I. Introduction: a tension between political economy and economic science?

'Political Economy and Economic Science' is a major theme in Phyllis Deane's later work. Her *Evolution of Economic Ideas* (Deane, 1978) puts "some of the current theoretical controversies into long-term perspective by tracing their historical antecedants" (Deane, 1978) and, as such, pictures how economics as a science has evolved. However, *The State and the Economic System* (Deane, 1989) is conceived as an introduction to the history of political economy, i.e. "the development of economic knowledge over the past three hundred years with particular reference to the ways in which the broader contexts of moral, scientific, and political ideas or events have influenced successive economists' vision of the operations of the changing economic system and their views of the scope for purposive State action to shape the process of change"(p. vi).

Some time ago, Phyllis Deane pointed to "an inescapable tension between political economy and economic science - a tension which could not, in practice, be bypassed by detaching positive economics from moral and ethical considerations, or pure-theoretic from applied economics" (Deane, 1991, p.175). Yet, the separation of positive economics (pure and empirical) on the one hand and normative economics (pure and applied) on the other is still common among neoclassical economists and has a long tradition: "Neville Keynes, with the advice and encouragement of his teacher Marshall, set out the taxonomic ground rules that should enable the academic student of economics to distinguish assumptions and findings about what is (constituting the positive core of economic science) from, on the one hand, statements about what ought to be (the scientific justification of which belongs to the moral sciences) and, on the other hand, prescriptions for achieving desired ends (i.e. the art of political economy)" (Deane, 1991, p.174). Subsequently, the neoclassical position - economics as a science, independent from ethics - was formulated most clearly in Lionel Robbins' *Essay on the Nature and Significance of Economic Science* (1935).

The separation between economic science and the art of political economy leaves an inevitable uneasiness, as the "object of any economic scientist's research is ultimately (if not always proximately) the solution of certain practical policy problems [...]. Marshall himself envisaged the cumulative results of
systematic economic research as being useful and accessible to practical men of business as well as legislators. [...] However, being more sensitive than most Marshallians to the tension between the pure science of economics (of which he was an acknowledged master) and the art of political economy (which he wished to serve), he made it his rule 'to avoid taking part in the discussion of a burning political question even if it contains a large economic element' " (Deane, 1991, p.175). Marshall's extreme reluctance to take a position in the 'free trade versus protection' issue is an example (Deane, 1991, pp.175-77).

There is, however, an alternative strand of economic thought which does not separate economic science from political economy in the sense proposed by Marshall: "The founders of political economy [the Physiocrats, the English classical economists, and Karl Marx] had started with the confident presumption [...] that the system within which individual producers cooperate to earn their livelihood was governed by laws that operated as independently of human volition as the laws which natural scientists found applicable to the physical universe. They took it for granted [...] that political economy was a science" (Deane, 1991, p.173), not an art as is the case since the (marginalist) neoclassical revolution in the 1870s. And equally important, the classical economists, above all Ricardo, did not hesitate to give strong policy advice on the basis of their 'Principles of Political Economy'. Ricardo's position with respect to free trade and the Corn Laws is well known. In this century, "John Maynard Keynes had no inhibitions about mixing politics with economics. [His] principal contribution to the art of political economy was to bring into sharp focus what is still its basic problem, i.e. identifying the scope for governmental intervention. [However,] it was Keynes' contributions to economic science (rather than to political economy) that enabled him to achieve his personal ambition of revolutionizing 'the way the world thinks about economic problems' " (Deane, 1991, p.177). Thus, there is no gulf at all between economic science and political economy with Ricardo and Keynes. Moreover, Keynes "[wanted] to emphasize strongly the point about economics being a moral science" (Keynes, 1973b, p.300), which implies that, in his view, the separation between science and ethics cannot be maintained either.

II. The problem and some definitional issues

1. The above suggests that there are two broad strands of economic thought implying a very different relationship between economic science, made up of pure theory or principles, and political economy, i.e. applied theory in a wider sense, comprising policy prescriptions and links with other domains, e.g. the
political sphere, history and ethics. For the classical and Keynesian economists, there seems to be no tension between economic science and political economy; rather, as will be seen later, both concepts are presumably strongly complementary; for example, Ricardo wrote on 'the principles of political economy'. (For the institutionalists and many historians, who are closely associated with the classical and Keynesian economists regarding policy measures, the problem does not exist; they do not possess a scientific system which, put crudely, implies 'policy without theory' or pragmatism.) However, a yawning gap between economic science and political economy exists in neoclassical theory in the broadest sense of the term, i.e. Walrasian general equilibrium theory, Marshallian partial equilibrium theory and Austrian 'disequilibrium theory', and its various refinements, particularly the 'rational expectations' theory. Why is this so? This is the problem to be dealt with in these notes.

2. The first issue to be tackled relates to the approach underlying classical and Keynesian economic theory on the one hand and neoclassical theory on the other. What are the answers given to the great questions of economic theory: value, distribution, employment, the role of money and international trade (sections III and IV)? The ensuing sections deal with those implications of the classical and Keynesian and of the neoclassical frameworks of analysis which, in our view, are most relevant to the relationship between economic science and political economy. In section V, the visions of man and society underlying the two strands of thought are sketched. Section VI tackles a problem of method: the perception of the relationship between theory and historical reality by the classical and Keynesian political economists on the one hand, and by the neoclassical economists on the other is crucial for the relationship between economic science and political economy. A different role played by ethics and politics is also implied in both strands of thought (section VII). In the concluding section VIII the lines of thought developed in the previous sections are gathered together in order to attempt an assessment of the relationship existing between political economy and economic science.

3. The main definitional issues arising in this essay relate to the close association existing between classical (essentially Ricardian) and Marxian political economy on the one hand and post Keynesian political economy on the other. Both strands of thought overlap because the latter comprises the neo-Ricardians (Sraffa and his followers) and the Keynesians (in the widest sense of the term), including Keynesian Fundamentalists, e.g. Paul Davidson, Robinsonians or Kaleckians, e.g. G.C. Harcourt and J.A. Kregel; and New Keynesians (on this specific definitional problem see Harcourt 1981, Hamouda and Harcourt 1988,
and Harcourt 2001). The picture is further complicated by the fact that there are Keynesians dealing with long-period aspects of output and employment (Garegnani 1978/79 and 1983; Bortis 1997); since long-period levels of output and employment are governed by technology and institutions (Bortis 1997) one could speak appropriately of 'Keynesian institutionalists'; the synthesis of neo-Ricardian and Keynesian institutionalist long-period, together with short-period Keynesian fundamentalist theory and with medium-term Kaleckian theory form a comprehensive system of classical-Keynesian political economy (set forth in Bortis 1997).

Considerable differences exist between Ricardians and Keynesians. However, these differences are not unsuperable and allow for a broad synthesis (Bortis 1997). The neo-Ricardians (as well as Ricardo and Marx) essentially deal with the principles regulating the functioning of socioeconomic systems (the social process of production and the institutions associated with the distribution and the use of the surplus). Thus, in terms of theory, the neo-Ricardians consider the principles - the causal forces - governing fully adjusted situations, i.e. those parts of socioeconomic reality which are governed by persistent and slowly changing institutional factors and by the production system: the normal prices or the prices of production in the sense of Sraffa (1960), implying that the profit and interest rates are governed by socioeconomic forces (e.g. entrepreneurial associations, trade unions and central banks). The Keynesian institutionalists deal, as suggested above, with the normal quantities that emerge from an interdependent production system and the long-period, normal or 'trend' level of output and employment are determined by long-period effective demand which, in turn, depends, as will be suggested below, on the various institutions making up the socioeconomic and political system (Bortis 1997, pp. 142-54). It is important to note that 'trend' or long-period output and employment do not imply full employment and are not equivalent to the corresponding statistical trends. The former are governed at any moment of time by the institutional set-up prevailing at the same moment and would coincide with the statistical trends only in stationary conditions. The fully adjusted situation, which includes trend output and employment, thus represents a kind of 'equilibrium', that would be realized had the entrepreneurs taken the correct accumulation decisions in the past. This is impossible which is equivalent to saying that economies can never be in equilibrium. The fully adjusted situation is, therefore, a hidden part of the real world governed by the the persistent or slowly changing institutional forces - the socioeconomic system - which is superseded by the visible socioeconomic outcomes (capital stocks, output and employment levels, market prices) resulting from aggregate behaviour of individuals. The presently existing institutional
system, including the production system, is the result of past behaviour. Hence, the fully adjusted situation is not a 'gravitation centre' since aggregate behaviour and the institutional system are not independent from each other: the former constantly modifies parts of the latter, i.e. there is technological and institutional change (see also Roncaglia 1995). As a rule, actual magnitudes will not converge towards normal ones: for example, actual output may fluctuate more or less regularly around normal output. Nevertheless, normal output is important as it governs normal employment and thereby persistent long-period unemployment levels (Bortis 1997, pp. 81-89).

Hence for the classicals and the Keynesian institutionalists the functioning of the system as a whole is primary and the behaviour of the individuals acting within the system (institutions) is secondary; moreover, behaviour is largely determined by the system. For instance, the real capital stock - the result of past accumulation - embodying certain techniques of production requires the deliveries of certain goods between industries if the social process of production is to go on in an orderly way; this cannot be changed at once because the size and the composition of the real capital stock can be modified only gradually through gross investments; or, trend effective demand governs the volumes of trend output and employment and of trend investment; this exerts a determining influence on all workers and investors: only a certain number of workers will find a workplace and only a given number of investment projects will succeed in the long run.

The determinism exerted by the system does not imply that there is no scope for freedom for the behaviour of individuals: there are considerable possibilities of choice regarding means and aims within a given institutional framework, above all regarding consumption and leisure activities. Moreover, the outcomes associated with aggregate behaviour will always deviate from the outcomes of the system (an economy is never in 'equilibrium'). Furthermore, uncertainty is not excluded either: given the volumes of trend employment and trend investment it is highly uncertain who will be employed or unemployed and which investment projects will succeed in the long run.

