How 'Neo-Classical' is Neoclassical Economics?

With Special Reference to Value Theory

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This article presents the argument that most of post-classical economics since the 1870s represents, particularly in its analytical or scientific dimensions, a non-classical rather than neo-classical economics. This is especially true of micro-economics, i.e., the theory of value/prices and distribution. On the other hand, insofar as it is based on the doctrine of laissez-faire (slightly modified), post-classical economics can be characterized as neo-classical and only in its ideological and other meta-scientific aspects. It is here argued that the notion of 'neoclassical economics', as applied to post-classical, including contemporary, micro-economics, is not only a terminological misnomer, but it also implies a serious substantive fallacy. To support that argument, the paper identifies and elaborates the formal-theoretical inconsistency of the designation 'neoclassical economics' with the crust of contemporary marginalist value theory. Hence, the paper's contribution is to show the inadequacy of the continuing widespread usage of the concept "neoclassical" in the modern economic literature.

'Value is the essence of Economics' (Wieser)

The Rise of a (Dubious) Nomenclature: 'Neoclassicism' as a Designation for Marginalism

Since the 1890s economic science has been denoted 'neoclassical', more precisely classical political economy has been renamed 'neoclassical economics'. In particular, Alfred Marshall seemed notably instrumental in establishing the notion of neoclassical economics. Marshall loomed large beneath the origin of the very term 'neoclassical' in the sense of continuation of classical political economy, since he was willing more than all the other 'marginalist founders' to re-establish or substantiate his 'continuity with classical theory'. And indeed, the very nomenclature of 'neoclassicism' to describe marginalism—a nomenclature which became widespread after World War Two—arose out of Marshall's characterization of continuity between classicism and his own version of marginalism; or more particularly, it arose out of Thorstein Veblen's acquiescence to the Marshallian conception, i.e., Marshall's 'own understanding of his continuity with the classics' (Aspromourgos, 1986, p. 266, 269; 1996, p. 4).

Marshall's assumed continuity implied re-interpreting classical political economy, especially Ricardo's theory, as a prelude to marginalism: the revision of the history of classical economics, which resulted in its being conceived as an anticipation to marginalist theory, was due to something additional. That something additional primarily was Alfred Marshall [who] among the marginalist founders sought to project a continuity with classical economics or more particularly Ricardo.' (Aspromourgos, 1996, p.4). Hence, in the Marshallian framework this implied that if classical political economy was an anticipation of - rather than an impediment to, as Jevons thought—of marginalism, then this latter was 'neoclassical.' This original meaning of the term 'neoclassical' seems, however, dubious, especially when used with reference to the (marginalist) theory of value and distribution, as argued throughout this paper. At any rate, it was Veblen who
originally coined the term 'neoclassical' in this meaning in around 1900 (cf., Aspromourgos, 1986, p. 286). Thus he argued that the 'so-called Austrian school [marginalism] is scarcely distinguishable from the neoclassical, unless it be in a different distribution of emphasis'. He considered Marshall the key figure of such 'neoclassical' economics, who 'excellently exemplifies the best work that is being done under the guidance of the classical antecedents' (Veblen, 1919, pp. 169-171).

However, it is a main thesis of this paper that this neoclassical nomenclature for marginalism was problematic to the extent that marginalism, especially its early version in Walras, Menger, and especially Jevons, was non- and even counter- or 'anti-classical', rather than 'newly' classical, as the term 'neoclassical' would suggest. To that extent, marginalism including the 'marginalist' (Aspromourgos, 1996, p. 1) theory of Marshall, appeared to have performed a 'subversion' or 'silent revolution' (Bharadwaj, 1988) rather than 'reform' or 'restoration' of classical political economy, above all in its theory of value and distribution.

The Marshallian conception of 'neoclassical economics' involved attempts (or claims) to re-establish congruence of classical political economy, especially its 'objective' (cost of production) value theory, with marginalist economics, above all its subjective (marginal utility) theory as culminating in the 1870s. Seeking such a continuity between classicism and marginalism, in terms of the dramatis personae involved Marshall engaging in a defense of Smith, Ricardo, and Mill from Jevons as well as Walras, Menger and other marginalist dissenters, e.g., Böhm-Bawerk, Wieser, Wickst with (Groenewegen, 1995). Eventually, Marshall seemed to have achieved continuity between Ricardo-Mill's and Jevons' initially divergent theories of value (and distribution). This continuity was indicated by the famous scissors parabola, with cost (supply) and marginal utility (demand) being two blades of a pair of scissors (Marshall [1890] 1961, pp. 675-6), i.e., two constituents of (the theory of) value. Such a 'synthesis' (O'Brien, 1990, p.157), 'reconstruction' (Groenewegen, 1995) or 'mix' (Reisman, 1990, p.263) was deemed to express some rehabilitation of classical political economy, above all in its value and distribution theory, that had been almost 'submerged and forgotten' (as complained by Sraffa, 1960, p. v) in the aftermath of marginalism.

Since he sought, unlike Jevons and most other marginalist pioneers, to reconstitute rather than revolutionize (Groenewegen, 1995, p. 788) classical political economy, presumably Marshall would not object to the designation of such an eclectic economic, theory as 'neo-classical. And 'muddy eclecticism' of J. S. Mill would give the appearance of a bridge between Ricardo and Marshall and hence a semblance of continuity between classicism and Marshallian marginalism (Aspromourgos, 1996, p. 4).

Regardless of whether in the 'neoclassical' the emphasis was more on 'classical', as perhaps Marshall initially intended (Dobb, 1924; Shove, 1942), or on 'neo', i.e., 'marginalist', as was probably the unintended consequence (Bharadwaj, 1988), or else some balance, synthesis or mix was struck, 'neo-classical economics' as a theoretical corpus was thereby born. According to some established interpretations, 'this theoretical corpus stems directly from Marshall, but it has gained much in rigor at the hands of Walras, Edgeworth and Wicksteed' (Stigler, 1941, p. 317), with the implication that Marshall's 'neoclassical' economics was cognate with marginalism.

For purposes of this article, marginalist value theory is understood as a subjective theory of prices that is based on the concept of marginal utility, including a marginal productivity theory of distribution (factor valuation), as initially formulated by Jevons, Walras and Menger, and as subsequently elaborated by others, including at least partly Marshall as part of the marginalist revolution during the 1870s-90s (Bharadwaj, 1988; Groenewegen, 1995). Moreover, some historians of economics place Marshall and his value/distribution theory completely among the 'marginalist theories' and 'founders',
alongside Jevons, Menger, and Walras, despite Marshall’s (initial) aversion toward marginalism, especially Jevons and the Austrians. More generally, the ‘defining character of the marginalist theory is [...] the principle of constrained individual optimization with autonomous preferences [...] because it captures the optimization conditions in marginal equations or inequalities’ (Aspromourgos, 1996, pp. 1-2). In marginalism, value and distribution ‘are treated in terms of the mutual interactions of demands and supplies for commodities and “factors of production”, these supply-and-demand forces being understood to determine simultaneously all the relevant prices and quantities.’ (Aspromourgos, 1986, p. 265). Although the notion of classical political economy is perhaps ‘not so straightforward’ relative to the ‘peculiarly unified character’ of marginalism, for the sake of this analysis the former is defined by its objective, cost-of-production theory of value (and distribution). In retrospect, the term ‘classical political economy’ was probably first (Aspromourgos, 1996, p. 4) coined by Marx only to engage in its critique.

More generally, the ‘birth’ of neoclassicism as marginalism involved a change from ‘political economy’ to ‘economics’ as the term of economic science. Thus ‘by the time the marginalist revolution had run its course in 1890 [the date of publication of Marshall’s Principles of Economics], the term political economy was not used for either mainstream economics or political science’ (Miller, 1997, p. 1173), but was completely superseded by the designation (neoclassical) ‘economics’. Marshall was also (perhaps the most) instrumental in this general and almost dramatic transition from ‘political economy’t to ‘economics’, above all in the English-speaking world since the early 1890s. If anything, even those not particularly impressed by Marshallian economics (Samuelson, 1983) must admit that Principles of Economics definitively (after the earlier and less influential Economics of Industry) inaugurated the term ‘economics’ in social science discourse. This was done in an obvious analogy to physics and mathematics (Miroswksi, 1989), albeit Marshall practiced remarkable prudence and caution, unlike, for example, Jevons (cf., his critique of the latter’s ‘mathematical economics’ in Pigou, [1925] 1966, pp. 97-9), regarding the (mis)use of mathematics in economics, with the former being regularly relegated to appendices (cf., his six-step procedure in Whitaker, 1996, p. 130). Simply, after Principles of Economics nothing was ever the same at least in regard to economic terminology, if not substantive economic theory for a long time, probably until the late 1920s, which marked the beginning of the decline of Marshall’s influence on modern economic science. Such a decline included the disregard on the part of a ‘majority of later economic theorists’ of Marshall’s insistence for explanation of ‘observable’ economic phenomena, reflecting his ‘own highly developed sense of economic reality’ (O’Brien, 1990, p.157). This has probably led to the ‘disappearance of his Principles from contemporary literature [in favor of] abstract formalism of the Lausanne [general equilibrium] tradition [though] the fact of his influence cannot be denied’ (Stigler, 1990, p. 12).

The above terminological change from (classical) political economy to (neoclassical) economics is of relatively little concern here, however. What concerns us mostly is the question of whether this change expressed something more substantive, namely if the ‘new’ economic science, now called ‘neoclassical economics’ was really a ‘newly’ classical, or rather a pseudo- or even non-classical approach. It will be argued that the term ‘neoclassical economics’ was a major misnomer in light of the marginalist revolution that was aiming at the displacement of classical political economy, above all its value theory, not just at amending it. Thus, if there exists an essential theoretical disjunction between the classical and marginalist theories of value and distribution, then the term neoclassical ‘would appear a misnomer [and] it would then appear curious that such a characterisation of marginalism should arise’ (Aspromourgos, 1986, p. 265).
Given the magnitude of the change not just in terminology or nomenclature, but also in substantive 'economic reasoning' (Pribram, 1983), no wonder the Marshallian conception of 'neo-classical' economics has spawned a vast specialized literature (for some recent examples and reviews, cf., Bharadwaj, 1988; Groenewegen, 1995; Hodgson, 1993; Moss 1994; Reisman, 1990; Whitaker, 1990) and even journals (The Marshall Studies Bulletin). And many contemporary authors like Samuelson et al. have sought to achieve what is called a 'grand neoclassical synthesis'. However, this synthesis has a different meaning—i.e., combining elements of macro-economics with orthodox (marginalist) micro-economics—than that found in or attributed to Marshall, viz., an assumed fusion of classical and marginalist value theories (Groenewegen, 1995; O'Brien, 1990; Reisman, 1990). On the other hand, Keynes called some of his contemporaries (Hayek, Hawtrey, Robertson) 'neoclassical', viz., those who have abandoned Say's law but without fully realizing the implications (Moggridge, 1979, pp. 266-73). In turn, his usage of 'neoclassical' was derived from his equally peculiar concept of classical economics, in which he included, for example, Marshall (Keynes, [1936] 1960, pp. 177-8). Hence Keynes's idiosyncratic use of the term 'classical' is to be distinguished from the generally accepted usage of the term. In Keynes such a usage has ensued in the term (neo) classical has acquired a different interpretation in macro-economics, viz., associated with Say's laws, than in value theory and generally micro-economics.

