*, Piccola Biblioteca Einaudi, Turin.
- [ 5 ] Finzi, Roberto(1979), "Turgot Fra Fisiocrazia e Pensiero Classico," in *Studi in Onore di Paolo Fortunati*, Cooperativa Libreria Universitaria Editrice, Bologna.
- [ 6 ] Gordon, D. F.(1965), "The Role of the History of Economic Thought in the Understanding of Modern Economics," *American Economic Review*, Vol. 55, No. 2, May, pp. 119-127.
- [ 7 ] Groenewegen, P. D.(1970), "A Reappraisal of Turgot's Theory of Value, Exchange and Price Determination," *History of Political Economy*, Vol. 2, No. 1, Spring, pp. 177-196.
- [ 8 ] Groenewegen, P. D. (1971), "A Re-interpretation of Turgot's Theory of Capital and Interest," *Economic Journal*, Vol. 81, June, pp. 327-340.
- [ 9 ] Groenewegen, P. D.(ed.),(1977), *The Economics of A. R. J. Turgot*, Martinus Nijhoff, The Hague.
- [10] Groenewegen, P. D.(1981), "Turgot's Place in the History of Economic Thought: A Bi-centenary Estimate," Paper presented at the History of Economic Thought Conference, Oxford, September (mimeographed).
- [11] Hollander, Samuel(1973), *The Economics of Adam Smith*, Heinemann, London.
- [12] Hollander, Samuel(1979), *The Economics of David Ricardo*, Heinemann, London.
- [13] Kauder, E.(1953), "Genesis of the Marginal Utility Theory," *Economic Journal*, Vol. 63, No. 251, September, pp. 638-650.
- [14] Marx, K. H.(1971), *A Contribution to the Critique of Political Economy*, Lawrence & Wishart, London.
- [15] Meek, R. L.(1973a), Introduction to *Turgot on Progress, Sociology and Economics*, Cambridge University Press.
- [16] Meek, R. L.(1973b), *Precursors of Adam Smith*, Readings in Economic History and Theory, Everyman's University Library, Dent, London.
- [17] Meek, R. L.(1973c), Introduction to re-issue(second edition)of *Studies in the Labour Theory of Value*, Lawrence & Wishart, London.
- [18] Meek, R. L.(1976), *Social Science and the Ignoble Savage*, Cambridge University Press.
- [19] O'Brien, D. P.(1975), *The Classical Economists*, Clarendon Press, Oxford.
- [20] Robbins, Lionel(1935), *An Essay on the Nature and Significance of Economic Science*, Second revised edition, Macmillan & Company, London.
- [21] Rotwein, E.(1955), *The Economic Writings of David Hume*, Nelson, London.
- [22] Schelle, G.(1913-1923), *Oeuvres de Turgot et Documents le Concernant*, Paris, Felix Arcan.
- [23] Schumpeter, J. A.(1959), *History of Economic Analysis*, George Allen & Unwin, London.
- [24] Smith, Adam(1976), *An Inquiry into the Nature and Causes of the Wealth of Nations*, edited by Campbell, Skinner and Todd, Oxford University Press.
- [25] Stigler, G. J.(1941), *Production and Distribution Theories, The Formative Period*, Macmillan & Company, New York.
- [26] Thurlings, Th. L. M.(1978), *Turgot en zyn Tijdgenoten*, H. Veenman & Zonen N. V., Wageningen.
- [27] Turgot, A. R. J(1973-54), "Plan d'un Ouvrage sur le Commerce, la Circulation et l'intérêt

de l'argent, la Richesse d'états," in G. Schelle(1913-23), I pp. 376-387.

[28] Turgot, A. R. J.(1759), Eloge de Gournay, in Groenewegen(1977), Chapter 4.

[29] Turgot, A. R. J.(1763), "Plan for a Paper on Taxation in General," in Groenewegen(1977), Chapter 6.

[30] Turgot, A. R. J.(1766), *Reflections on the Production and Distribution of Wealth*, in Groenewegen(1977), Chapter 5.

[31] Turgot, A. R. J.(1767a), "Observations on a Paper by Saint-Pérvy," in Groenewegen(1977), Chapter 7.

[32] Turgot, A. R. J.(1767b), "Observations on a Paper by Graslin," in Groenewegen(1977), Chapter 8.

[33] Turgot, A. R. J.(1769), "Value and Money," in Groenewegen(1977), Chapter 9.

[34] Turgot, A. R. J.(1770), "Letters on the Grain Trade," in Groenewegen(1977), Chapter 11.

[35] Walsh, Vivian & Gram, Harvey(1980), *Classical and Neoclassical Theories of General Equilibrium*, Oxford University Press, New York.

[36] Yamakawa, Yoshia(1959), "The Transition of Turgot's Value Theory," *Waseda Economic Papers*, Vol. 3, pp. 30-47.

農業経済研究 第53巻 第4号 (発売中)

《論文》

相川 哲 夫: 農村空間編成の経済構造

磯前 秀 二: 畑地改良の土地生産性効果——北海道美瑛町における検証——

谷本 一 志: 地価と離作補償にみる耕作権対価

松村 敏: 大正・昭和初期における蚕種統一政策の展開

——国立蚕業試験場設立以降——

B 5 判・52 頁・定価 1000 円 日本農業経済学会編集・発行／岩波書店発売