The Keynesians, however, deal with these directly observable disequilibrium situations resulting from aggregate behaviour and with the uncertainty attached to individual investment projects. The Robinsonians (or Kaleckians) have worked out a theory of cyclical growth based upon the double-sided relationship between profits and investment. The Keynesian Fundamentalists mainly deal with degrees of capacity utilization in relation with short-period effective demand and with the role of money in an uncertain world. Clear-cut divisions between the different Keynesian groups do not exist. However, what
distinguishes them from the neo-Ricardians and the Keynesian institutionalists is that they consider behavioural outcomes that are co-ordinated by the system; in fact, the system sets restrictions to the scope of behaviour through the volume of effective demand which is associated with the monetary flows taking place within the production system. This means that the social process of production is always implied in Keynesian analysis; with some Keynesian authors, e.g. Donald Harris, the sphere of production even figures prominently.

We denote the synthesis of classical and Keynesian elements of analysis as classical-Keynesian political economy (Bortis 1997) which, in fact, constitutes a synthesis and an elaboration of post Keynesian political economy. In the subsequent lines classical-Keynesian political economy is contrasted with liberal or neoclassical economic theory.

The neoclassical economists concentrate upon the behaviour of individuals and postulate that the economic actions of individuals are co-ordinated by an anonymous self-regulating mechanism, i.e. the market mechanism, which, if functioning satisfactorily, is supposed to solve the great economic problems, that is value, functional distribution and employment.

In what follows, we shall concentrate on fundamentals (principles) only which are associated with the classical-Keynesian and with the neoclassical approach respectively.

III. Production based economic theories and the socioeconomic system

1. In recent years, the habit to broadly classify economic theories according to the importance they attach to production and exchange has become increasingly attractive. This classification has been proposed by Luigi Pasinetti (for example in Pasinetti 1981, pp. 8ff. and pp. 23ff. and in Pasinetti 1986) and extensively put to use in an important volume on the foundations of economic theory (Baranzini and Scazzieri 1986). Classical-Keynesian political economy is production based. This is evident for classical (Ricardian-Sraffian) political economy; work along Keynesian lines implies production: in fact, Keynes explicitly aimed at developing a monetary theory of production (Keynes 1973b, pp. 408-11). Classical-Keynesian political economists conceive of production as a social process: a common aim, the production of the social product, is reached by combining complementary means, i.e. sectors of production and firms cooperate to produce goods. However, neoclassical economic theory is built upon exchange, and production is an application of exchange. The neoclassical view of production is individualistic: entrepreneurs combine factors of production to produce at minimum costs; more expensive factors are substituted
for cheaper ones if 'factor prices' change. Some implications of these different views on production will be brought out in the subsequent sections.

2. Production plays a basic role in classical political economy. Marx denoted the social process of production most felicitously as an interaction between man (labour) and nature (land). With his labour theory of value Ricardo brought out systematically for the first time the labour aspect of the social process of production. This aspect of production was taken up in Marx's *Kapital*, the first volume of which is called *Der Produktionsprozess des Kapitals* and in Pasinetti's vertically integrated labour model (Pasinetti 1981, 1993). Production as a social phenomenon, i.e. as an interrelated circular process, is also central in Quesnay's *tableau économique* where the nature aspect of production is put to the fore. Leontief's input-output models, Sraffa's prices of production model and Pasinetti's *Lectures on the Theory of Production* (Pasinetti 1977) all grew out of Quesnay's horizontal and interindustry framework. Keynes, when working out his *General Theory*, explicitly aimed at elaborating a model of a monetary production economy: money (finance) enables production and the result of social production is 'exchanged' against money; at this stage the principle of effective demand enters the picture. Indeed, Pasinetti considers his vertically integrated production framework (which implies interindustry relations - Pasinetti, 1981, pp.109ff.) as an analytical basis for Keynesian type of work: "[...] it is possible to build a unifying theory behind all the new [non-marginalist] contributions to economics [...]" (Pasinetti, 1981, p.19): (i) Keynes/Kalecki's short-run theory of unemployment; (ii) the discussion on the behaviour of firms [...] which led to the formulation of the full cost principle and to the studies of oligopolistic behaviour; and [...] to 'managerial economics' theories; (iii) Leontief's input-output analysis and Sraffa's production of commodities scheme; (iv) [Keynesian and post Keynesian] theories of the business cycle; (v) Harrod-Domar's macro-dynamic model and the post-Keynesian theories of growth and distribution" (Pasinetti, 1981, p.17).

One of the purposes of this note is to suggest that within production based economic theories there is no tension between political economy and economic science. This requires a brief look at the kind of economic theory that emerges from a production based approach; we consider the theory of value and distribution, of employment, of money and of international trade.

3. With the social process of production as the analytical starting point, relative normal prices depend, in principle, upon the conditions of production and on distribution. With n-1 goods (the n-th good being labour), there are "n-1 production equations in n+1 unknowns, namely [the money wage rate, the rate of profits] and [...] n-1 prices [...]. We therefore have two more unknowns than
we have equations [...]; we may begin by setting the price of any arbitrarily chosen commodity equal to unity. The number of prices (which thereby become relative prices) is reduced to (n-2) and the total number of unknowns is reduced to n. We have still one degree of freedom [...]; since it would have no economic meaning to fix arbitrarily a relative price, we are left with a choice between the [real] wage rate and the rate of profit" (Pasinetti, 1977, p. 73). Various solutions have been proposed to solve this problem. The classical economists, particularly Ricardo, have opted for determining the wage rate: the natural wage is a physiological and sociological datum which may, however, vary in time and in space (see, for example, Dobb, 1973, p. 91-92); rent is determined by the marginal principle and profits appear as a surplus remaining after payments of wages: the surplus principle of distribution is of a sociological nature in that it embodies part-whole relationships, represented here by the wages and profits share in income net of rents. Modern post Keynesians opt for determining the profit rate through the Cambridge equation - the realized profit rate is determined in the sphere of exchange. For the Classical-Keynesians distribution is related to the social process of production: processes of collective and individual wage bargaining shape the wage structure, the calculation of normal prices is based upon the normal costs of production takes account of a target rate profits; customs and habits will substantially affect distributional outcomes and the state may intervene in fixing minimum wages. In the medium term, i.e. in the course of the business cycle, the double sided relationship investment-profits relationship (Joan Robinson and Michal Kalecki) will be associated with deviations of realised prizes and profits from long-period (normal) prices and profit levels.

4. In production based theories of value and distribution, distribution inevitably appears as a social and political problem. John Stuart Mill most clearly perceived this: "The laws and conditions of production of wealth partake of the character of physical truths. There is nothing optional and arbitrary about them. [...] It is not so with the Distribution of Wealth. That is a matter of human institution only [...]. The distribution of wealth [...] depends on the laws and customs of society. The rules by which it is determined, are what the opinions and feeling of the ruling portion of the community make them, and are very different in different ages and countries; and might still be more different, if mankind so chose" (John Stuart Mill 1909, pp. 199/200). This may perhaps be considered as the most appropriate formulation not only of the classical, but also of the modern post Keynesian and classical-Keynesian approach to distribution. This approach to distribution leaves the gate wide open for 'political economy' to enter: distribution is, fundamentally, not a market problem - although the
intensity of competition may play a role in governing profit rates - but mainly a social, i.e. a sociological and political issue. The social character of distribution emerges most forcefully in part-whole relationships between individuals and groups on the one hand and society as a whole on the other. Such part-whole relationships are implicit in income structures and in shares in a given national income governed by effective demand. Consequently, to take an example, the wage rate is not the price of labour which equilibriates supply and demand on the labour market, but is a share in a given overall income. Finally, in a production based approach, distribution - the real wage rate or the rate of profits - must be known to determine relative prices (of production); distribution is logically prior to value (Sraffa, 1960). Indeed, in practical life, price calculation can take place only if a wage structure and a target rate of profit are already there. This is perhaps why, in Ricardo's view, "[to] determine the laws which regulate [...] distribution is the principal problem in Political Economy" (Ricardo, 1821, p.5). The importance of distribution is enhanced by the fact that it is crucial in governing the scale of economic activity and hence of the level of employment through the purchasing of the population, a point emphasised by Keynes several times in his General Theory (e.g. on p. 373).

5. In a monetary production economy the employment problem arises from the very nature of the social process of production. In all models picturing this process (models of the Leontief-Sraffa-Pasinetti type), only relative proportions are determined, leaving the scale of activity undetermined: "[...] the systems of [price and quantity] equations [...] yield solutions for relative prices and relative quantities, which are independent of the total quantity of labour available"(Pasinetti, 1981, p.23, n30). The determination of the proportions between industries and sectors governing relative prices and quantities is the principal problem of classical macroeconomics, whilst Keynesian macroeconomics is about the scale of economic activity, with structures given. It is at this stage, that Kalecki's and Keynes's employment theory based upon the principle of effective demand enters the picture. To complement the classical - long-period - production model embodying constant or slowly changing elements of socioeconomic reality, a long-period theory of effective demand is required. Such a theory might be based upon a supermultiplier relation (suggested in Hicks, 1950): the autonomous (exogenous) demand components - government expenditures and exports - are linked through a supermultiplier to the endogenous variables, i.e. output and employment (Bortis 1997, pp. 142-204). The size of the supermultiplier, governing output and employment in principle, depends, most importantly, upon distribution: a larger mark-up on wages and thus a higher profit rate and a higher share of profits are associated
with a lower supermultiplier. The foreign trade position is also relevant: a smaller import coefficient relative relative to the export volume and more favourable terms of trade imply a higher supermultiplier. The trend (gross) investment ratio (the trend growth rate of autonomous expenditures), the depreciation coefficient and the capital-output ratio are all positively linked with the size of the supermultiplier.

Two important features characterize the supermultiplier relation. First, the trend rate of growth of exports is decisive for the long-term evolution of capitalist economies (this is in line with the Harrod-Kaldor theory of the export multiplier: Kaldor, 1989, pp. 90-99; Bortis 1997, pp. 190-98). Second, trend output and employment move together with the share of wages in national income; this conclusion is standard in post Keynesian and classical-Keynesian models and is due to the fact that the fraction of wage incomes consumed is much larger than that of property income: in the long run, consumption expenditure is crucial, and the level of investment has to be in line with the capacities required to produce the normal - long-period output; this means that only the capacity effect of investment is relevant in the long run (Bortis 1997, pp. 144 and 153).

The independent variables of the supermultiplier relation (the autonomous variables and the parameters determining the size of the supermultiplier) are all governed by institutions: for example, long-period (trend) government expenditures (regulated by legal prescriptions) are the outcome of a very complex process involving political institutions (the parliament, the government and the civil service) and socioeconomic institutions (e.g. various pressure groups); trend exports depend, among many other factors, upon the quality of the education system, the technical dynamism of an economy, labour relations, aggressiveness on world markets, and marketing and after-sale service; distribution (the wage structure and target profit rates) is, as has been suggested above, governed by customs and habits that have evolved historically and by present social relations between workers and employers.