Overall, post-classical (and contemporary) mainstream economics is usually called 'neoclassical', and this implies some rehabilitation or revival of classical political economy. Is this conventional designation correct? The paper argues that the designation is not adequate, especially with regard to value theory, including distribution theory. The main argument of this paper is that post-classical economics, from the 1870s to the early 1900s, is non- or anti-classical rather than neo-classical as usually designated, albeit with some qualifications. For instance, Marshall's work was never anti-classical in the sense that Jevons, and to a lesser degree, Menger and Walras opposed the older economics of Mill, Ricardo and Smith.' (Groenewegen, 1995, p. 788)5. Such opposition is especially true of value or price theory which 'lies at the basis of all [traditional] economic theory' (Smart, 1966, p. 17), i.e., of both classical political economy and 'neoclassical' economics. The paper thus argues that in its analytical content (Shove, 1942)4 or scientific dimensions, most of post-classical, especially marginalist, economics represents a non-classical theory of value/prices and distribution. By contrast, only in its meta-scientific or pseudo-ideological components, modern (micro) economics can be characterized as neo-classical to the extent that it is based on the doctrine of laissez-faire or free markets (albeit slightly modified), as well as a 'common utilitarian approach and the common assumption of a hedonistic psychology' (Aspromourgos, 1986, p. 286)5. In this regard, both classical political economy and ('pure') neoclassical economics would represent a 'theory of price determination under a hypothetical regime of absolutely free competition' (L. Walras, [1874] 1926, p. xi)6 as often- an -ideological- or -political 'desideratum' (Myrdal, 1953, p. 4; also Dobb, 1973), i.e., what Keynes (1972, pp. 276-7) termed the 'Church of England' sanctioning 'the least deviation into impiety'. However, classical and neoclassical economics radically differ in terms of explanation of the nature and determinants of this process of price determination, namely of the causes and measures of exchange value under a market economy.

Overall, there exists rarity of attempts at showing the inadequacy of the term 'neo-classical economics' for designating post-classical and modern value theory in the current literature. Still economists have sometimes voiced misgivings about the usage of the 'nebulous description, neo-classical economics' (Stigler, 1941, p. 8), doubting the 'somewhat misleading title of Neo-classicism' (Roll, 1942, p. 487), and even recommending the elimination (Hicks, 1983, p. xiii) of it from contemporary economic
discourse. Furthermore, other economists (Dobb, 1931; Pasinetti, 1981) have suggested that marginalist value and distribution theory be denoted ‘counter-classical’ rather than ‘neo-classical’ (as described by Robinson, 1964), by virtue of its divergence from the classical theory. In this connection, Stavrian economics mounted a pointed critique of marginalism and attempted rehabilitation of classical political economy, by starting from a ‘standpoint [of constant returns], which is that of the old classical economists from Adam Smith to Ricardo [and which] has been submerged and forgotten since the advent of the ‘marginal’ method’ (Sraffa, 1960, p. v). The latter is, in contrast, regarded as being based on the notions of changes in the scale of production, viz., diminishing marginal productivity and generally decreasing returns, or in the ‘proportions’ of production factors (input substitution). Such a ‘critique’ of the marginal theory of value and distribution, i.e., of its basis in ‘spurious margins’ (Sraffa, 1960, pp. v-vi), would thereby imply that the designation ‘neoclassical’ was inadequate for marginalist economics. Moreover, ‘it is just Sraffa’s reconstruction of Ricardo’s economics - and the reappraisal of classical economics which has been stimulated by it—which is perhaps the major source of disquiet about the appropriateness of the designation.’ (Aspromourgos, 1986, p. 268).

Nevertheless, if previous studies agree that the classical and marginal theories of value are different, they do not necessarily infer therefrom, or elaborate enough (with the exception of perhaps Sraffa et al.) on, whether the designation ‘neoclassical economics’ may be a serious misnomer in terms of these theories. Even when acknowledging these differences in value theory between classical political economy and post-classical economics, many studies still denote the latter ‘neoclassical’, which is contradictory and paradoxical. This is a major ‘mistaken attribution’ (Stigler, 1990, p. 2) to the extent that classicism and marginalism ‘do indeed embody distinct and different theoretical approaches to economics’ (Aspromourgos, 1986, p. 286), more particularly to value/prices and distribution.

Against this background, this paper’s contribution and justification lies in essence in its attempted demonstration that the continuous and widespread usage of the term ‘neoclassical economics’ in the current economic literature may be misguided and imprecise at best. Furthermore, since such (mis)usage of the designation ‘neoclassical’ can express some fundamental misunderstanding (or neglect) of alternative strands of economic theory, questioning the legitimacy of such interpretation goes beyond mere issues of terminology and nomenclature, but remains of interest in substantive terms as well. The argument that post-classical (micro) economics is in its analytical elements non-classical rather than neo-classical is further elaborated by adding relevant theoretical evidence, especially from marginalism to which the nomenclature ‘neoclassicism’ is usually attached.

**Marginalist (‘Neo-Classical’) Value Theory**

In general, ‘neo-classical’ (micro-) economics appears as a marginal utility theory of value/prices just as it is a marginal productivity conception of distribution. The main elements of this theory are briefly presented as follows.

**Utility (plus scarcity) as the general source of value**

While in classical economics labor or cost is treated as the main source of value, such a status in neoclassical economics is attributed to utility. Thus value is regarded as determined by the ‘natural laws of variation of utility’, of which the law of supply and demand is assumedly a ‘necessary consequence’ (Jevons, [1871] 1909, p. 170). Typically, the conjunction of utility with scarcity represents the ‘source’ of value within neoclassical economics. This was exemplified by Auguste and Leon Walras’s (the father
and son) concept of rarity in the sense of utility-associated scarcity. Overall, abstract utility, just as abstract labor in the Marxian-Ricardian and other classical theories of value, is considered the major determinant of value, so this latter is re-defined as a ‘quantitative measure’ of utility (J. B. Clark, [1899] 1956, p. 74).

Rejection of the notion of intrinsic, objective, labor-cost value
The repudiation of the concept of inherent value, as implied in the labor-cost theory, was epitomized by Jevons’s ([1871] 1909, p. 243) dictum that ‘bygones are forever bygones’ in the realm of value as in others. The underlying rationale was that labor or costs as historical variables cannot substantially influence present or future variables (values)–this is the argument against the ‘dead hand of the past’. The concept of intrinsic value inhering to goods by virtue of their being products of abstract labor or the costs of production was stigmatized as a ‘non-entity’ or a metaphysical entity (Pareto, 1927, p. 244), and replaced by that of the ‘ratio of exchange’ (Jevons, [1871] 1909, p. 52). In other words, value was redefined in the sense of a ‘relative fact’ rather than an ‘absolute magnitude’ (L. Walras, [1874] 1926, p. 102). In consequence, the labor-cost theory of value as a whole was explicitly rejected by all marginalist economists (Wicksell, 1935, p. 51). This rejection was particularly categorical as to the Marxian labor theory of value, which was seen as a metaphysical or philosophical conception ‘derived from the more general cost theory’ (Bohm-Bawerk, [1887] 1987, p. 713).

The status of marginal utility as the concrete determinant and criterion of value
By virtue of this status, almost all neoclassical economics can be characterized as a marginal utility theory of value, in contrast to classical political economy as a labor-cost theory. This is not greatly affected by some divergences in the terminology referring to marginal utility–e.g., the ‘final degree of utility’ (Jevons, [1871] 1909), ‘rarity’ (A. Walras, 1884; L. Walras, [1874] 1926), ‘marginal importance’ (Menger, [1871] 1950), ‘marginal significance’ (Wicksteed, 1933), ‘ophelimité’ (Pareto, 1927), ‘comparative marginal desirability’ (Fisher, [1896] 1965), ‘final utility’ (J. B. Clark, [1899] 1956), and so on. Despite this terminological cacophony, all these terms were in essence intended to signify some notion of marginal utility (Bohm-Bawerk, [1922] 1959; Marshall, [1891] 1961; Wicksell, 1934; Wieser, [1893] 1956). (Also, most of them implied the idea of cardinal utility, with the exception of Pareto’s ophelimité) Marginal utility as the utility of the last unit (Gossen’s ‘atom’) of a commodity or input–or the first derivative of the function of total utility (as in a similar vein defined by Fisher, [1896] 1965; Jevons, [1871] 1909; Pareto, 1927; L. Walras, [1874] 1926; Wicksteed, 1933)–is in turn conceptualized as ‘synthesis’ of total utility and scarcity (Wicksell, 1934, p. 30). For this synthesis, Leon Walras’s term raréité (invented by his father Auguste) is indicative in its meaning not of ordinary rarity but of the conjunction of this with utility.