Thus, the problem of employment determination is not simply a 'macroeconomic' problem because effective demand determines the level of output and employment. The effective demand mechanism pictured by the supermultiplier relation is but a vehicle which channels the influence of the whole socioeconomic system (the material basis and the institutional superstructure) upon the level of long-period economic activity. Given this, the problem of employment determination is, essentially, a problem of political economy linked with the functioning of the socioeconomic and political system as a whole.
6. In a monetary production economy *money* is entirely integrated in the socioeconomic system. Production, consumption and investment plans are in terms of money which constitutes a link between the past and the future (Keynes). Banks provide finance to entrepreneurs so as to enable them to set the production process into motion, i.e. to buy means of production - labour force, raw materials; buildings and equipments are financed by the capital market and by own financial means. Within the social process of production - captured by Leontiev-Sraffa interindustry models and by Ricardo-Pasinetti vertically integrated models - the means of production are transformed into final products which are 'exchanged' against money which represents effective demand. The sales receipts obtained by the productive sector covers costs and allows to realise a profit. The central bank plays a key role in fixing the interest rate at which liquidity is provided (nowadays the international situation heavily influences the decisions taken by individual central banks). The interest level may, in turn, contribute to governing the rate of profits entering the price calculation of enterprises and influence thereby income distribution which, in turn, is an important factor determining the normal employment level through the supermultiplier mechanism (Bortis 1997, pp. 142-54 and 158-75). In addition, wages and prices are fixed in money terms, determining thus the real wage rate. In a monetary production economy the real wage is a macroeconomic concept (Pasinetti, 1993, pp.125ff.); among other things this means that each worker's contribution to the common (social) product is paid for in paper money; with prices of production given, each worker may buy some of the final products which emerge from the production sector. Bank notes thus represent promises to acquire goods out of the social product in line with individual preferences. This in turn implies that, in a monetary production economy, the level of activity is always governed by effective demand in that final commodities have to be 'exchanged' against money. Finally, in such an economy, part of wealth is held in the form of money or near money, due to permanent uncertainty, whereby uncertainty is not related to the institutional system but to the situation of each individual. Hence near-certainty and uncertainty coexist. Effective demand governs the *volumes* of normal output, employment and investment with near-certainty, while the fate of the individual workers and of the individual investment may be highly uncertain.

7. The theory of international trade emerging from a production based approach emphasizes quantity adjustments rather than price adjustments in bringing about tendencies towards current account equilibria. This implies putting to the fore the mercantilist-Keynesian employment aspect of international trade (Bortis 1997, pp. 185-98). Indeed, according to the - Harrod-Kaldor - theory of the
export multiplier long-period or trend output and employment crucially depend upon the volume and the growth of exports and on the export multiplier which is the reciprocal of the import coefficient multiplied by the terms of trade (Bortis 1997, p. 191). The employment effect of international trade is particularly strong if exports mainly consist of advanced and research-intensive manufactured products and if imports are made up, in the main, of standard manufactures, agricultural products and raw materials; a low import coefficient (relative to exports) and favourable terms of trade are also conducive to a high employment level. A small import coefficient results from a low technical and cultural outside dependence and large market shares of domestic industries on home markets. The terms of trade represent a kind of 'international reduction coefficient': favourable terms of trade imply that the export produce, containing some given amount of domestic labour, buys relatively large quantities of foreign goods, containing an equally large amount of foreign labour. Such trade relations may come into being between highly developed countries producing sophisticated industrial goods and economically underdeveloped countries which produce standard products.

Some important corollaries are implied in the export multiplier theory: a particular division of labour on a world scale favours economic development in some countries while being a hindrance to development in other countries. Given world effective demand, one country may increase its level of economic activity at the cost of others through conquering higher market shares for industrial product and services. As Maynard Keynes perceived, a new world economic and financial order would be required to enable individual countries to achieve high employment levels; Keynes's propositions, based upon the conception of the bancor, would have to play an essential role in this reform (Keynes 1980). Once again, politics directly influences the economic domain. Politics also comes in directly regarding normative trade theory: in a monetary production economy with labour as the sole factor of production learning processes are far more important in enhancing economic development than trade (Pasinetti, 1993, pp.148ff.). This implies that actually given prices and possibilities of trade that might be beneficial to the consumer in the short run (for example, most industrial goods are cheaper if imported) are not very important. What is important in the long run is to enhance the powers of production, i.e. to raise labour productivity. List's 'infant industry argument' is still of paramount importance today. In this context, international politics becomes immediately relevant as is forcefully argued by Kuttner in his important book *The End of Laissez-Faire - National purpose and the global economy after the cold war* (Kuttner, 1991).
8. At this stage it should be reminded that Classical-Keynesians do not merely confine their attention to the functioning of the socioeconomic system and its determining influence upon the behaviour of individuals. The Keynesians and post Keynesians direct, as has been alluded to in section II above, their attention to behavioural outcomes. For example, the process of cyclical growth (Kalecki, 1970) based upon the two-sided relationship between profit and growth rates (Joan Robinson, 1962) reflects the aggregate accumulation behaviour of entrepreneurs and is associated with directly observable stocks of real capital and of output flows. Or, the holding of money for speculative purposes is based upon the uncertainty about the future which individuals face. However, there is an interaction between the behavioural outcomes pictured by the Keynesians and post Keynesian and the system outcomes analysed by the classical-Keynesians: the actually existing system is the result of past behaviour. For example, past (gross) investment behaviour of entrepreneurs results in a certain present physical capital stock, which is, in turn, continuously modified by new gross investment. The technique of production embodied in this capital stock is an important part of the system: normal prices, depending upon the conditions of production and upon the target rate of profits, and normal prices and quantities make up the fully adjusted situation which is hidden below actual output (Bortis 1997, pp. 81-89).

IV. Exchange based theories and aggregate individual behaviour

1. In neoclassical economic theory the starting point is clearly exchange. Schumpeter, in his History of Economic Analysis, is illuminating on this: "The first problem that Jevons, Menger, and Walras [...] tackled by means of the marginal utility apparatus was the problem of barter. [...] they all [...] aimed at the same goal, which was to prove that the principle of marginal utility suffices to deduce the exchange ratios between commodities that will establish themselves in competitive markets [...]. The essential point is that [...] marginal utility analysis created an analytic tool of general applicability to economic problems. [Indeed,] Menger went on to say that means of production [...] come within the concept of economic goods by virtue of the fact that they also yield consumers' satisfaction, though only indirectly, through helping to produce things that do satisfy consumers' wants directly [...]. This analytic device [...] enables us to treat such things as iron or cement or fertilizers [...] as incomplete consumable goods, and thereby extends the range of the principle of marginal utility over the whole area of production and 'distribution' [...] which really ceases to be a distinct topic [...] . The whole organon of pure economics thus
finds itself unified in the light of a single principle - in a sense it never had before. [...] most of the problems that arise from this set-up can be discussed only on a level on which Walras rules supreme" (Schumpeter, 1954, pp.911-13). Indeed, Walrasian equilibrium economics is basic to the entire subsequent development of neoclassical economic theory.

The structure of Walras' *Eléments* (Walras, 1900) clearly reveals the primacy of exchange over production: sections II and III deal exclusively with exchange; individuals are endowed with certain quantities of goods, and tastes are given; the process of exchange between individuals is governed by the principle of utility maximization; exchange results in a new allocation of goods which is a social optimum in the sense that it is not possible to increase the well-being of one or several individuals without diminishing the well-being of others. *Subsequently production is introduced* (Walras, 1900, section IV, pp.175ff.): given quantities of factors of production (productive services) are allocated in the various production sectors, the process of allocation being governed by the principle of profit maximization, with the concepts of 'marginal productivity' and of 'factors markets' being implied in the analysis. *Production thus emerges as a simple application of exchange.* In section V capital accumulation is brought in; again, equilibrium on the market for new capital goods is brought about by exchange (courbes d'achat et de vente des capitaux neufs; Walras, 1900, pp.289-90). Money appears at the last stage only (Walras, 1900, section VI) to govern the absolute level of prices and to facilitate exchange of consumer goods and factor services. The real sector is all important and money plays an subordinate role. (All this of course holds for Walras's *Eléments* only which became the foundation of neoclassical economic theory; from other works, e.g. his *Etudes d'économie sociale*, Walras emerges as a political economist as the following passage illustrates: "[...] in the spirit of John Stuart Mill, who regarded the 'Distribution of wealth' as 'a matter of human institution solely' [...] Walras sought of Distribution as a socio-ethical problem and not one for which a solution could be ground out simply by turning the crank of an analytical engine" (Jaffê, 1983, pp.211)).

According to neoclassical economic theory the price mechanism (supply and demand) solves, in principle, all the great economic problems: in the first place, of course, the problem of value; functional income distribution becomes a simple appendix to price theory; the employment problem does not exist as equilibrium implies full employment - all markets clear at the equilibrium price vector; finally, money does not play an essential role in what is, fundamentally, a barter economy: money is a veil. Microeconomics *is* economics;
macroeconomics simply deals with aggregate individual behaviour and is, as such, qualitatively equivalent to microeconomics.

2. The individualistic exchange approach to economic problems has consequences for the relationship between economic theory and political economy. According to neoclassical theory individuals act in different domains: economic, social, political, legal and moral. Each domain is governed by specific laws which co-ordinate the behaviour of individuals: e.g. the market mechanism in the economic sphere, and voting procedures, the tactics and strategies of political parties in the political sphere. Each sphere is largely autonomous. Therefore, politics should, in principle, not interfere with economics (the market mechanism) as a competitive (Walrasian) equilibrium is associated with a social (Pareto) optimum. This provides a basic reason for separating the activities of the economist and the politician, e.g. for separating economic science from the art political economy. The first is the concern of the economist theorist, the second of the politician.

In practice, the relationship existing between the various spheres of human action is not clear at all. For example, the economic life (the behaviour of individuals on the market place) takes place within a social, legal and political framework. It is acknowledged that there is an interdependence between the market and the framework: social, legal and political institutions result in shifts in the demand and supply curves of some or all markets; for example, trade unions are supposed to cause shifts of the supply curve of labour to the left, thus diminishing the supply of labour and thereby raising wage rates. A clear separation between the economic and other spheres does not seem possible; this might partly explain why "political economy is synonymous with economics [which consists in the] search for systematic regularities in economic behaviour [...] and originated in response to the information needs of central governments and policy-makers. Today, [...] the primary object of the exercise remains the same as it was in the seventeenth century: to provide national administrators and their responsible agents with the objective knowledge needed to design and implement efficient economic policies" (Deane, 1989, p.v).

3. In the exchange based neoclassical framework, a tension between economic science and political economy arises because, on the one hand, there are separate causal forces that govern the various, supposedly autonomous spheres in which individuals become active: economic life is governed by the law of supply and demand, the political sphere is dominated by voting procedures and by party politics; on the other hand, there is clearly an interaction between the spheres: the broad organization of society influences the economic sphere (the market place): different social and political configurations determine the nature of
market equilibria in that the social and political framework is part of the various parameters that govern a general economic equilibrium. This issue may be illustrated by the 'free trade versus protection' issue on the practical (political economy) side of which Marshall was so reluctant to take position in spite of his strong theoretical (economic science) convictions for free trade (Deane, 1991, pp.175-77). The theorist had to say that, in the very long run, free trade on the world scale would result in a general equilibrium associated with maximum world welfare. The political economist (the politician), however, would point to the immense structural changes required, in each country, to reach the new equilibrium; for example, those industries having an unfavourable relative cost position on the world markets would have to shrink or even to disappear, those with a favourable relative cost position would correspondingly expand. This process could involve growing import dependence with respect to basic goods needed in the process of production or with respect to necessary consumption goods. Given an uncertain world, even the most doctrinaire free-trader could understand the politician who opposed unrestricted free trade to prevent social upheavals in his country and to maintain some degree of autarchy with respect to basic goods to secure some degree of autonomy and independence (on these and similar lines Keynes, 1982, is highly revealing). But the pure economic scientist (Marshall) would leave the decisions as to the implementation of protectionist policies to the political economist: he has to know how the political and social sphere works. The (neoclassical) economic scientist can, at best, come in to point to the dangers of excessive protection for the economic sphere: to maintain relatively unproductive sectors of production and reduced competitive pressure will lead to less favourable welfare outcomes.

V. The underlying vision of society and man and the role of institutions

1. "[...] analytic effort is of necessity preceded by a preanalytic cognitive act that supplies the raw material for the analytic effort [...] this preanalytic cognitive act will be called Vision" (Schumpeter, 1954, p.41). In the social sciences the vision is about the broad functioning of society and the relationships between society and individuals. Evidently, there are crucial differences between the vision of society and man in classical-Keynesian political economy and of neoclassical economics (Bortis 1997, pp. 20-57 and 253-281). In the classical-Keynesian system, economy and society as a whole (the socioeconomic system) are primary and the behaviour of individuals is, in part, determined by the system; moreover, the socioeconomic system possesses laws of its own, and the rationality of the system may contradict the rationality of individuals, Keynes's
paradox of saving being a case in point. In neoclassical economics, however, the optimising behaviour is primary; there is freedom of choice, within constraints though, which may be economic (scarcity), legal, political and social. These constraints constitute the framework within which economic actions take place. The differing visions of society and of man are crucial for the way in which the relationship between economic science and political economy is perceived.

2. If, as is the case in classical-Keynesian political economy, society is not simply seen as a collection of individuals but is something more than its parts, then, almost automatically, some kind of holism enters the analysis. The various spheres of socioeconomic and political life are considered to be complementary to some degree, thus forming an entity; individuals exercise different functions which mutually require each other. This implies that, spontaneously or consciously, social aims are pursued alongside individual aims. For example, a social aim - the production of the social product - is pursued within the social and circular process of production as pictured by Quesnay, Sraffa, Leontief and Pasinetti. Each (basic) sector plays a crucial role in the production process in that it is strictly complementary to the others which means that if there is no production in one basic sector, the social process of production would break down altogether. The production of a good by a firm is also a social process: a common aim is being pursued which implies complementarity and cooperation. Determinism is exercised in various ways by the system. A certain capital stock - the result of past accumulation - implies a certain technique of production; the capital stock and its structure are given and cannot be changed readily. This implies that certain deliveries between industries and sectors must go on if the social process of production is to function in an orderley way. Or, the prices of production are determined by the conditions of production and by the institutions regulating distribution. Finally, according to the supermultiplier relation, 'trend' effective demand determines normal output and employment whereby directly and indirectly the whole of the socioeconomic and political system enters the picture.

However, the system does not determine everything. For instance, the volume of trend employment is determined by the socioeconomic system through the supermultiplier mechanism; however, the question who will be employed or unemployed remains open; in the attempt to get a job, professional ability and the way in which an individual acts on the 'labour market' is of crucial importance. Or, with the volume of trend investment determined by trend effective demand, the fate of the individual investment is highly uncertain and the professional ability of the individual investor will be very important in determining the success of the project. Moreover, the realised investment
volume which depends on freely taken entrepreneurial decisions will always deviate from the system-determined 'trend' investment; the same is true of market prices and prices of production: the former result from (freely taken) individual decisions, the latter are determined by the system.

Classical-Keynesian long-period theory (Bortis 1997, pp. 142-204) is uniquely concerned with the functioning of the system similar to Quesnay and Ricardo, whilst the Keynesians and the post Keynesians mainly consider behavioural outcomes that are co-ordinated by the principle of effective demand: for example, in a Kaleckian vein, the volume of investment actually undertaken depends upon long-term expectations; investment will govern profit volumes and employment levels through the principle of effective demand; realized profits will, in turn, exercise an influence upon investment (Bortis 1997, pp. 204-220).

The social and circular process of production is intimately linked with the surplus principle: the determination, the appropriation and the use of the social surplus coming out of the production process are all very complex social and political processes. The surplus accrues partly to the state in the form of taxes and partly to particulars as after-tax profits, rents and surplus wages exceeding the necessary wage level. If a normative point of view is taken, this means that society ought to stand in the service of the individuals composing it: the surplus emerging from the process of production enables a society to erect a social, political and cultural superstructure within which individuals ought to be able to unfold their potential capabilities. In this context, Keynes and many of his followers have emphasized time and again that full employment and a socially acceptable distribution of income are essential prerequisites to the prospering of individuals. For example, in his "concluding notes on the social philosophy towards which the General Theory might lead [Keynes remarks that the] outstanding faults of the economic society in which we live are its failure to provide for full employment and its arbitrary and inequitable distribution of wealth and incomes" (Keynes, 1973a, p.372).

An important corollary is implied in classical-Keynesian political economy. Institutions in the broadest sense of the term (social and political institutions and regulated behaviour) and technology directly govern socioeconomic outcomes: the prices of production depend upon the technology in use and upon income distribution (the rate of profits or a hierarchy of profit rates); distribution itself is an immensely complex process: institutions associated with distribution (for example, trade unions, entrepreneurial associations, wage fixing on the basis of a historically evolved wage structure) result in certain profit rates which, in turn, imply a certain real wage and a certain wage structure. Finally, according to the
supermultiplier relation pictured above, the 'independent variables' governing the level of trend employment are all directly governed by a complex set of institutions. The institutional determination of the fundamental socioeconomic magnitudes is the main tenet of Bortis (1997).

The fact that society as a whole enters into the determination of the prices and quantities is the reason why there is no tension at all between political economy and economic science, if the classical-Keynesian vision of society and of man is adopted. Here, the economic, social, political and ethical spheres are complementary parts of the socioeconomic and political system which forms a structured entity. Correspondingly, the social and political sciences, of which political economy is a part, considers different properties, i.e. the economic, legal, social, political and ethical properties of the same object, i.e. society as a whole. This means that, if Phyllis Deane's definitions are adopted, economic science is that part of political economy which is concerned with explaining economic outcomes in terms of the social and political system. Political economy in a wider sense would also deal with, for instance, social and legal implications of economic outcomes and, of course, set up policy measures on the basis of the explanations given. In this sense the normative, for example full employment and a socially appropriate income distribution, is simply the ethically appropriate form of the positive which may be characterised by involuntary unemployment and an inequitable distribution of wealth and incomes. Thus, in the classical-Keynesian framework of analysis, the tension between economic science, i.e. pure theory dealing with principles, and political economy (applications of principles to unique real world situations) does not exist.

3. It is at this point where the crucial difference between classical-Keynesian political economy on the one hand and neoclassical or liberal economics on the other emerges (see also Bortis 1997, pp. 20-57 and 272-81). In the latter, the individual is primary and society is seen as a complex network between individuals which is based upon implicit and explicit contracts. Economic transactions, firms and, for some liberals, even the state are the result of contracts between individuals. Individuals act in various domains, most importantly in the economic and political sphere; individual actions are co-ordinated by self-regulating mechanisms, the market in the economic sphere and voting mechanisms in the political sphere. Society and social outcomes are thus explained in terms of individual actions exclusively: institutions, even if seemingly social like firms, have no specific social quality but are simply vehicles which enable individuals to reach individual aims more easily. Thus, the system does not possess laws of its own except the self-regulating
mechanisms which co-ordinate the behaviour of individuals in the various spheres. In the economic sphere, the market is supposed to co-ordinate individual actions in a way such that individual rationality coincides with the rationality of the system. For example, increased savings are transformed into higher levels of investment through the proper functioning of the market for new capital goods.

The liberal or neoclassical vision of society inevitably leads to a tension between political economy and economic science: On the one hand, the economic sphere (the market place) is considered to be autonomous and self-contained; the object of pure economic science is precisely to set forth the principles governing the behaviour of individuals in their role as economic agents and the coordination of this behaviour by the market mechanism. On the other hand, there is an awareness of the mutual dependence of the economic sphere with the social and political framework that surrounds it. In general equilibrium terms the latter determines the parameters which govern the equilibrium values of prices and quantities. More popularly, the institutions pertaining to the framework partly govern the positions of the demand and supply curves on the various markets. For example, trade unions are said to shift the supply curve of labour to the left thus raising wages and reducing employment; or, legal prescriptions on environment protection raise costs of production in specific industries - the ensuing shift in supply curves raises prices and reduces quantities, that is the structure of the economy changes; the same is true if protective measures are introduced or abolished: the new institutions define a new equilibrium position of the economy, whereby the transition from the old to the new equilibrium may be extremely painful because some sectors will have to shrink and because it takes time for the sectors favoured by the changed institutional set-up to expand correspondingly.