Now, just as the notion of labor-cost amounted to an objective theory of value in which value is determined independently of individual actions or subjective valuations, the concept of marginal utility led to a subjective theory of value. According to this theory, both the ‘cause and measure of value are subjective’ (Bohm-Bawerk, [1887] 1987, p. 706), so emphasis is put on ‘subjective valuations’ (Fisher, [1930] 1954, p. 14) and psychological variables generally. Thus the law of decreasing marginal utility is sometimes treated as a special case of the ‘law of diminishing psychic returns’ (Wicksteed, 1933, p. 86). In fact, given the salience of these psychological valuations, subjective value is regarded as determining ‘objective’ value, including cost-price, i.e., the cost of production plus normal profits, or market prices, rather than vice versa as assumed by classical economics. Simply, ‘exchange value, considered objective, can only find its explanation in the laws of subjective value.’ (Wieser, [1893] 1956, p. 34)
The introduction of the marginal utility concept was also conducive to redefining the law of supply and demand. If for classical political economy, the law of supply and demand was just an auxiliary and opposite principle of value determination relative to that of labor-cost, neoclassical economics treats the former as a market expression of a ‘deeper law’ of marginal utility. The difference is thus that, while in the first case, the law of supply and demand is deemed different from the postulated main law of value, in the second case, it is considered as isomorphic or functionally equivalent to such a law. However, in both cases the law of supply and demand is seen as ultimately secondary and subordinate to some primary law (labor-cost or marginal utility). Within marginal economics, the underlying connection between the law of supply and demand and the law of marginal utility (Pareto, 1932, p. 1595a), was implied in the view of supply as reflecting relative scarcity, ‘obstacles’ or difficulties of attainment, and of demand as manifesting utility, preferences or ‘tastes’ (Pareto, 1927, p. 241), with scarcity and utility being blended in marginal utility, viz., Walras’ *rarité* or Pareto’s *ophelimité*. A cognate position in this regard is taken by Böhm-Bawerk ([1887] 1987, p. 716) who states that ‘demand rests exclusively on the utility of goods, whereas a scarce supply may be easy to explain by a more or less difficulty of attainment.’ Nevertheless, in the marginalist frame of reference not only the demand side (as partly implied in Böhm-Bawerk’s statement), but also the supply side is driven by utility.

Counter-distinction between the law of marginal utility or supply and demand and the law of labor-cost

Quite opposite to classical economics, in neoclassical economics the former law is deemed superior to the latter in value determination. This position was epitomized in the view that marginal utility is the direct and primary determinant of value, while labor or cost is an indirect and secondary one that influences value only through its impact on supply (as vigorously defended by Jevons, [1871] 1909, p. 244). In consequence, the law of cost is observed as part, and thus subordinated to, the general law of marginal utility, as applied to the realm of production and distribution, in addition to exchange and consumption. Thus the costs of production are conceived as expressions of the marginal utility of production factors (Böhm-Bawerk, [1887] 1987, p. 731), or as forms of *ophelimité* in production (‘pseudo-costs of production’ (Pareto, 1927, p. 219)), as proxies to opportunity costs (foregone ‘alternative value possibilities’ (Davenport, [1908] 1964, p. 575)). This is because, within the marginal framework, factor prices are formed in the market in accordance with the law of marginal utility applied to production factors, i.e., the principle of marginal productivity, and the costs of production are redefined as but the sum of such factor prices. This position is exemplified by L. Walras’s ([1874] 1926, pp. 175-6) distinction between the law of supply and demand--reflecting the ‘deeper’ law of rarity--as the principle of product price determination and the ‘law of the cost of production’ pertaining to factor price determination. The second law is treated as dependent on the former in that input prices (costs) are assumed to be ultimately derived from product prices (L. Walras, [1874] 1926, p. 176). Thus determined these prices of productive services tend to be equal or proportional to the ‘partial function of fabrication, i.e., to their marginal productivities’ (L. Walras, [1874] 1926, p. 375). This process of factor valuation expresses the operation of (as later called by Marshall, [1891] 1961, p. 479) the principle of derived demand or value of the factors of production relative to that of products. In the Austrian terminology, the prices of goods of ‘the higher order’ or inputs are derived from the prices of goods of ‘the first order’ or commodities (Menger, [1871] 1950, pp. 360-2). The principle of derived factor demand and value, positing that costs are actually determined by prices (Jevons, [1871] 1909, pp. 281-2; L. Walras, [1874] 1926, pp. xvi-xvii), implies a radical reversion of the classical postulate that, on
the contrary, costs determine prices. This principle introduces us to neoclassical distribution theory.

Applying the Marginal utility principle to distribution or factor pricing
In neoclassical economics, factor pricing, just as product valuation, is conceived as proceeding according to the same general law of ‘final [marginal] utility’ (Clark, [1899] 1956, p. 47/208), and generally of subjective value. Hence, marginalist theories of distribution can be defined as those which ‘rose out of the theory of subjective value [marginal utility], and which were finally systematised into the general marginal productivity theory’ (Stigler, 1941, p. 1). The law of marginal utility is in the realm of distribution reformulated as the law of marginal, differential, final productivity or productive contribution at the margin, i.e., of the ‘imputation of returns’ to productive factors according to such a ‘marginal law’ (Wieser, [1893] 1956, p. 78/97). Hence, an analogue of the principle of decreasing marginal utility is that of diminishing marginal productivity which states that the ‘marginal significance [productivity] of the increasing factor falls, and that of the decreasing factor rises.’ (Wicksteed, 1933, p. 362) And the marginal utility (productivity) of production factors or ‘goods of the higher order’ is regarded as contingent on the marginal utility of products or ‘goods of the first order’ (Böhm-Bawerk, [1887] 1987, p. 731; Menger, [1871] 1950, pp. 146-7). This is the marginalist rationale for formulating the principle of derived input demand/price, which implies that distributive shares or factor incomes are determined by product demand/price. In the terminology of Austrian marginalism, the value of goods of the ‘lower order [products] cannot be determined by the value of goods of the higher order [inputs] that were employed in their production [but] value of goods of the higher order is always and without exception determined by the prospective value of goods of the lower order’ (Menger, [1871] 1950, pp. 49-50).

On the one hand, the factors of production are treated as having a ‘derived value’ from their anticipated contribution to the ‘imperial throne of Human [product] Demand’ (Wicksteed, 1933, p. 393). The value of the total product is seen as completely exhausted by the sum of factor distributive shares (costs), so individual agents (firms) would make zero-profits in equilibrium (Pareto, 1927, p. 223; L. Walras, [1874] 1926, p. 195). This has come to be known as the Euler theorem of distribution which thus posits that ‘when differential [marginal] distribution is effected, there is no surplus or residuum at all’ (Wicksteed, 1933, p. 792), with such a theorem requiring constant returns to scale, i.e., constant marginal productivity, in the factors of production, especially technology (Robinson, 1964)°. In mathematical terms, the Euler theorem implies that all the partial derivatives of the production function vanish in the process of this distribution according to the marginal utility/productivity rule (cf., Fisher, [1896] 1965, pp. 67-72; also Samuelson 1983). In consequence, pure profit as a price of entrepreneurial services are termed a ‘vanishing-sum’ on grounds that the ‘a priori laws of political economy demand the annihilation of it’ (J. B. Clark, [1899] 1956, p. 45). On the other hand, Keynes ([1936] 1960, p. 275) finds ‘pitfalls’ in a ‘pseudo-mathematical method which makes no progress except by making everything a function of a single variable and assuming that all the partial differentials vanish.’

In retrospect, marginalism caused a ‘large-scale paradigm destruction and major shifts’ (Kuhn, 1970, p. 68), if not a genuine scientific revolution within classical economics, and to that extent the term ‘counter-classical’ would be more appropriate (as suggested in regard to marginalist distribution theory by Dobb, 1973, p.248) than ‘neoclassical’ (Robinson, 1964). Despite this revolutionary features and effects, the marginal theory of value and distribution as (re)emerged in the 1870s is not absolutely new, but it had some previous origins, antecedents or at least adumbrations. As an
illustration, several of these best known can be mentioned here as particularly prominent. First, Gossen's 'laws' of utility are prototypical marginal utility principles, especially the 'first law' postulating diminishing marginal utility defined as the 'utility of the last atom', and the 'second law' positing utility maximization at the point of zero marginal utility. These 'laws' seemed to have especially influenced Menger's and generally the Austrian version of marginal utility theory. As hinted before, Auguste Walras's *loi de rareté* is also worth mentioning. This is because it had a strong impact on Leon Walras's formulation of the marginal utility (rarity) principle, including the law of diminishing marginal utility. This holds true although the law of (diminishing) marginal productivities or of derived factor demand/value was, while being a logical extension in this regard, a relatively independent formulation of Leon Walras. At this juncture, some early origins of the principle of derived factor demand and value can also be found in Say and Bastiat, who probably were to a degree influential in L. Walras-Pareto's statements of this principle. In addition, Senior's emphasis on the role of scarcity ('limitation of supply') and utility in value determination may have been just a step away from formulating a consistent marginal utility theory. Within English political economy, such a formulation was performed later by Jevons et al., who were probably more influenced by, or at least more sympathetic to, this emphasis than the focus on labor-cost prevailing in most of the classical theory of value and distribution. Having presented the main elements of the marginal theory of value, the so-called neo-classical synthesis in this realm is considered next.

The 'Neo-Classical Synthesis' Reconsidered: Completion or Submergence of Classical Theory?

Presumably, the so-called 'neoclassical synthesis', especially in its Marshallian version, has involved endeavors to blend divergent elements in the classical and marginal theories of value and distribution in a definitive formulation, thus seeking, as Marshall often put it, 'completion' of the classical system. Originally, the notion of a 'neoclassical synthesis' was attributed to Samuelson's attempts to synthesize Keynesian macroeconomics and marginalist, including Marshallian, microeconomics (for a recent self-account, cf., Samuelson, 1998), though Marshall 'would have staunchly opposed the obfuscation inherent in the distinction between micro- and macro-economics as both narrow and simplistic.' (Groenewegen, 1995, p. 788). More particularly, such attempts at synthesis place Keynesian macroeconomics within an equilibrium (Walrasian) framework within which marginal analysis can be applied. However, here the notion is used in a different (perhaps idiosyncratic) sense of a synthesis of the classical and marginalist theories of value and distribution, as reportedly sought by Marshall. The latter's endeavors to project continuity between classicism and marginalism were manifested in that 'Marshall, more aware that any of the leading economists of his time of the achievements of Classical economists, made the marginal revolution 'work' by plugging it into the general circuit of the existing body of economic literature in England.' (O'Brien, 1990, p. 156). Moreover, in some interpretations Marshall 'always claimed his own niche of independent discovery in what was subsequently called the 'marginal revolution' of the 1870s. This was not unjust if the emphasis is on marginal rather than on the utility content of this 'revolution' (Groenewegen, 1995, p. 778).