Thus, according to the neoclassical or liberal vision of society, institutions only indirectly influence economic events, i.e. through the market mechanism: institutional changes result in new equilibrium positions implying new structures. The choice of the institutional set-up of a society belongs to the domain of politics. The economic scientist has to accept the framework proposed by the politician and to confine his activities to the economic domain, i.e. to show how the behaviour of individuals is co-ordinated by the market forces or to investigate the functioning of the price mechanism on goods and factor markets under various conditions. Marshall's instinct not to engage in discussions of political economy was, therefore, entirely sound from the liberal point of view.
4. The comparison of the classical-Keynesian and the neoclassical vision leaves us with a fundamental question: Do market forces produce a tendency towards a full employment equilibrium in a monetary production economy where "commodities are produced by means of commodities [and labour]" (Sraffa, 1960), i.e. where production is a social and circular process? Two major reasons lead us to deny this. First, there is historical experience which shows that involuntary unemployment has been ever present, to a greater or lesser extent, in monetary production economies; the great crises of the last quarter of the 19th century and of the thirties of the 20th century are perhaps the prime historical examples for the inability of the market system to produce a tendency towards full employment. Second, the outcome of the capital theoretic debate has shown that there need not exist, even under ideal conditions, a tendency towards a full employment equilibrium, except by a fluke, as there are no regular associations between 'factor quantities' and 'factor prices'. This is associated with the fact that capital cannot be measured independently of distribution and prices if capital goods are heterogeneous (on this see Harcourt, 1972).

Hence two reasons account for the tension between economic science, i.e. pure theory, and political economy, which comprises applications of pure theory in the case of neoclassical theory if the underlying vision is considered. The first concerns the institutional framework surrounding the market. This framework evidently influences the market equilibrium, and to bring into being an institutional framework compatible with full employment is virtually impossible due to a lack of knowledge about the immensely complex relationships existing between the market place and the institutional framework. What happens in practice is that institutions that might hamper the proper functioning of the market mechanism are eliminated or reduced in significance, i.e. trade unions, social and state expenditures, because high tax levels may make a country or a region less attractive to investors.

There is second, more fundamental reason, for the tension between economic science (principles) and political economy (applications of principles) in neoclassical theory. If, even under ideal conditions, there is no persistent tendency towards a full employment equilibrium, the market is, in fact, unable to solve any of the great problems of economic theory, mainly value, distribution and employment, on a fundamental level. The central reason is that the basic neoclassical model - Walras's general equilibrium model - is based upon individuals and exchange. However, modern economies are monetary production economies, its constituting elements being money and finance and the social and circular process of production. Markets play a secondary role. In a
classical vein, the role of markets prices is to induce quantity adjustments tending to bring about the fundamental - normal - prices and quantities. The inability of the neoclassical model to solve, in principle, the great socioeconomic problems implies that liberal economic theory cannot come to grips with socioeconomic reality. Indeed, with his model, Walras was able to show that a general equilibrium may exist, giving thereby some content to Adam Smith's invisible hand. For him it went without saying that there was a strong, even a natural tendency towards an equilibrium. However, on the basis of the results of the capital theory debate (Harcourt 1972) and of relevant historical events - the great crises - one may quite safely conclude that such a tendency does not exist in principle (see also Bortis 1997, pp. 281-93).

The basic inability of neoclassical theory to come to grips with socioeconomic reality naturally results in tensions between economic science - pure theory or principles - and political economy - comprising applications, including policy applications - of economic science. Paradoxes may result, the most famous perhaps being Keynes's paradox of thrift; or, instead of a tendency towards equilibrium, increased competition may result in growing involuntary unemployment and increasing disparities in incomes and wealth.

To consider the relationship between political economy and economic science on the basis of the vision and of the material content underlying classical-Keynesian political economy on the one hand and neoclassical economic theory on the other is to take a global point of view. Two fundamental methodological issues are also closely linked with the relationship between economic science and political economy: the relationships between theory on the one hand and history as well as ethics and politics on the other. These are sketched in the two subsequent sections.

VI. Theory and history in economic science and in political economy

1. In the opening chapter of his Untersuchungen über die Methode der Socialwissenschaften, Carl Menger distinguishes two kinds of social science: the historical sciences aim at obtaining knowledge about unique historical events; the theoretical sciences deal with the general elements embodied in recurring phenomena (Menger, 1883, pp.3ff.). For example, a history of prices would aim at explaining price formation in specific industries and markets at specified time periods. Theory would deal with the essence (the nature) of values and prices: are the latter ultimately governed by utility or by labour embodied? This implies looking for principles, e.g. the basic causal forces permanently at work in determining a certain phenomenon. Explanation of historical events is based
upon the principles which are supposed to govern the events in question. Principles (pictured by theories) remain invariant, whilst the form in which they are applied to determine specific real world events changes. After the Methodenstreit a rather sharp division between pure theorizing and historical investigations occurred. The German Historical School, the American Institutionalists and their followers rejected theory - classical and neoclassical - as being too abstract and entirely irrelevant, and concentrated on empirical and historical investigations. Since the publication of Keynes's General Theory the gap between theory and history seems to have narrowed somewhat. In this work, Keynes explicitly alludes to the economists of the German Historical School who were "sceptical, realistic, content with historical and empirical methods and results, which discard formal analysis. [...] Thus Germany, quite contrary to her habit in most of the sciences, has been content for a whole century to do without a formal theory of economics which was predominant and generally accepted. Perhaps, therefore, I may expect less resistance from German, than from English, readers in offering a theory of employment and output as a whole, which departs in important respects from the orthodox tradition. [...] Can I persuade German economists that methods of formal analysis have something important to contribute to the interpretation of contemporary events and to the moulding of contemporary policy?" (Keynes, 1973a, p.xxvi).

In his attempt to narrow the gap between theory and history Keynes proceeds in a way similar to Menger's. Theory deals with the principles, picturing permanently acting causal forces in a pure form; in concrete historical situations principles take shape in widely varying forms which are the object of applied theory which, in turn, provides the basis for policy measures. For example, Keynes distinguishes between "the logical theory of the multiplier [the multiplier principle, H.B.], which holds good continuously, without time-lag, at all moments of time, and the consequences of an expansion in the capital-goods industries which take gradual effect, subject to time-lag and only after an interval" (Keynes, 1973a, p.122). While the multiplier principle (a piece of pure theory) is of striking simplicity, its application to a concrete situation is extremely complex: "[This] can be seen most clearly by taking the extreme case where the expansion of employment in the capital-goods industries is so entirely unforeseen that in the first instance there is no increase whatever in the output of consumption-goods. In this event the efforts of those newly employed in the capital-goods industries to consume a proportion of their increased incomes will raise the prices of consumption-goods until a temporary equilibrium between demand and supply has been brought about partly by the high prices causing a postponement of consumption, partly by a redistribution of income in favour of
the saving classes as an effect of the increased profits resulting from the higher prices, and partly by the higher prices causing a depletion of stocks. So far as the balance is restored by a postponement of consumption there is a temporary reduction of the marginal propensity to consume, i.e. the multiplier itself, and in so far as there is a depletion of stocks, aggregate investment increases for the time being by less than the increment of investment in the capital-goods industries [...]. As time goes on, however, the consumption-goods industries adjust themselves to the new demand, so that when the deferred consumption is enjoyed, the marginal propensity to consume rises temporarily above its normal level, to compensate for the extent to which it previously fell below it, and eventually returns to its normal level; whilst the restoration of stocks to their previous figure causes the increment of aggregate investment to be temporarily greater than the increment of investment in the capital-goods industries [...]." (Keynes, 1973a, pp.123-24). Keynes's method of reconciling theory and history emerges most clearly from his *Treatise on Money* (Keynes 1971). The first volume of this work exhibits principles or invariable causal forces and, consequently, is denoted 'The Pure Theory of Money'; the second volume is about historical realisations of principles and is called 'The Applied Theory of Money'.

Efforts made to narrow the gap between theory and history have also been made on the neoclassical side. Neoclassical economic theory based upon rationally behaving individuals has been applied to explaining historical developments in various fields (the new economic history) and the behaviour of collective agents (new institutional economics and new political economy). These micro and sectorial behavioural models have, to be sure, produced extremely valuable results. (Given this, it must be borne in mind that alternative explanations of behaviour, based upon post Keynesian or classical-Keynesian theories of the firm or upon managerial economics are also possible.) However, if macro-phenomena, i.e. the evolution of the volumes of employment and output in the course of the cycle, are considered, a tension between economic science and political economy continues to exist within the confines of neoclassical economics: it is very difficult to develop a real cycle theory on the basis of equilibrium economics as is evident from the 'rational expectations' cycle theory; therefore, cyclical movements are, as a rule, explained by external shocks, for example monetary factors: mistakes of monetary policy and/or excessive creation of credit money. Or persistent involuntary unemployment produced by the socioeconomic and political system cannot be explained at all on the basis of neoclassical equilibrium theory. Again this tension vanishes in classical-Keynesian political economy: the supermultiplier theory explaining long-period
output and employment trends and Kalecki's theory of cyclical growth and referred to above provide illustrations (Bortis 1997, pp. 142-220). This is due to the method employed by neoclassical and classical-Keynesian theorists. In the next two subsections it is attempted to substantiate these propositions.

2. In classical and classical-Keynesian political economy the principles used to explain real world phenomena are of extreme simplicity. With Ricardo, labour embodied regulates - in pure or in modified form - relative prices, distribution is governed by the marginal principle (which determines rent) and the surplus principle which explains the division of the remaining product into wages and profits. Keynes's *General Theory*, though very complex due to the various applications of his monetary theory of production to the real world rests, basically, on two very simple principles: the multiplier and the determination of the rate of interest through monetary factors. Thus, Ricardo and Keynes are using very simple causal models which enable the explanation in principle of selected aspects of the real world; the point of view taken is that of the socio-economic system as a whole, behavioural issues play a secondary role. Schumpeter clearly perceived this methodological issue: "The similarity between the aims and methods of those two eminent men, Keynes and Ricardo, is indeed striking, though it will not impress those who look primarily for the advice a writer tenders. Of course, there is a world between Keynes and Ricardo in this respect, and Keynes's views on economic policy bear more resemblance to Malthus'. But I am speaking of Ricardo's and Keynes's methods of securing the clear-cut result. On this they were bothers in spirit" (Schumpeter, 1954, p. 473n). Similarly, Pasinetti states: "Like Ricardo, [Keynes] is always looking for fundamentals [i.e. principles regulating certain spheres of the real world, H.B.]. He singles out for consideration the variables he believes to be the most important. All the others, giving rise to unimportant complications [...] are, for immediate purposes, frozen out by simple assumptions. The characteristic consequence of this methodological procedure is the emergence in Keynes, as in Ricardo, of a system of equations of the 'causal type' or [...] of the 'decomposable type', as opposed to a completely interdependent system of simultaneous equations" (Pasinetti, 1974, pp. 43-44). Marshall also had perceived the problem: "[Ricardo] does not state clearly, and in some cases he perhaps did not fully and clearly perceive, how, in the problem of normal value, the various elements govern one another mutually, and not successively in a long chain of causation" (Marshall, 1920, p. 816).

Simple causal models of the type suggested by Ricardo and Keynes allow the pure theorist to establish hypotheses on how an economic outcome is brought about in principle; for example, Sraffa-Pasinetti production models tell us that
the prices of production and the corresponding quantities are governed by the conditions of production and by income distribution (the rate of profits); hence, if the process of production is seen as a social phenomenon, pricing is not a microeconomic but a macroeconomic problem since the whole - complementary - production process enters the picture. Similarly the supermultiplier relation states how socio-economic and political institutions determine, in principle, the levels of 'trend' or normal level of output and of employment. These very simple causal models tell us how various causal forces are combined and, taken together, determine a single socioeconomic outcome, i.e. a price of production or the level of trend employment.

While pure causal models exhibiting principles, e.g. logical multiplier models, are of extreme simplicity, applied models may be extremely complex. This is suggested by Keynes's logical and applied multiplier mentioned above (Keynes 1973a, pp. 122-25). The reason is that the causal forces pictured by the model act simultaneously with a great many other causal forces which may modify the way in which the causal forces considered act. The social and circular process of production or the determination of the trend employment level by various socioeconomic and political institutions foreshadow the complexity of socioeconomic reality; in fact, each institution plays a specific role within the whole socioeconomic and political system and that there are interactions between institutions: complexity becomes organic. Thus, for the applied economist, and even more for the policy maker, it is not sufficient to possess a general vision of the functioning of society and to know about principles governing selected aspects of the real world. Knowledge about the functioning of a specific society is essential (whereby knowledge about complex objects is always probable in Keynes's sense (Bortis 1997, pp. 57-74). However, the crucial point here is that no tension exists in classical-Keynesian political economy between theory (the principles pictured by causal models) on the one hand, history (application of principles to explain some socioeconomic phenomenon) and policies (political economy) aimed at improving given situations in desired directions on the other hand (Bortis 1997, pp. 118-30). The reason is that the classical-Keynesian vision embraces the entire socio-economic and political system which forms an ordered entity with the economic, social, political and cultural sphere playing complementary roles. With institutions given - as the result of historical evolution - the functioning of the socio-economic and political system as a whole is considered; the basic aim of the theoretical economist consists in looking for the principles that regulate selected aspects of the system. Ricardo's *Principles of Political Economy* and Keynes *General Theory* are the landmarks in the search for principles of this kind.
3. Neoclassical economic theory tackles the relationship between theory and history in an entirely different way. In fact, macroeconomic and social phenomena are explained in terms of the behaviour of individuals. This leads, as has been suggested above, to a tension between economic science (theory) and political economy (concrete policy actions). Moreover, a tension between theory and history also emerges.

Menger takes it for granted that it is possible and highly desirable to explain social phenomena - money, the state, division of labour, markets - on the basis of the behaviour of individuals (Menger, 1883, pp. 153ff. and 171ff.). He calls this method 'exact' and 'atomistic' and considers it to be truly 'scientific' (Menger, 1883, p.156). This methodological procedure has become a hallmark of neoclassical economic theory: the microfoundations are all important. If the behaviour of all agents in the economic sphere is considered, as is the case in the Walrasian general equilibrium model, an overall or macro view is not required, the implication being that the system is not regulated by laws of its own independent of the behaviour of individuals: "[...] the logical structure of Walras' system [sets forth] the conditions or relations (equations) that are to determine the equilibrium values of all the economic variables [...] : the prices of all products and factors and the quantities of these products and factors that would be bought, in perfect equilibrium and pure competition, by all the household and firms. [...] since the determination of these quantities implies the determination of individual as well as group and social incomes, this theory also includes all that is covered by the concept of Income Analysis and that the conditions or relations to be considered, though they are fundamentally microanalytic in nature (they refer fundamentally to the quantities bought and sold by individual households and firms), also include macroanalytic aspects, for example, as regards total employment in the society [our emphasis]. It cannot be too strongly impressed upon the reader that it is not correct to contrast income or macroanalysis of, say, the Keynesian type with the Walrasian microanalysis as if the latter were a theory that neglects, and stands in need of being supplemented by, income and macroanalysis" (Schumpeter, 1954, pp. 998-99). The market system is supposed to co-ordinate the rational actions of individuals in such a way that the rationality of the system is qualitatively the same as individual rationality: general equilibrium outcomes are individually and socially optimal.

The attempts of the neoclassical economists to explain macro-outcomes on the basis of the behaviour of individuals inevitably leads to a tension between theory and history which is closely linked with the tension that exists between economic science and political economy. This tension is linked with the
functioning of the market mechanism which co-ordinates individual actions in the economic sphere and with the relationship of this mechanism to other spheres. If, given sufficient competition, market forces produced a quick or even an immediate tendency toward a unique equilibrium a tension between theory and history would not exist, which seems to be the case in the 'rational expectations approach' (equilibrium business cycles!). Nor would there be a tension if the equilibrium prices and quantities of the Walrasian equilibrium model constituted centres of gravitation as Walras (and the early neoclassicals) postulated: "Walras, much like J.B. Clark, conceived [...] equilibrium prices to be, normally, the level around which prices oscillate in real life [...] . Like Clark, he used the analogy with the 'level' of the lake in order to convey his idea - the old idea of A. Smith" (Schumpeter, 1954, p.999 and p.999n). Historical reality, for instance prices and quantities, could, in this case, be interpreted as deviations from the long-run equilibrium governed by the permanent or slowly changing forces (technology and institutions). However, a tension between theory and historical reality arises if the fundamental equilibrium lies in the future and would be reached only if a present disequilibrium situation could work out without being disturbed any more. This implies postulating a stationary framework surrounding the market. As conditions are never stationary in the real world, the impact of new disturbances arising during the adjustment process on the equilibrium position and upon the process itself would have to be assessed (on the problems associated with centres of gravitation see Harcourt, 1982, pp. 205-221, who distinguishes four different concepts of centre of gravitation). This would require a dynamic theory of immense complexity picturing the relationship between the various domains in which individuals act: economic, social and political in the main. A complete theory of this type has, however, never been produced by neoclassical economists; only partial and piecemeal theories built on the concepts of 'external effects' of the economic system on other subsystems or vice versa have been elaborated. Finally, the tension between theory and history (and between economic science and political economy) becomes extreme and leads to a rupture if there is no permanent tendency towards a fundamental equilibrium position at all. This is precisely the principal result of the capital theory debate (Harcourt, 1972). As suggested above, the outcome of this debate - which started with Ricardo who was the first to clearly state that relative prices depend, as a rule, upon the conditions of production and on income distribution - very seriously hampers the scientific status of neoclassical equilibrium economics; for example, no regular associations between factor prices and factor quantities exist, which implies that supply and demand forces are unable to produce a persistent tendency towards
full employment. This implies a cleavage between theory and history (and between economic science and political economy) since possible equilibria are not rooted in historical reality and therefore become hypothetical. Exchange based equilibrium theory based upon optimizing behaviour of individuals is simply not in a position to explain macrophenomena - business cycles and persistent involuntary unemployment - which result from the functioning of the socioeconomic system. This is the reason why, in the early 1930s, Keynes set out to develop a monetary theory of production (Keynes 1973b, pp. 408-11).

4. To be sure, the scientific analysis of behaviour in the economic sphere is indispensable when tackling microeconomic and sectorial issues. However, the analysis of macroeconomic problems, like the determination of trend output and employment levels and cyclical movements of an economy requires a macro approach in order to come to grips approximately with the functioning of socioeconomic systems, because these systems possess laws of their own, for example the laws associated with the social process of production and with the principle of effective demand. Keynes certainly felt that the principle of effective demand represented an important tool for analysing historical movements of the volumes of output and employment (Keynes, 1973a, foreword to the German edition). Simultaneously, he vigorously rejected methodological individualism and equilibrium theory built hereupon: "The celebrated optimism of traditional [equilibrium] theory, which has led to economists being looked upon as Candides, who, having left this world for the cultivation of their gardens, teach that all is for the best in the best of all possible worlds provided we will let well alone, is also to be traced [...] to their having neglected to take account of the drag on prosperity which can be exercised by an insufficiency of effective demand. For there would obviously be a natural tendency towards the optimum employment of resources in a society which was functioning after the manner of the [neo]classical postulates. It may well be that the [neo]classical theory represents the way in which we should like our economy to behave. But to assume that it actually does so is to assume our difficulties away"(Keynes, 1973a, pp.33-34). There is a complete separation of theory and history in neoclassical economics: neoclassical equilibrium theory does not contribute to explaining real world phenomena like involuntary unemployment, which are, in fact, interpreted as deviations from a postulated equilibrium situation.

VII. Ethics and politics, and the nature of institutions

1. The tension between economic science and political economy existing in neoclassical economic theory also shows up in the domains of ethics and
politics, while the relationship between these domains in classical-Keynesian political economy is, in principle, harmonious. The issues involved here can perhaps be dealt with most appropriately by having a look at the implications of the neoclassical and classical-Keynesian vision of man and of society briefly dealt with in section V above.