However, the somewhat unintended or unsuspected outcome of this attempted or attributed Marshallian 'synthesis' may have been a 'silent revolution' (Bharadwaj, 1988, p. 134) in the form of a marginal utility (or supply and demand) theory of value, rather than a reconstruction of the classical (cost of production) theory. Hence it would *prima facie* appear that Marshall's projected continuity between classicism and marginalism was in its consequences, though perhaps not in its intentions, conducive to a 'subversion'
(Bharadwaj, 1988) rather than completion or rehabilitation of classical political economy. To that extent, Marshall’s value (and distribution) theory can less plausibly be denoted ‘neoclassical’ than ‘marginalist’ (Aspromourgos, 1996, p. 1) and thus non-classical, though not ‘anti-classical’ in the manner of Jevons as well as Menger, Walras and other ‘pure’ marginalists.

Still, the enigma of Marshall’s character (Groenewegen, 1998, pp. 766-94) as one of the major dramatis personae in the development of economic theory since the 1870s, partly remains reflected in his economics, above all the theory of value and distribution. No wonder different interpretations of the nature of Marshall’s value (and generally economic) theory abound, viz., as its being decidedly classical, as a synthesis or mix of classicalism and marginalism, and as marginalist. For instance, some of his disciples (Shove, 1942, p. 295) have characterized Marshall’s theory of value and distribution, especially the ‘strictly analytical content’ of Principles, as being of an essentially classical ‘descent, especially Ricardian, and thereby neo-classical, with emphasis on the “classical”’.

Some modern historians of economic thought regard Marshall’s theory of value and generally his economics as a reconstruction of classical political economy by ‘completing and correcting’ it (Groenewegen, 1995, p. 788), thus implying that it is ‘neoclassical’. Still more severing the classical link, some other historians of economic thought have interpreted Marshall’s value and distribution theory as involving a ‘synthesis’ or ‘reconciliation’ (O’Bien, 1990, pp. 176-7), ‘mix’ (Reisman, 1990, pp. 263-4) or ‘continuity’ (Aspromourgos, 1996, pp. 1-4) between classicism and marginalism, with the implication of ‘neo-classical’ being attenuated in proportion to the role of marginalist ingredients in this eclectic or ‘new compound of thought’ (Myint, 1948, pp. 120-4). However, Marshall himself occasionally expressed irritation (cf., Pigou, [1925] 1966, p. 418) over the view of his theory of value as an endeavor to ‘compromise between’ or ‘reconcile’ such ‘divergent schools of thought’ as classical political economy and marginalism generally, and particularly between their respective theories of value and distribution. This has probably prompted some economists to term as one of the ‘mistaken attributions’ the assumed Marshallian synthesis, viz., the resolution of the ‘dispute between the Austrians and Jevons, who urged the primacy of utility in setting values, and the Classical economists, who had asserted the primacy of cost of production’ (Stigler, 1990, p. 2).

Finally, in some relatively less frequent interpretations (Bharadwaj, 1988) Marshall’s theory of value and distribution is interpreted as more ‘marginalist’ than ‘classical’ by virtue of its almost radical transformation of classical political economy via some kind of quiet marginalist ‘revolution’. By implication, in such interpretations Marshallian value theory would be non-classical rather than neo-classical. Against this background of these different interpretations, the ensuing consideration addresses the issue of the ‘neo-classical credentials’ (Groenewegen, 1995, p. 787) of Marshall’s theory of value and distribution. By and large, this theory may be less ‘neoclassical’ (as defined before) and more non-classical--though not necessarily anti-classical as in Jevons et al.--than often thought. In general, despite the label ‘neoclassical’ intended to mean a ‘continuity between those [marginalist] theories and classical economics’ (Aspromourgos, 1986, p. 265), Marshall’s endeavor in the realm of value theory seemed to reflected a recognition, even ‘disappointment and annoyance’ (Keynes, [1925] 1966, p. 21; as also indicated by his various correspondence; cf., Pigou, [1925] 1966; Whitaker, 1996) that post-classical economics, especially marginalism as advanced by Jevons as well as Walras and Jevons, was in its key assumptions largely non- and anti-classical rather than neo-classical. The attributed Marshallian continuity or synthesis between classicism and marginalism made ‘neo-classical’ economics solely in part congruent with
classical political economy. This is shown by reconsidering the neoclassical (Marshallian) theory of value and distribution.

‘Neoclassical’ (Marshallian) Value Theory

First and foremost, Marshall (as he claimed; cf., preface in 1961 and in Pigou, [1925] 1966, pp. 412-3) borrowed or re-invented the concept of marginal utility (and in extension marginal productivity) from von Thünen, before adopting Jevons’ notion of ‘final degree of utility’ as an equivalent, only to subsequently revert to the original term. For illustration of adopting Jevons’ notion, Marshall ([1891] 1961, p. 673) states that the exchange value of a thing is the ‘same all over the market, but the final degrees of utility to which it corresponds are not equal at any two parts.’ In turn, Marshall ‘grudgingly corrected’ (in the second edition of the Principles) his ‘ingenious, but erroneous attribution’ of the term ‘marginal’ to Thünen (in the first edition) in favour of von Wieser as the nominal inventor of ‘marginal utility’ (Groenewegen, 1995, p. 777; on the curious personal relations of Marshall to Wieser and other Austrian economists such as Böhm-Bawerk, cf., Groenewegen, 1995, p. 217).

Then the concept of marginal or final utility was used as an explanation, though in conjunction with cost of production unlike Jevons¹, the Austrians and other subjectivist marginalists, of value formation, just as the notion of marginal productivity was applied, again with qualifications, to distribution theory. In this (qualified) sense, Marshall was a ‘self-confessed marginalist’ (Groenewegen, 1995, p. 788)¹, and his value/distribution theory ‘marginalist’ (Aspromourgos, 1996, p. 4). Thus in the ‘young Marshall’ value theory, a ‘silent revolution in the direction of the marginalist supply-and-demand theory was brought about in the course of adopting, extending and transforming some ideas in Mill’ (Bharadwaj, 1988, p. 134). This silent ‘revolution’ has been subsequently indicated by the statement that in all situations, viz., short and long periods, the ‘price of everything and the amount of it that is produced are governed by the general relations between demand and supply’ (Marshall, [1891] 1961, p. 378), and thus by implication by marginal utility to the extent that the law of supply and demand is understood as an expression or equivalent of the law of marginal utility, as usually done in marginalism.

This statement contrasts with the classical position according to which only current, market, occasional prices are determined by supply and demand, with natural, normal, ‘long-term’ price being determined by cost of production or labor. Nevertheless, Marshall makes at this juncture some qualifications such as that ‘the shorter is the period we consider, the greater must be the part of our attention which is attended to the influence of demand on value; and the longer is the period, the more important will be the influence of the cost of production on value. For the influence of changes in the cost of production takes as a rule longer to work out than the influences of changes in demand.’ (Marshall ([1891] 1961, p. 29). In a similar vein, Marshall (1975, pp. 97-8) makes at another (earlier) occasion the following qualification in this regard: ‘Whereas Ricardo and company maintain that value is determined by cost of production [and] Jevons & (in a measure) the Austrians that it is determined by utility, each was right in what he affirmed but wrong in what he denied. They none of them paid...sufficient attention to the element of time. That I believe holds the key of all the paradoxes which this long controversy has raised. When Ricardo spoke of Cost of production as determining value he had in mind [longer] periods at which cost of production is the dominant force: when Jevons emphasized utility, he had in mind shorter periods.’ In essence, in his later phase (the Principles) Marshall ‘did not accept the sharp line [as found in Ricardo, for example] of division between ‘normal [long-run, cost of production] values’ and ‘current’, ‘market’ or ‘occasional’ [short-term, supply-and-
demand] values', but rather this distinction appears as a 'matter of gradation [by] applying the principle of continuity to a generalization of the supply-and-demand determination of prices' (Bharadwaj, 1988, p. 148). For both classes of values are subject, unlike in classical (Ricardian) analysis, to the same principle of determination, viz., that of supply and demand, and by implication of marginal utility if one accepts—though in Marshall's case with qualifications—the typical marginalist treatment of the latter as underlying the former. This is exemplified by Marshall's ([1891] 1961, p. vii) admonition that 'there is no impassable gulf between these two; they shade into one another by continuous gradations [because] the element of Time, which is the centre of the chief difficulty of almost every economic problem, is itself absolutely continuous: Nature knows no absolute partition of time into long periods and short.' Still, though applying the identical supply-and-demand apparatus to explanation of both long-run normal values and short-term market prices, Marshall tended to regard these latter as somewhat ephemeral in relation to the former as more pertinent for general theoretical propositions (Bharadwaj, 1988, p. 148). This is witnessed by his letter to Edgeworth, in which Marshall writes that 'I never apply curves or mathematics to market values. For I don't think they help much, and market values are, I think, either absolutely abstract or terribly concrete and full of ever-varying (though individually vital) side-issues.' (Pigou, [1925] 1966, p. 435).

Such qualifications notwithstanding, a further elaboration of the idea of 'continuous gradations' between normal and market values is implied in Marshall's attempts at 'mixing' (Reisman, 1990) or 'reconciling' (O'Brien, 1990) classical political economy's law of cost of production and the law of marginal utility, despite his well-known protestations in this regard. These two laws are regarded as 'component parts of the one all-ruling law of supply and demand', each part operating like 'one blade of a pair of scissors' (Marshall, [1891] 1961, p. 675), the first blade being associated with supply, and the second with demand. In this regard, Marshall's innovation or synthesis was twofold. First, these two laws were now seen as complementary in contrast to their opposition or distinction in both classical political economy (labor-cost vs. supply and demand) and marginal economics (costs vs. marginal utility). Second, the law of supply and demand was viewed as an over-arching law, unlike its status in both classical and marginal economics as a partial expression of some 'deeper' law, e.g., the law of cost and the law of marginal utility, respectively. In the first case, the target was to some degree the marginalist theory of value, as especially proposed by Jevons (Pigou, [1925] 1966, pp. 93-9), i.e., its one-sided emphasis on marginal utility as a single-explanation of value (Bharadwaj, 1988, p.152). The second argument was built on Mill-Cairnes secondary treatment of the law of supply and demand as 'fundamental and anterior' to the law of cost of production in some cases, viz., the case of 'international values' as an exception of the dominance of the 'law of cost'.