To begin with it is appropriate to distinguish between two types of institutions (which may be defined as frameworks within which individual and social aims are permanently pursued). A first type of institutions is individualistic and is, as such, associated with regulated behaviour: individual aims (for example, to pursue certain consumption patterns) are persistently pursued. Second, there are social institutions which can be seen in two ways. In the usual sense as is implied in classical-Keynesian political economy, social institutions are linked with the pursuit of common aims; this involves, on the one hand, division of labour and of tasks and, on the other, coordination of the various functions exercised, with co-operation playing a crucial role if a social institution is to function properly. For example, the process of production is a social (macro-)institution within which a common aim is (spontaneously) pursued, i.e. the production of the social product, each sector and each industry exercising a certain function in this process. In this sense, a social institution is something more than the sum of its parts which, in a way, forms a structured entity. Social institutions and society as a whole thus possess their own laws that cannot be reduced to the behaviour of individuals pursuing individual aims. The latter goes along with a rather narrow a view of man, while social activities within social institutions enrich each participant. Of course, there are considerable areas of freedom with social institutions: the social aim associated with a specific institution may be reached in different ways, individuals may to some choose the social institutions within which they want to be active and, finally, it is possible to create new institutions.

A liberal economist would presumably attach another meaning to the notion of 'social institution'. He would consider it as a vehicle enabling the associated individuals to reach individual aims in a better way. For example, the state provides a legal framework enabling individuals to pursue individual aims in various domains, e.g. utility and profit maximization under constraints; or, the firm facilitates production. Social institutions (including the state) are, in the liberal view, based on explicit or implicit contracts between individuals. Society, i.e. the sum of social institutions, is thus secondary in the sense that it is derived from the behaviour of individuals.

2. According to the liberal vision, with the autonomous individual occupying a primary position and society being secondary, ethics, politics and the economy
are simply domains within which individuals become active: there is the economic, the political and the ethical man. Each sphere is, in principle, autonomous and regulated by specific mechanisms. Within each sphere individual aims are pursued, e.g. utility and profit maximization in the economic sphere and the pursuit and maintainance of political power in the political sphere. Under competitive conditions this kind of behaviour is supposed to produce a tendency towards a socioeconomic optimum in the economic sphere. This is why Walras called his main work *Eléments d'économie politique pure ou théorie de la richesse sociale*. In principle, ethics is not needed in the economic sphere because economic values are automatically realized through the market mechanism. Relative to the initial endowments the equilibrium (market) price is the 'just price', the laws of functional income distribution based upon the marginal productivity theory are considered to be natural. Ethics might enter the scene precisely in relation with the 'socially appropriate' distribution of endowments.

However, in the presence of disequilibria or of situations of change the aims pursued in the various spheres may give rise to conflicts. For instance, it has been suggested above, that the question of protection of certain or all industries may create a tension between the political and social sphere on the one hand and the economic sphere on the other: protection will prevent or slow down structural adjustment and thereby reduce structural unemployment in the short or medium term; in the long run however protection will, in the liberal view, give rise to welfare costs. Or, more equity might be ethically desirable, but would reduce efficiency in the economic sphere. The neoclassical economist cannot take position on these issues. All he can do is tell the politician how the trade off between equity and efficiency looks like and leave it to him to decide. Economic science is considered to be neutral and value free.

Thus, the tension between economics, ethics and politics arises, on the one hand, because of conflicting views on the aims to be pursued in the various spheres (how far should protection go?). Moreover, the various spheres mutually influence each other: social, political and cultural institutions affect the economic domain in that they shape the general equilibrium of prices and quantities, that is institutions influence the positions of supply and demand curves. This implies that a specific institutional set up would be required to guarantee the existence of a full employment equilibrium. However, any attempt to create an 'institutional equilibrium system' is be bound to fail almost certainly, simply because the task is too complex. (Some system theorists seem to argue that the competitive mechanism can be applied to all spheres of human activity to produce a tendency towards a comprehensive social equilibrium. In
view of problems associated with tendencies towards Walrasian equilibria it is difficult to see how an overall social equilibrium could come into being.) Tensions between the economic sphere and other domains of human activity are thus inevitable because of contradictions existing between the various spheres (equity versus efficiency is an example) and because of the lack of a comprehensive theory to co-ordinate the different domains of human activity. Finally, tensions between economics and ethics arise because economies are never in equilibrium and changes in all spheres occur continuously; for example, there is a reluctance to extend payments to involuntarily unemployed because this might affect the proper functioning of the labour market.

3. If a classical-Keynesian vision of society and man is taken, an entirely different relationship between the economic sphere on the one hand and politics and ethics on the other emerges (Bortis 1997, pp. 39-47). Here, society and man are seen as entities: societies are not merely collections of individuals and man is something more than a rationally behaving actor in various spheres. In this view, economics and political economy belong to the moral sciences because each human action, whether individual or social, economic or political, has an ethical dimension. This always went without saying for the historically and institutionally minded social scientists. Keynes also wanted "to emphasise strongly the point about economics being a moral science" (Keynes, Collected Works, vol. XIV, p.300). "The central question [is]: 'What is the right way for men to live, both as individuals and as a group?' On this basis we can distinguish two main branches of practical philosophy - [individual] ethics (or moral philosophy) and politics [political philosophy or social ethics]" (Brown, 1986, p.11). Brown subsequently presents a neo-Aristotelian system of ethics which could provide the ethical foundations for classical-Keynesian political economy (Brown, 1986, chapter six, pp.130 ff.).

Social ethics deals with the ethical content, i.e. the contribution to the common weal or the public interest, of the social activities of man which show up in the pursuit of common aims where individual actions acquire a social dimension in that they are complementary and in that co-operation is essential. For example, the process of production, be it on the macro, the sector or the firm level, is essentially a social process. Moreover, what appears to be an individual action rests on a large social background. For example, consumption is certainly individual, but the consumption pattern may be very much socially determined. Hence social institutions play an essential ethical role, not only in the socio-economic, but also in the political and cultural sphere, because of their greater or less contribution to the public interest.
If society is seen as an entity, then the various spheres (economic, social, political) are to some extent complementary and there must exist a specific relationship between them. The social role of the economic system is the production of a social surplus which enables a society to erect, on the economic (material) basis, an institutional superstructure: a political system, a legal framework, and cultural institutions in the widest sense of the word. The way in which society is organized depends upon a system of values, the supreme value being the public interest. In some societies cultural values in the widest sense dominate, in others material values are put to the fore. Changing value systems, sometimes initiated by an evolution in the forces of production, set into motion institutional change. For example, cultural activities may be enhanced by diminishing economic activities through a reduction of working time which, in turn, is rendered possible through technical progress.

Ideally, the role of politics consists in arranging as harmoniously as is humanly possible the various spheres of society in order to approach the common weal to a feasible extent. This is an extremely complicated task as, on account of the social value system, everything depends on everything. The task of politics is also permanent as changes in circumstances, material or other, constantly occur and, consequently, the threat of disharmony and of growing alienation is permanent.

Political or social ethics thus deals with the good or right organization of society. The fundamental notion is that of distributive justice which is about the relationship of parts to the social whole. The meaning of this notion can perhaps be illustrated best by applying it to the fundamental issue in political economy, i.e. income distribution. Distributive justice comes in here in two ways, i.e. the determination of the surplus (profits and rents) and of the structure of wages. The possibility to realize profits is essential for enhancing the productive powers of an economy, i.e. to produce at the lowest possible costs. Rents are not only important regarding land but also relative to labour: outstanding skills must be materially rewarded. With the surplus and consequently the wages share determined, the problem of fixing the wage structure occurs. Each wage structure implies a valuation of the different kinds of labour. This means determining the socioeconomic position - the status - of each type of labour. Clearly, in this view, distribution is not a market problem implying relations between individuals (workers and employers), but is a social and political issue which deals with the relationship between individuals and groups on the one hand and society on the other, i.e. a part-whole relationship. It is here that conflicts may arise between individuals or groups. To eliminate these conflicts as far as is possible and to bring about a socially acceptable wage structure and
socially acceptable shares of profit and rents is the principal task of political economy and, as such, one of the main tasks of politics. Obviously, the task is immensely complex which is compounded by the fact that income distribution directly influences other parts of social life; for example, overall labour productivity and the levels of employment and output. It is likely that a broadly equitable distribution of incomes has a favourable influence upon labour productivity because of improved labour relations and upon the levels of employment and output because of a higher level of effective demand. Higher levels of labour productivity and of employment result in an increase of the surplus which in turn renders possible an extension of cultural activities, for example.

The prime task of politics is to promote the public interest (the traditional common weal). This implies creating favourable socioeconomic, political and legal preconditions enabling individuals to prosper, i.e. to approximately realize those fundamental values which constitute a good life (Brown, 1986, ch.6). In a monetary production economy with extensive division of labour full employment and an equitable distribution of incomes are certainly the most important of these preconditions. These domains of social and economic life lie within the confines of political economy which ought to aim at organizing economic life in a way most beneficial to society as a whole. James Steuart put this admirably: "What economy is in a family, political economy is in a state: [...]. The great art [...] of political economy is, first to adapt the different operations of it to the spirit, manners, habits, and customs of people; and afterwards to model these circumstances so, as to be able to introduce a set of new and more useful institutions.

The principal object of this science is to secure a certain fund of subsistence for all the inhabitants, to obviate every circumstance which may render it precarious; to provide every thing necessary for supplying the wants of the society, and to employ the inhabitants [...] in such a manner as naturally to create reciprocal relations and dependencies between them, so as to make their several interests lead them to supply one another with their reciprocal wants" (Steuart, 1966, pp.16-17). In a more modern vein one could say that a monetary production economy is a means to provide the material foundations for a society organized on the basis of certain values. From this vision of things, based upon the classical surplus principle, the normative character of political economy clearly emerges.

4. Individuals act within the confines of a social organization, i.e. the material basis and the institutional superstructure. Again their actions always comprise an ethical dimension. The ethical problem is not to follow formal rules, e.g. to
maximize utility, but to aim at specific concrete values which are hierarchically ordered, e.g. "physical and mental health, material affluence (within limits), the development of (some of) one's potential, useful or 'meaningful' work, a set of personal relationships (friendship, love etc.) and to regulate these [in order to obtain] a rational plan of life to be lived in a rationally organized society" (Brown, 1986, p.136). The precise content of these values will differ between individuals because each human being is unique. Ethics thus deals with the good conduct of individuals; this includes relations between individuals. The ethical meaning of the latter may be illustrated by a famous economic example, i.e. the problem of the just price at which goods ought to be sold. If the process of production is seen as a social and circular process the prices of production depend on the technical condition of production and upon income distribution, that is the structure of money wages and the rate of profits; the structure of money wages reflects, in turn, a valuation of the various types of labour. These distributional preconditions for pricing reflect the Ricardian tenet that distribution logically precedes value. Now, a socially appropriate wages structure and socially appropriate shares in national income reflects distributive justice which, in turn, expresses part-whole relationships, i.e. relations between individuals and groups on the one hand and society on the other. Hence the prices of production reflect social ethical arrangements in the realm of distribution and the efforts undertaken by society to produce goods which shows up in the conditions of production. If now the distributional arrangements are socially appropriate and, therefore, approximate distributive justice, the prices of production would reflect just prices. And trade at just prices or selling goods at just prices would, in turn, imply commutative justice in the sense of Aristotle and Aquinas: trade or sale is balanced and fair and expresses ethically appropriate relationships between the exchanging individuals or between producers and consumers. Hence approximate commutative justice only obtains if a social precondition is fulfilled, i.e. if distributive justice is - approximately - achieved. This suggests that an ethically appropriate organization of society is a precondition for ethically correct behaviour on the individual level.