Offsprings of this admixture of the law of cost of production, assumed to control supply and the law of marginal utility underlying demand were Marshall's ([1891] 1961, pp. 283-7) notions of 'supply price' and 'demand price'. Supply price constituted of the costs of production (as re-defined later) plus normal profits; in his early phase (Essay on Value) Marshall (1975, p. 138) called this price the 'value in use' to the producer or seller. In turn, demand price, i.e., the 'value in use' for the consumer or buyer, was deemed to express consumer demand-schedules. These two prices are conceived to converge toward equivalence in the form of an 'equilibrium-price', though often 'demand-price is greater than supply-price' (Marshall, [1891] 1961, p. 287), just as vice versa. Now, Marshall's supply-price is, like 'normal' value in classical analysis, a cost-of-production concept, but it is determined by marginal costs in contrast to its classical counterpart based on the total costs of production. As Marshall ([1891] 1961, pp. 373-4)
argues, the 'general drift of the term normal supply price is always the same whether the period to which it refers is short or long period...In every case reference is made to a certain rate of aggregate production [and] the price is that the expectation of which is sufficient and only just sufficient to make it worthwhile for people to set themselves to produce that aggregate amount; in every case the cost of production is marginal [though] the causes which determine this margin vary with the length of the period under consideration.' At this juncture whilst Marshallian supply-price appears as 'neoclassical' in its expressing a general cost-of-production idea, it is non-classical by virtue of its concrete marginal-cost (including profit) content.

In sum, despite some elements of 'neoclassical' synthesis in the sense of 'completion' of or continuity with classical value theory, much of Marshallian price theory seems to be more non-classical or marginalist than classical. This is evidenced by the assumption that supply and demand—and thus mutatis mutandis marginal utility as a synthesis of scarcity or supply and total utility or demand (Wicksell, 1934, p. 30-1)—determine almost invariably value, i.e., prices in both short and long periods. Thus supply and demand forces, as expressing some underlying principle of marginal utility, are determinative not only for current market prices, as in classical analysis, but for normal, equilibrium prices, as postulated by marginalism. Hence the crux of Marshallian value theory is that 'Value is determined at the equilibrium point of Demand and Supply...' (Keynes, [1925] 1966, p. 42). If not anti-classical like Jevons' (Groenewegen, 1995, p. 788), Marshall's putative 'neoclassical' theory of value in the course of its elaboration has admittedly (Shove, 1942, p. 296) evolved more in a non-classical, specifically marginalist, formulation than initially intended or admitted by himself (Bharadwaj, 1988, p. 152). In particular, Marshall's value theory involved some substantial deviations from Ricardo's coherent labor-cost of production theory. Thus what are often regarded (Shove, 1942) or self-acknowledged by Marshall ([1891] 1961, pp. 670-3)—by his '...amiable but ruinous vice of excessive modesty', especially to the great masters Smith and Ricardo' (Groenewegen, 1995, p. 776)—as 'extensions and generalizations of Ricardo in Principles (the introduction of the demand side, the functional relation between costs and output, the supply-and-demand determination of wages and profits) are radical departures from the Ricardian standpoint.' (Bharadwaj, 1988, p. 153). This leads to Marshallian distribution theory.

**Marshallian distribution theory**

In addition to his theory of value, Marshall's distribution theory also seems largely non-classical in its key premises. No doubt Marshall (initially) harbored strong antipathy toward the marginalist critique of the classics, more particularly Jevons' vigorous criticism of Ricardo, which prompted his 'rather ungenerous review' (Bharadwaj, 1998, p. 156) of Jevons's Theory of Political Economy (Pigou, [1925] 1966, pp. 93-100), and generally of other marginalist purists, viz., Walras, Böhm-Bawerk, and Wieser (Groenewegen, 1995, pp. 777-8)\(^\text{21}\). Despite his distance from such purist marginalism, nevertheless, Marshall was not either willing or able to entirely transcend or gloss over the marginalist theory of distribution in favor of a 'neoclassical' completion or synthesis. On the contrary, Marshall's distribution theory seemed to be to an important degree more 'marginalist' (Aspromourgos, 1996, p.1; cf., also Sraffa, 1951) than 'classical', including Ricardian; just as his value theory, involved a 'subversion' or 'silent revolution' in this regard (Bharadwaj, 1988).

One can speculate or 'hazard the guess' (Shove, 1942, p. 307) that if Marshall were to be consistent, a 'neoclassical' completion of the classical theory of distribution would have been performed along these lines. In the short-term factor prices or distributive shares, including wages, would be determined by marginal productivity, or
rather by supply and demand as in the classical theory of distribution. But in the long run they would be determined by the ‘real’ costs of re-production (‘subsistence’) of labour and other production factors rather than by supply and demand, as argued or implied by Smith, Ricardo, Mill, as well as Marx. Hence the fact that ‘Smith and Ricardo did not explain distribution in that way’ (Garegnani, 1983, p. 309), viz., long-run wages and other distributive shares in terms of the relative scarcity and utility, i.e., supply and demand, of production factors, but rather by their costs of re-production (Ricardo’s ‘iron law’ of subsistence wages) suggests that such a distribution theory was closely related to a cost-of-production theory of value. At this juncture, interpreting these classical explanations of (relative) prices or value and wages or distribution along marginalist lines, i.e., discovering marginalism in classicism (especially in Ricardo) as its presumed prelude, ‘is not well founded’ (Garegnani, 1983, p. 309; also Aspromourgos, 1996; Sraffa, 1951).

Curiously enough, instead of the formulation apparently consistent with his intended ‘completion’ of the classical system, Marshall adopted and applied, albeit with some qualifications or additions—e.g., the notion of ‘waiting’ as a certain reformulation of Senior’s ‘abstinence’—the marginal productivity or supply-and-demand principle of distribution. This principle was applied to both short and long periods, and thus to normal and market factor prices (wages) alike, with disregard or secondary status of the cost of reproduction (‘subsistence’) postulate of Ricardo et al. To that extent, Marshall implicitly subscribed to Wieser’s ([1893] 1956, p. 186) (dis)qualification of this latter postulate as a ‘monstrous idea’22. Moreover, in the Marshallian framework, ‘the general idea, underlying the proposition that Value is determined [by] Demand and Supply, was extended as to discover a whole Copernican system, by which all the elements of the economic universe are kept in their places by mutual counterpoise and interaction’ (Keynes, [1925] 1966, p. 42). This extension of the law of supply and demand included distribution, i.e., the realm of the determination of wages, profits and other factor ‘prices’. In consequence of the assumption of the ‘supply-and-demand determination of wages and profits [in Marshall’s] theory of distribution, which concerned Ricardo most, there were hardly any traces of Ricardian reasoning’ (Bharadwaj, 1988, p. 153)23. This would suggest caution as regards making ‘unsustainable claims about the ‘Ricardian’ nature of Marshall’s analysis’ (O’Brien, 1990, p. 157) of distribution, and thus about its ‘neoclassical’ rather than marginalist character (as objected by Sraffa, 1951). His (qualified) embrace of the marginal productivity theory of distribution is clearly indicated by the proposition that ‘capital and labour cooperate in production and draw their earnings in the measure of their respective [marginal] efficiency’ (Marshall, [1891] 1961, p. 452). This proposition has been further specified by Marshall’s disciple Pigou ([1920] 1960, p. 659) stating that ‘each factor of production, including entrepreneur’s work tends to be rewarded at the rate equivalent to its marginal net product [in accordance with] the law of diminishing returns to the individual factors of production,’ i.e., with the principle of decreasing marginal productivity.

In doing so, Marshall expanded the concept of ‘margin’ from utility or value theory to production factors or distribution: ‘The notion of Margin was extended beyond Utility to describe the equilibrium point in any given conditions of any economic [production] factor which can be regarded as capable of small variations [marginal productivity] about a given value or in its functional relation to a given value.’ (Keynes, [1925] 1966, p. 42). Then an analogue to the law of decreasing marginal ‘utility’ or productivity of labour and any other production factor would be that expressing the increase of what Marshall ([1891] 1961, p. 117) calls the ‘marginal disutility of labour’ with increases in its amount. Another ramification of the Marshallian (marginal) productivity theory of distributive shares can be found in Keynes’ ([1936] 1960) concept
of (diminishing) ‘marginal efficiency of capital’ assumed to determine or equalize the return on capital (the rate of interest). Nevertheless, a rigid marginal productivity theory of distribution was not fully embraced by Marshall (Stigler, 1941, pp. 348-58), and nor was a stringent marginal utility theory of value (Stigler, 1990, pp. 2-5).

The case for a Marshallian marginal productivity theory of production could also be made on the basis of Marshall’s own statements. For instance, referring to J. B. Clark’s marginal productivity theory (from Distribution of Wealth), Marshall says that ‘our differences are largely of emphasis; but in the main we are allies.’ (Pigou, 1925) 1966, p. 412). This seems indicated by Marshall’s assertion that he ‘formulated the doctrine ‘normal wages’ = ‘terminal’ (I got ‘marginal’ from von Thünen’s Grenze) productivity of labour...’ (Pigou, 1925) 1966, p. 412). By the same token, the case for such a theory can be weakened if one considers Marshall’s own account that his distribution theory is ‘based on the first instance on Adam Smith, Malthus and Ricardo, and [only] in the second on von Thünen [and] Cournot...’ (Pigou, 1925) 1966, p. 100). However, some recent reinterpretations of this account (cf., Bharadwaj, 1988; O’Brien, 1990) would suggest the opposite, viz., a non-classical (marginalist) distribution and generally value theory of Marshall.

Notably, what seems to particularly make his distribution theory more non- than neo-classical is Marshall’s adoption and further specification of the (marginalist) principle of derived factor demand/price. Even if Marshall ever rejected a pure marginal productivity principle, alongside a Jeovian marginal utility rule of value, his almost unqualified acceptance or re-invention of the principle of derived factor demand/price would make his distribution theory crucially non-classical, i.e., marginalist. This is epitomized in Marshall’s position that the demand for production factors, including labour, is ultimately determined by that for consumer goods in a sharp contrast to Mill’s position (expressed in his fourth proposition about capital) that the ‘demand for commodities’ is not the ‘demand for labour’. Specifically, according to Marshall (1961, pp. 316-8) the ‘demand-schedule for any factor of production of a commodity can be derived from that of the commodity [so] the demand for [the factors of production] is indirect and derived from the direct demand for those serviceable products...’ Although the ‘tyranny’ which one factor of production can exercise on other factors ‘through the action of derived demand’ tends to be ‘tempered by the principle of [input] substitution’ (Marshall, 1891) 1961, p. 320), the assumed general rule of factor pricing is that ‘in the case of any [human or material] agent of production, this demand is derived demand for those things in whose making it is employed’ (Marshall, 1891) 1961, p. 479).

In retrospect, such statements seem to preclude or contradict the intended or eventual ‘reconstruction’ and ‘completion’ of classical political economy in the field of distribution and value generally. For they imply that costs or factor prices or distributive shares are determined by product prices, rather than vice versa as Ricardo, Mill and others had argued regarding ‘normal’ values. Apparently, the logical-empirical link between product-valuation and factor-pricing, and thus between price theory and distribution theory, is far from being impertinent in a ‘neo classical’ (Marshallian) framework. Thus it would be inconsistent to juxtapose or mix the classical conception of (long-term) price determination as being governed by cost of production with the marginalist law of derived factor demand/price, which seems to imply the opposite. In logical terms, both the classical and marginalist theories of value and distribution are at least consistent by using the same principle(s) in their explanation of price determination and distribution, viz., the cost of (re)production and marginal utility-productivity, respectively.

At any rate, like his theory of value Marshall’s distribution theory here appears to be less ‘neo-classical’ than marginalist and thus non-classical in many respects. For
instance, Marshall’s conception of quasi-rents is to some degree predicated upon a marginal productivity or efficiency theory of distribution. For these distributive rewards are, in Wieser’s terms, ‘imputed to ‘a possession of extraordinary natural faculties’ (Marshall, [1891] 1961, pp. 552-3), which are assumed to generate high (marginal) productivity or efficiency. Thus a factor of production receiving a quasi-rent, viz., highly paid labour, ‘is generally efficient’ (Marshall, [1891] 1961, p. 423). Relatedly, Marshall re-interpreted the classical, especially Ricardian, theory of land rent - and some other phenomena, viz., the differences between riches and value as ones between total and marginal utility ([1891] 1961, p. 670)-in pseudo-marginalist terms. Specifically, Marshall ([1891] 1961, p. 446) seemed to interpret or mis-interpret24 (as implied by Sraffa, 1951; also 1960) the assumed Ricardian ‘law of diminishing returns’ to land as that of decreasing marginal productivity or efficiency, thus re-discovering ‘marginalism’ in Ricardo (Bharadwaj, 1988, p. 153), with the implication that classical political economy was an anticipation of marginalism (Aspromourgos, 1996, p. 4). More generally, even if the analytical structure of Marshall’s economics (especially from the Principles) was not either a reconciliation, synthesis, and conflation of classical (Ricardian) ideas with marginalism, or ‘an attempt to substitute for Ricardian doctrine a new system arrived at by a different line of approach’ (Shove, 1942, p. 295), the ‘process of completion and generalization involved a transformation more thoroughgoing than Marshall himself was disposed to admit.’ (Bharadwaj, 1988, p. 152).

One additional instance of the non-classical thrust of Marshall’s ([1891] 1961, p. 320) distribution theory seems to be the above concept of factor substitution. More particularly, this applies to the ‘extraordinarily fruitful in results’ notion of Substitution at the Margin, ‘not only between alternative objects of consumption, but also between the factors of production.’ (Keynes, [1925] 1966, p. 42). This is because this concept thus understood implies (in the terms of Hicks, 1939) that of marginal rates of substitution (between consumption goods) and of marginal rates of substitution or transformation between production factors, i.e., differential ‘changes in the proportions of factors’ (as called in his critique of marginalism by Sraffa, 1960, p. v), or ‘non-fixed proportions in the coefficients of production’ (Pareto, 1927, p. 328). Still another example in this regard has been provided by the Marshallians’ subsequent redefinition of factor exploitation along marginalist lines, viz., as the differential resulting from a factor’s distributive share (income) being lower than its marginal value productivity. In regard to labor, for example, wages can be ‘unfair’ because workers ‘are exploited in the sense that they are paid less than the value which their marginal net product has for the firms which employ them’ (Pigou, [1920] 1960: 551). This marginalist definition of (factor) exploitation seemed logically derived from Marshall’s ([1891] 1961, p. 457) assumption that the ‘earnings’ of labor and other production factors are estimated in the ‘measure of their [marginal] efficiency’, and thus represent ‘efficiency-earnings’, with deviations from this assumed equivalence implying exploitation or distributive injustice.

Generally, Marshall’s theory of value and distribution was characterized by the evolution from an initial antipathy to marginalism (especially in Jevons’ version), induced by his attempts at ‘completion’ of classicism, to an eventual transformation into more of a marginalist, and thus non-classical, than a neo-classical theory as he originally sought. Thus, ‘while Marshall was initially averse to accepting the Jevonsian utility-based approach, his attitude towards the new [marginalist] theories softened over time and in the Principles he incorporated a number of such ideas, especially on the demand side of his value explanation [and] this, indeed, was a total change of regime’ (Bharadwaj, 1988, p. 155)25. Given that change, to characterize Marshall’s economics, especially his value/distribution theory as ‘neoclassical’, is imprecise at best. In sum, of those major post-classical, especially marginalists economists, between the 1870s and the
early 1900s here considered, even Marshall cannot be characterized as unequivocally "neo-classical" in the sense of reviving or rehabilitating the classical theory of value and distribution. This is because the somewhat unintended outcome of Marshall's intended "reconstruction" or "completion" (Groe newegen, 1995, p. 776-91) of classical political economy was a "synthesis which [...] made the marginal revolution work" (O'Brien, 1990, p. 157). This was a revolution which was in its Copernican aim or thrust (Schumpeter, 1954, p. 919) often 'counter-classical' (Pasinetti, 1981, p. 10) rather than—as correctly implied, in reference to constant returns to scale, by Sraffa (1960, pp. v-vi)—"newly-classical as the common (mis)usage to term 'neoclassical economics' to denote marginalism (cf., Aspromourgos, 1996, p. 1-4; Bharadwaj, 1988, pp. 151-5).

Conclusion

The above considerations suggest marginalism and the rest of post-classical economic theory is non-classical rather than neo-classical, especially with reference to value (and distribution) theory. This is the crux of Schumpeter's expression 'Copernican revolution' made by the marginal theory of value and distribution, namely an essential and radical discontinuity with the classical theory. In this connection, 'there is no more sense in calling the Jevons-Menger-Walras theory [of value] neo-classic than there would be in calling the Einstein theory neo-Newtonian.' (Schumpeter, 1954, p. 919). Originally, Veblen characterized marginalist, especially Marshallian, economics as 'neoclassical' on the basis of its perceived commonality with classical political economy in the use of a utilitarian approach and resort to a (simplified) hedonistic psychology. In retrospect, such a characterisation perhaps involved an omission, viz., the common reliance of both classical and marginalist economics on (some type of) the doctrine of laissez-faire or free-market as an ideological-political objective (Dobb, 1973; Myrdal, 1953) or meta-theoretical presupposition. In this connection, the 'end of laissez-faire' (Keynes, 1972, pp. 276-88) was not to be expected within such a marginalist economics qua really neoclassical economics, but this was of a secondary concern here. More importantly, Veblen's original designation of Marshallian economics, and especially its generalization—e.g., by Samuelson, Robinson, Hicks, and Stigler (cf., Aspromourgos 1986)—to marginalism in general, as 'neoclassical' implied a fallacy of commission, especially in regard to value/distribution theory, i.e., analytical contents of micro-economics. Such a designation and generalization was thus problematic to the extent that marginalist value and distribution, including even Marshall's, theory was more discontinuous than continuous with the classical theory. Hence a perhaps more adequate conception of marginalism as non-classical or at least doubting its designation as neoclassical would have in retrospect 'pre-empted a [mistaken] view of continuity between classical and marginalist theory.' (Aspromourgos, 1986, p. 269). Hence, a sensible path in this regard would be perhaps to abandon the term 'neoclassical' in contemporary economic discourse (as suggested by Hicks, 1986, p. xiii-iv).

At this point, a caveat is in order. By the aforesaid it is by no means implied that the marginal utility principle is necessarily conducive to a more adequate theory of value and prices than is the labor or cost of production principle; this is not an issue here. At issue is not the degree of adequacy of comparative theories of values but of consistency between them, in particular of how (and whether) consistent is the post-classical theory with the classical to warrant denoting the former as neo-classical. The argument here made that post-classical economics is non- or even anti-classical, especially in the early marginal theory of Menger, Jevons, and L. Walras, rather than newly-classical, implies no assertion that this latter is ipso facto superior to the latter.

In this connection, we admit agnosticism regarding the 'truth' in the various value theories. For the purposes of this analysis, such an agnostic attitude seems justified
though modern (micro) economics is dominated by a myriad of marginalist principles, concepts and methods, which would indicate the triumph of the marginalist theory of value. This marginalist theoretical-methodological apparatus include both the original concepts pertaining to value and distribution (marginal utility and marginal productivity) and their various derivations (e.g., marginal cost, marginal revenue, marginal gain, the marginal rate of substitution or transformation, marginal propensity to consume or invest, marginal revenue product, marginal efficiency of capital, etc). The dominance of such an apparatus thus suggests the marginalist, rather than 'neo-classical', paradigm, approach and terminology of modern economics, especially its price and distribution theory. The exception is a Sraffian economics as an attempted rehabilitation of classical political economy, especially Smith, Ricardo, and partly and indirectly Marx (Aspromourgos, 1996; Goodwin, 1986).

Furthermore, agnosticism concerning the 'truth value' of value theory as a whole is also sensible given that, in retrospect, both classical and marginal economics share the same fallacy. This can be called the fallacy of misplaced search for the absolute in the realm of value or prices. Such a fallacy is epitomized by the search of some 'natural', 'intrinsic', 'necessary', 'permanent', or 'real' value (including the 'just price'). Irrespective of the character of its ultimate 'cause', such a value is then invidiously distinguished from actual market prices, which are seen as temporary and largely irrelevant variations around that, in Adam Smith's words, 'central' value.