5. The remarks made so far in this section clearly indicate that, in classical-Keynesian political economy, ethics is intimately linked with all economic phenomena. This is also true if, as will always be the case, a greater or smaller gap exists between some real world situation and the ethically perfect situation in which the common weal would be realized (Bortis 1997, pp. 47-53). To modify somewhat a Marxian notion this gap might be called alienation to designate the tension between 'what exists' and 'what ought to exist'. Keynes, but also Marx perceived that alienation is caused by an inappropriate
functioning of the socioeconomic system. Marx argued that private property led to a misconceived organization of the socioeconomic system and thus to alienation; Keynes however realised that persistent involuntary unemployment, due to defects of the market system, was the main source of system-caused alienation. Without discussing this particular point we think that Keynes is basically right. The main reason is that private property is an important social institution which contributes to the good functioning of society because individuals care about what they own and social peace is enhanced if property is widely spread (Bortis 1997, pp. 158-75).

Alienation brought about by persistent involuntary unemployment may lead to a perversion of certain or all ethical values. For example, in an unemployment situation the production and the export of weapons might be justified by the fact that work places are saved; or, according to Maynard Keynes and William Petty, useless work, like building pyramids is to be preferred to leaving workers involuntarily unemployed. However, the prime example for this way of reasoning is Bernard de Mandeville, who argued that private vices were public virtues if they contributed to secure work places.

Because of its destructive effects on individual and social life, involuntary unemployment is certainly the central socioeconomic problem arising in a monetary production economy; the gradual formation of a two-class society is perhaps the major social effect of persistent unemployment. To develop a fundamental - long-period - theory of output and employment is, therefore, a central problem of political economy (Bortis 1997, pp. 142-204). On the basis of long-period employment theory one may, in turn, suggest conceptions for policy actions in line with the requirements of social or political ethics (Bortis 1997, ch. 6).

VIII. Economic science and the art of political economy

In section V above it has been suggested that an entirely different vision of society and of man is implied in the neoclassical approach and in the classical-Keynesian approach (Bortis 1997, pp. 253-56). This is associated with widely differing views on the great problems of economic theory: value, distribution, employment and money (sections III and IV). The method employed in both approaches is also fundamentally different; this shows up in a differing relationship between theory and historical reality (section VI). Finally, the relationship between economics on the one hand and ethics and politics on the
other is sharply opposed in the liberal and in the middle-way classical-Keynesian view (section VII).

It has been suggested that in neoclassical economics a tension exists between economic science and political economy, between theory and history and between economics on the one hand and ethics and politics and that such a tension does not exist in classical-Keynesian political economy. The clue to this state of affairs is provided by the differing visions of society and of man associated with both approaches and the implications of these visions.

In the neoclassical approach the autonomous individual is primary. Man is seen as a technocrat acting rationally in various spheres of life, economic, political, ethical. Society is a collection of individuals who are linked through a network of implicit and explicit contracts. There is no comprehensive view of man and of society: man and society are not considered as entities. This individualistic approach is certainly very useful to explain the behaviour of individuals and collectives. However, if the various mechanisms that are supposed to coordinate behaviour do not work properly in a monetary production economy - if no tendency towards a full-employment equilibrium exists -, and if the relationships between the economic, social and political sphere are not specified, overall evolutions (output trends, unemployment levels, for example) cannot be explained in terms of individual actions. The system is governed by laws of its own. As a consequence, the rationality of the system may differ from the rationality of individuals. Paradoxes occur, the most important being perhaps Keynes's paradox of thrift, which implies that a more unequal income distribution may lead to higher unemployment levels which, in turn, may cause the distribution of incomes to become even more unequal - this is immediately evident from the supermultiplier relation (Bortis 1997, p. 146). It is these contradictions which lead to tensions in various fields if the viewpoint of neoclassical economic science is adopted to tackle socioeconomic phenomena.

The tensions between economic science and political economy seem to be mainly due to the closed and autonomous character of economic science which is a direct consequence of the neoclassical vision of man and of society. The object of enquiry of neoclassical economic theory is, consequently, the immediately visible - surface phenomena or appearances -, i.e. market prices and the corresponding quantities; underlying social processes - production and distribution - are ignored (production simply appears as an application of exchange as is illustrated by the concept of a factor market). Given the immense complexity of the real world with everything depending on everything else, the basic neoclassical model - the general equilibrium model - is also extremely complex, in spite of the facts that attention is confined to the economic sphere.
only and that the level of abstraction is very high as is the case with the Walrasian model. A first type of tension is due to the nature of this model which is simply not operable, a fact perceived with great clarity by Alfred Marshall. However, the partial equilibrium approach, when conceived to solve macro problems (income distribution, employment levels) involves further tension. The relationship of one market with all the other markets and, more fundamentally, of the market system with other subsystems (the political, social, ethical subsystems) are not specified in a general form. The latter would require a general theory of external effects (produced by the economic system) and of impacts from outside (the framework surrounding an economy) in terms of the behaviour of individuals. Such a theory is, probably, intractable, even on a purely formal level. Given this, the tensions between economic science and political economy, between theory and history, and between the economic and the political and ethical sphere will, presumably, ever grow as (neoclassical) economic science 'progresses'.

We have suggested that such tensions do, in principle, not exist in the classical-Keynesian approach. Here, the starting point is not the individual, but society as a whole. The scientific procedure is not based upon a subjective basis (methodological individualism) and dominated by formal rules to be followed by individuals: profit and utility maximisation under constraints in the economic sphere. The questions are about specific concrete objects. For example, Ricardo inquired into the principles that regulate distribution and relative prices. He realized that both were interrelated and dependent upon the entire socioeconomic system. Methodologically speaking, Ricardo asked for fundamentals: what is the nature (the essence) of the price? This implies abstracting from transient surface phenomena, e.g. market prices, and concentrating on what is stable or slowly changing. Each price is now seen to depend upon the conditions of production and upon distribution (the rate of wages), with the latter depending on a complex set of institutions. From Pasinetti (1977 and 1981) emerges with great clarity that each price of production is in fact a macroeconomic phenomenon, which is determined by the whole social production system. Similarly, Keynes, in his General Theory dealt with one precise problem, involuntary unemployment. The principle of effective demand can operate in a monetary production economy only and involves that the whole socioeconomic and political system comes in to determine the level of employment. This is particularly evident if the supermultiplier relation mentioned in section III above is considered (Bortis 1997, pp. 142-54). Classical-Keynesian political economy thus start from society (made up of a set of interrelated institutions composing the material basis and the political, legal,
social and cultural superstructure) as should be the case in the social sciences. The problem is to discover the principles that regulate selected phenomena, prices and employment levels; Ricardo's *Principles of Political Economy and Taxation* for example illustrates best this methodological procedure. As society as a whole is considered when tackling an economic problem a tension between economic science (a set of principles) and political economy cannot exist. This does not imply that the concrete application of the principles to the real world, when pursuing specific economic policies, is easy and straightforward; the difficulties have been alluded to in section III above where Keynes's 'logical theory of the multiplier' and a real world application of this principle have been considered. This implies that any application of principles to a specific historical situation for explanatory or for policy purposes requires an intimate knowledge of the concrete circumstances in question; the application of principles cannot be mechanical as societies are of organic complexity (man and society are 'ethical organisms' because of the interrelatedness of values which form a hierarchical system). *It is here that the art of historical reasoning and the art of political economy come in.* Due to the ethical nature of societies, reasoning in history and in political economy cannot be based uniquely on scientific explanation but requires understanding based upon a comprehensive vision of man and society. The fact that principles (theoretical tools) can be applied without difficulty to explain concrete historical situations as Keynes envisaged it (Keynes, 1973a, preface to the German edition) implies that there is no tension between theory and history in classical-Keynesian political economy either. Explanation of selected aspects of reality is attempted by the means of simple causal models. Finally, there is no tension between economic science and ethics. In fact, the social sciences are, as has been stressed by Keynes, moral sciences by their very nature. On the one hand, each human action embodies an ethical dimension in that, spontaneously or consciously, aims are pursued which may be good or bad in varying degrees. On the other hand, social and political ethics deals with the organization of society reflected in a certain institutional set-up. A society is organized better, the closer the basic aim of political ethics - the public interest or the common weal - is approached, i.e. the less alienation prevails. To avoid misunderstandings it should be stressed that markets and the behaviour of individuals in the market place are not excluded or considered as unimportant in classical-Keynesian political economy. Particularly, the market is supposed to bring about a tendency of market prices towards the socially determined prices of production. The scope of the market is therefore much narrower than is the case in the liberal (neoclassical) view where markets, if functioning satisfactorily, are supposed to solve the most important economic problems.
The question concerning the relationship between economic science and political economy, posed by Phyllis Deane, is associated with basic issues in economic theory and policy and in the organization of society. Its importance deserves a thorough investigation by social scientists, especially after the downfall of the socialist systems and the doubts that continue to prevail on the ability of market economies to provide satisfactory solutions to income distribution and employment, which are, according to Keynes, the two great socioeconomic problems of our time (Keynes, 1973a, p.372). After the downfall of socialism, the tension between economic science and political economy within the liberal doctrine and the continuing contradictions of capitalism naturally leads to asking the fundamental question about the possibility of a humanist middle-way alternative. Bortis (1997) attempts to combine Keynes's principle of effective demand with the classical surplus principle and contributes to establishing a system of classical-Keynesian political economy. As has been suggested in these notes, the tension between political economy and economic science vanishes in principle within this humanist middle-way system. A reconciliation of political economy and of economic science, however crude, on Keynesian and classical ground certainly reflects Phyllis Deane's ultimate thoughts on this subject.

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