In passing, in some recent interpretations (Rodgers 1997, p.90), Smith's analysis of the relations between market prices and natural price as a central value around which the first are assumed to oscillate is viewed as an instance of taking into account 'dynamic and stochastic' elements in the economy. The same interpretation is applied to the relationship between the actual and natural rate of unemployment or NAIRU within Friedmanian economics. However, many economists have doubts about the precise meaning of the natural rate of unemployment: thus, 'it is not clear what we are talking about when we talk about the natural rate' (Solow, 1986, p.524). Moreover, others (Gordon, 1987) criticizes the NAIRU Hypothesis as an 'un-Natural Rate of Unemployment'. The same doubts mutatis mutandis hold true of the 'natural price' and other concepts of 'natural' economic variables and processes. In retrospect, the 'natural rate of unemployment' and related notions are macro-counterparts of 'natural price' and other exemplars of the application of the 'natural law' in the economy.

In consequence of the market price-central value opposition, traditional economics has often been permeated by the metaphysical or philosophical search for an absolute or immutable value with assumed roots in some invariable source or cause. In one case (classical political economy) such a source of value is found in labor or/and the cost of production. In another case ('neoclassical economics'), it is marginal utility or scarcity and utility. But this is a subject largely belonging to the field of 'economic philosophy' (cf., Robinson, 1962) or perhaps of the sociology of knowledge—in the sense of the Durkheim-Mauss thesis of social structuration of ideas, including economic thought (on marginalist economics, cf., Mirowski, 1988)—and thus a task for another time.

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Notes

1. In the view of Groenewegen (1995, pp. 787-8) this is just one of what are called ‘myths’ concerning Marshall’s economic theory, such as the ‘myth’ about his ‘neoclassical [marginalist] credentials’, viz., as a ‘supply and demand theorist’ and as a ‘self-confessed marginalist, as well as the ‘myth’ as a ‘simple micro-economist’.

2. However, it appears that in the more recent editions of Samuelson’s textbook (the Principles), the ‘notion of the neoclassical synthesis is more muted, perhaps due to the decline in influence of just that synthesis of Keynes and marginalism that Samuelson championed.’ (Asproumourgos, 1986, p. 265).

3. Relatedly, Groenewegen (1995, pp. 787-8) states that a ‘myth about Marshall the economist concerns his neoclassical credentials. His manifold sources of economics [...] show him as a neo-classical in the manner that word was coined by Veblen and originally used by others: the reconstructer of the classical structure by both correcting and completing it as he himself liked to put it.’ In Blaug’s (1996) words, Marshall, just as Smith and Mill, is considered a ‘complex, multifaceted’ economist (cf., also O’Brien, 1990; Whitaker, 1996) in contrast to those ‘simple-minded, narrowly focused’ and opposed to classical political economy, like the marginalist pioneers (e.g., Jevons and Walras).

4. In some earlier interpretations, Shove (1942, p. 295) argued that in this ‘strictly analytical content’, Marshallian economics (as especially presented in the Principles) was in ‘direct line of descent’ from classical political economy, especially from Smith, Ricardo and Mill, and thus neoclassical, rather than non-classical. However, this view has been recently subject to critique (Bharadwaj, 1988, O’Brien, 1990). An earlier more specific critique (Steffa, 1926, 1951, 1960) focuses on the question of returns to scale, and argues that classical (Smith-Ricoardo’s) analysis assumes constant returns, and marginalist, including Marshallian, economics, ‘changes in the scale of production’ and ‘spurious margins’, e.g., diminishing marginal productivity. In passing, a ‘similar but not identical’ formulation (Roncaglia, 1978-59) to Steffa’s can be found in von Neumann’s (1945-6) theory of general economic equilibrium postulating ‘proportional growth’ and based on the assumptions of given production technology and constant returns to scale (Kurz and Salvadori, 1995). Moreover, in some interpretations von Neumann ‘did this in an unorthodox, Saffrta-like way by considering production of commodities by means of commodities, yielding a result independent of scale.’ (Goodwin, 1986, p. 204).

5. It was in this common utilitarianism or/and hedonism that Veblen initially found a continuity between classical and marginal economics, and thereby a substantive ground for coining the designation ‘neoclassical’ in regard to marginalism (Asproumourgos, 1986, p. 286). However, unlike Keynes and others, it seemed that Veblen failed to notice the common doctrine of laissez-faire as another possible ground for such a designation. In passing, one possible explanation why Veblen denoted marginalist economics as ‘neoclassical’ rather than non-classical lies in his evolutionary economics, viz., that Veblen’s ‘view of life in general and therefore also of intellectual life’ is characterised by ‘evolution rather than disjunction instilled in him a predilection in favor of this conception of continuity [between classicism and marginalism].’ (Asproumourgos, 1986, p. 286). Also, Marshall’s ‘institutional and evolutionary economics’ (or lack of it), particularly his treatment ‘economic biology’ as the ‘Mecca of the economist’, have been also analyzed (Hodgson, 1993; Loasby, 1991; Moss, 1994).

6. In retrospect, most classical and early ‘neo-classical’ economists, including Walras, Jevons and others, seem to make no coherent distinctions between free competition from perfect competition, unlike some contemporary economists (cf., Sigure, 1941; also Kurz and Salvadori, 1995). An exception in this regard is perhaps Marshall, who operates largely with the concept of ‘perfect market’ – defined (Marshall, 1891 p. 494) following Cournot and Jevons – rather than that of ‘free competition’ that is explicitly removed from much of his analysis (as remarked by a reviewer), though his student Pigou (1920) 1960, p. 250) seems to rely more on the concept of ‘simple competition’ In addition, proponents of the theory of ‘monopolistic competition’ (Chamberlin, 1957) distinguish ‘pure’ from ‘perfect’ competition, and in consequence monopolistic from imperfect competition. Ironically, some Marshallian (Robinson, 1969) exponents of theories of imperfect competition seem to consider such distinctions as either false or irrelevant.

7. However, insofar as Sraffian economics engages in a ‘critique of neoclassical theory’ (Roncaglia, 1978, p. 166), including the ‘neoclassical theory of distribution [and value]’ (Dobb, 1973), in the form of a ‘critique of marginalist theory’ (Roncaglia, 1978, p. xvi), it would appear that the terms ‘marginal’ and
neoclassical' are used almost as equivalents. To that extent, the nomenclature of neoclassicism is used to qualify marginalism (Asproumourgos, 1996, p. 4), as done in most of contemporary economic discourse since Marshall's project of continuity between classical political economy and marginalist economics, and Veblen's designation of this project as 'neoclassical'.

8. According to Asproumourgos (1986, p. 286) 'in the hands of Hicks and Stigler the term [neoclassical] acquired its widespread contemporary sense, being extended to embrace all the marginalist founders', thus marking a change or generalization in the meaning, viz., from Veblen's designation of Marshallian economics as 'neoclassical' to viewing marginalism in general as 'neoclassical'.

9. Thus utility drives the supply side in that disutility underpins factor, especially labor supply (here I benefit from a referee's insights). And since in the marginalist framework scarcity is not just a 'principal additional' to utility, but part of the identical synthetic notion (Wicksell, 1934, p. 30) e.g., marginal utility or Walras' *rareté as their *synthesis*---'difficulty of attainment' is in this framework also subjective, viz., 'disutility of work', 'waiting', etc.

10. It is interesting that some Marshallians (Robinson 1964) use the term 'neoclassical' to designate the marginalist theory of distribution, as exemplified by the Euler theorem. However, others (Dobb 1973; also Pastenei, 1981; Sraffa, 1951) would adopt the description 'counter-classical' as a more apt one in this regard.

11. According to Bharadwaj (1988, p. 157) that subversion consisted in that since the emergence of marginalism in the 1870s 'the old [classical] doctrines were subverted and Marshall's theorizing played a major role in abandoning the old and in heralding and establishing the new [Marginalism].' In a similar interpretation, 'Marginalism, once Marshall had shown its role, was recognised as [...] as much more than a progressive scientific programme: and for this perception, the work of Marshall is to a very considerable extent responsible. Unfortunately, in the very process of 'plugging in' the new form of analysis, Marshall was led to make claims about the nature of classical analysis [that] are difficult to interpret as anything other than exaggerated 'pietas' with rhetorical undertones.' (O'Brien, 1990, p. 156).

12. At this juncture, one needs to distinguish (as suggested by a referee), Marshall's own analysis from what is called (Schumpeter, 1954) the 'simplified Marshallism' that was embraced by the latter Marshallians, especially so given the departure of Marshall's immediate followers from his own writings.

13. Thus Shove (1942, p. 295) argued that Marshall's theory of value and generally the 'analytical content of his Principles' is in direct line of descent through Mill from Ricardo and through Ricardo through Adam Smith. It is of the true Ricardian stock, neither a cross-bred nor sport. Similarly, Dobb (1931, p. 368) stated that Marshall 'imbibed the Ricardian tradition through the medium of J. S. Mill thereby being an economist in the Ricardian tradition.' In the sense of a 'mixture of the classical economic ideas and those of the Marginal Utility school' (Myint, 1948, pp. 120-4), the designation 'neoclassical' would not be appropriate even for Marshall's economics, or the Cambridge school, to which Veblen's designation originally referred to. This would the case insofar as, in this interpretation, 'what the Cambridge school has done is to divest the Classical Political economy of its more obvious crudities, to sever its connection with the philosophy of natural law, and to restate it in terms of differential calculus. The line of descent is fairly direct from Smith, Malthus and Ricardo,' (Dobb, 1924, p. 68).

14. For example, Reisman (1990, p. 263) states that 'it is in this mix that Alfred Marshall's mission is to be most clearly found. Marshall unified the paradigm by stressing the complementarity of cost of production in the sense of the Ricardians with final degree of utility in the sense of Jevons [and thus] synthesized the disparate elements into a single whole...'

15. Stigler (1990, pp. 2-5) notes that these 'mistaken attributions' or 'common mistaken claims' regarding Marshall are: resolution of the dispute between the marginalist (utility) theory of value and the classical (cost-of-production) theory; the concept of elasticity; monopoly theory; the father of econometrics or economic quantification; the theory of general equilibrium. Here, I thank an anonymous reviewer for also stressing the latter point, viz., that Marshall was 'unable to fully embrace the [general] equilibrium framework required for marginalist principles to survive (in the long period).' Instead, Marshall's 'major influences' on economics are deemed the following: making time a 'major factor in the theory of value'; the doctrine of (external and internal) economies; the conception of representative firm; the notion of consumer surplus as a 'significant' step in the development of welfare economics; and others (cf., Stigler, 1990, pp. 5-10). In this interpretation, Marshall can hence be considered more of a theorist of comparative dynamics or dis-equilibrium than of comparative statics or equilibrium, which would ironically move him closer to the Austrian non-equilibrium theory of the market process (Hayek, 1950; Mises, 1966; Wieser, 1927; 1967; also Kirzner, 1952).

16. In some interpretations of Marshall's versus Jevons' value theory, the former is considered to have begun with the objective demand and supply schedules, the phenomena of the market place and worked back from them to their psychological basis, not (as in the case with Jevons) the other way round.' (Shove, 1942, p. 307). Thus Marshall's theory of value would be less 'subjectivist' than Jevons' and generally
pure marginalism with which Marshall was not always comfortable. In this connection, Alfred Marshall (as remarked by a reviewer) can be considered part of the ‘marginalist revolution’ by virtue of his adoption or invention of many of its fundamental principles, and yet also diverged from its goals in important respects.

17. However, Groenewegen (1995, p. 788) objects that as such, ‘Marshall has also often been placed firmly within the modern neo-classical camp [which] is a problematic classification for Marshall was no narrow praxiologist of resource allocation, no static re-arranger of scarce substitutable resources to ends given from outside by an unseen hand. Marshall’s more realistic and complex system of thought greatly surpasses this simplified version of the so-called ‘economic problem’, warning in advance of its codification by Robbins that a person is not likely to be a good economist if the problem of value is simplified in this way.’

18. Yet some analysts stressing Marshall’s subversion of the classical analysis of value and distribution (Bharadwaj, 1988, p. 148) admit that in some early writings (e.g., *Economics of Industry*), the Marshallian distinction between normal values and market prices is ‘closer to the classical notion’. This closeness is implied in the statement that one can ‘neglect temporary fluctuations of supply and demand [in favor of] normal results [that] are those which competition would bring about in the long run’ (Marshall and Marshall, 1881, p. vii). This implies that market prices ‘thus were not systematically analysable.’ (Bharadwaj, 1988, p. 148). In contrast, emphasis is placed on normal or average price, defined as the ‘cost of production, including profits, at which this amount [of commodity] can be permanently sold’ (Marshall, 1975, pp. 137-8). Such early pronouncements (especially from *Essay on Value*) suggest (as done by a reader) the need of consideration of the ‘young Marshall’ (cf., Whitaker, 1975) in an account of his relationship to classical political economy. Here, the links between Marshall and Ricardo and Mill (and indirectly Smith) are particularly pertinent, with Marshall’s ‘loyalty’ swinging between Mill (in the early phases) and Ricardo, especially after Jevons’ attack on him, so in Marshall’s words, ‘my youthful loyalty to [Ricardo] boiled over when I read Jevons’ *Theory.*’ (Pigou, [1925] 1966, p. 100). However, whilst he eventually viewed Ricardo’s ‘genius’ as above that of Mill (cf., Marshall, 1975, pp. 50; Pigou, [1925] 1966, pp. 99-100), still Marshall began, as one could expect, from Mill [as] the basis from which he starts.’ (Hicks, 1976, p. 368). In this regard, it seems that the ‘essential truth is clear enough: Marshall started economics by reading J. S. Mill and while still an able mathematician in the 1870s followed a ‘research programme’ of mathematising parts of Mill.’ (O’Brien, 1990, p. 157).

19. However, some analysts (Groenewegen, 1995, p. 788) note that ‘as a supply and demand theorist Marshall is also often described as a neo-classical [marginalist] writer’ and warn that this is a ‘dangerous perspective if designed to infer that Marshall thought largely in terms of equilibrium positions reached by adjustments of supply and demand schedules envisaged exclusively as functions of price [since] supply and demand for Marshall were more than functional relationships, [namely] two fundamental categories by which to analyse the dialectically related opposites of production and consumption, wants and activities.’

20. Perhaps ironically for someone who intended to ‘complete’ classical political economy in a project of continuity with marginalism (Aspromourgos, 1996, pp. 1-4), ‘yet Marshall expressed irritation at being thought of as one who ‘compromised’ between or ‘reconciled’ divergent schools of thought’ (Bharadwaj, 1988:152), as shown by his letter to J. B. Clark (in Pigou, [1925] 1966, pp. 412-8). On the other hand, Marshall (in Pigou, [1925] 1966, p. 416) states that ‘my position as to the theory of value and distribution was practically completed in the years 1867 to 1870; when I translated Mill’s version of Ricardo’s or Smith’s doctrines into mathematics; and that when Jevons’ book appeared, I knew at once how far I agreed with him and how far I did not.’ However, according to some recent interpretations, Marshall’s life-long work ‘involved reconciling these two stream [classical and marginalist], developing the recent one in its own right...’ (O’Brien, 1990, p. 157).

21. Namely, Marshall’s review of Jevons’ *Theory* was ‘niggardly’ in its praise and strong on criticism, explained ex post by Marshall’s ‘anger at Jevons’ treatment of his masters’, especially Ricardo.’ (Groenewegen, 1995, p. 776). At best, as Keynes in his memoir of Marshall (Pigou, [1925] 1966, p. 22) states, this review, ‘whilst not unfavourable, is somewhat cool and it points out several errors.’ Even later Marshall still thought that the ‘central argument of his [Jevons] *Theory* stands on a lower plane than the work of Cournot and von Thünen.’ (Pigou, [1925] 1966, p. 99). Moreover, Marshall states that his economic (especially distribution) theory, alongside Smith, Malthus, and Ricardo, is based on ‘von Thünen as regards its substance and Cournot as regards the form of the thought.’ (Pigou, [1925] 1966, p. 100). In the wake of Jevons’ *Theory*, ‘Smith and Ricardo increasingly received his most generous praise, followed by Thünen and particularly later in life by more qualified recognition given to the contributions of Cournot and John Stuart Mill.’ (Groenewegen, 1995, p. 779). Now, alongside Jevons’ ‘virulent attack’ (Bharadwaj, 1988, p. 153) on the classics, above all Ricardo, Keynes ([1925] 1966, pp. 21-2) seems to attribute such a ‘cool’ review to that the ‘publication of this book [Theory] must have been an occasion of some disappointment and annoyance to Marshall. It took the cream of novelty off the new ideas which Marshall was slowly working up, without giving them - in Marshall’s judgment -
adequate or accurate treatment... This seems to apply to Marshall’s attitude toward other ‘pure’ marginalists, including the Austrians and Walras. For instance, in some accounts Marshall’s ‘annoyance with the younger Austrians, especially Böhm-Bawerk, was also attributed by him to their mistreatment of early predecessors [while] Marshall’s relationship with Menger had been formal, correct and minimal [though] a good case can be made out that Marshall’s dislike of Böhm-Bawerk and von Wieser was inspired more by their criticism of himself...’ (Groenerwegen, 1995, p. 777), as partly evinced by his letters to J. B. Clark (Pigou, [1925] 1966, pp. 416-8). Moreover, these accounts report that ‘associations with [Leon] Walras are in a class of their own insofar as Marshall’s uncollegiality and uncivility [sic!] are concerned.’ (Groenerwegen, 1995, p. 778).

22. It is to be noted that Marshall, for various reasons, was very critical of the Austrian marginalist theory of distribution (‘imputation’), especially of Böhm-Bawerk’s (as well as Wieser’s) capital theory (cf., Groenerwegen, 1995, pp. 777-8; Pigou, [1925] 1966, pp. 416-7). To that extent, it is plausible to say that Marshall was not ‘totally committed’ to a strictly marginal productivity theory of distribution (as stressed by Stigler, 1941, pp. 348-58).

23. However, Bharadwaj (1988, p. 146) admits that in Marshall’s ‘early writings on distribution, the analysis of the cost of production did develop in that [Ricardian] direction’, viz., the concept of ‘real costs of production’. Marshall retained the latter concept in the Principles, and distinguished it, defined as ‘sacrifices and exertions’, from ‘money expenses of production’ or factor prices ([1891] 1961, p. 282).

24. On the other hand, in his interpretation of Ricardo, Sraffa (1951, 1960) refutes such ‘marginalism’ by arguing that the functional relation between output and costs, and thus the notion of returns to scale, including the ‘law of diminishing returns’, is impertinent in the Ricardian theory of distribution, presumably being based on the idea of constant returns. If constant returns to scale rule, then no law of diminishing marginal productivity can be derived, since ‘the marginal product of a factor (or alternatively the marginal cost of a product) would not merely be hard to find - it just would not be there to find.’ (Sraffa, 1960, p. 4). Thus, for ‘Ricardo’s theory of value and distribution, the so-called ‘law of diminishing returns’ (i.e., decreasing marginal productivity) would be more of a fifth wheel’ (Bharadwaj, 1988, p. 153).

25. However, according to some interpretations, ‘although Marshall did not contribute [marginal] utility-theory to economics, he was not prepared to acknowledge his heavy indebtedness in this area to Jevons and Walras.’ (Stigler, 1990, p. 1). In retrospect, Marshall in his early writings (especially Essay on Value) used very seldom the term ‘utility’ (and not with a positive connotation) but rather ‘satisfaction’. Probably such early reluctance to rely on the notion of ‘utility’ was owing to its ‘narrow Benthamite, ethical connotation’ (Bharadwaj, 1988, p. 150), which was suspected by Marshall (Shove, 1942, p. 306). In addition, following Mill-Cairnes’ assumption of the ‘plurality’ of motives in economic behavior, Marshall held that these motives could be multiplex, ranging from the motive for profit or wealth to desire for social distinction to altruism, thus not being necessarily resolvable into utilitarianism or hedonism, i.e., the ‘desire for pleasure or the avoidance of pain.’ (Pigou, [1925] 1966, pp. 152-73).

26. At this juncture, Aspromourgos (1986, p. 269) remarks that ‘to an extent this argument was correct, at least with regard to the utilitarianism [and] was flawed on two counts: on the one hand he sought to argue that the subjective theory of value was essentially an expression of utilitarianism, on the other, that the Marshallian system was fundamentally the same as that of the other marginalists. But it would be impossible to sustain the view that all the marginalists employed a utilitarian approach, let alone a hedonistic philosophy.’

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