

Metamorphoses: The Concept of Labour in the History of Political Economy

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Abstract

The emergence of an understanding of labour as the basis of value is traced from ancient Greek authors to classical political economy and Karl Marx, and the subsequent eclipse of the theory in neoclassical economics is then charted. While the ancient Greeks did not have a concept of labour as a measure of value, in Scholastic authors the notion was fixed that labour and cost of production determine value. Labour assumed a central role in Adam Smith, but it was with David Ricardo that a fully blown labour theory of value was achieved. Marx gave the concept its philosophical dimension, tying it to a critique of classical political economy. The labour theory of value came under attack in neoclassical formulations which in the end effected the analytical disappearance of labour in several ways. Labour became just another factor of production, with marginal productivity regulating its price. Then factors of production and final goods became analytically equivalent as sources of subjective utility, especially in the context of general equilibrium theory. In disutility models of labour supply, labour was substituted by its absence, 'leisure'. Finally, attempts were made to explain the employment relationship as an application of agency theory, moving away from the pure commodity model of labour. Nevertheless, all these theories failed to account for what became the Achilles' heel of neoclassicism — namely the indeterminacy of the labour contract.

Introduction

In his autobiography, J. R. Commons (1934: 131) writes that 'from John Locke to Adam Smith, to Ricardo, Proudhon and Karl Marx, it is possible to build a whole system of political economy on the one foundation of labor.' It was only with the advent of neoclassical economics in the late 19th century that labour was dethroned as a basic analytical category, and relegated to the status of just another commodity. This article begins by outlining the variety of analytical treatments of the concept of labour in different systems of political economy, from the ancient Greek authors to classical political economy and Marx. It then discusses how the classical labour theory of value was eventually displaced by a political economy in which the very concept of labour became analytically superfluous.

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The article's first section traces the development of the concepts of labour and of the role of labour as an objective basis of value, from ancient Greek philosophy through the Scholastics and mercantilists to the forerunners of classical political economy. The second section outlines the emergence of the classical labour theory of value in the work of Ricardo and Marx. The third section traces the dethronement of the labour theory of value, and the growing invisibility of labour under twentieth century neoclassical models, ending with present labour economics in which work is a commodity and from which the worker is absent.

From the Beginnings to Classical Political Economy

Ancient Western Economic Thought

Both the subjective and the objective theories of value trace their origin to Aristotle (Meikle 1995; Gilibert 1998; Theocarakis 2006). In Book V of the *Nicomachean Ethics* (EN) the Greek philosopher attempts to establish the common measure necessary for *equivalent exchange* which, in turn, is a precondition for commercial association. He speculates that such a measure can be found in need (*chreia*), which brings the two contracting parties together. Discussing the logical equation of the work, or product (*ergon*), between a builder and a shoemaker, he admits the impossibility of finding a common measure for things that are as dissimilar as a shoe and a house. In a respectful and admiring passage, Marx (1867: 74) argues that it was the circumstances of his society that prevented Aristotle from realising that such a common measure was human labour.

Labour as a determinant of value does not appear in Aristotle, or in any other Greek author. The Ancient Greek conceptualisation of work and labour was derived from the concepts of *poiësis* (production, making) and *praxis* (doing, action) (Arist. EN1140a2 ff., Pol.1254a5 ff.; Cartledge 2002: 161). Life was *praxis* and slaves, or those who worked for others, were involved in *poiësis*. *Praxis* meant being a full Greek citizen, participating in philosophy and especially politics. A man who was ignorant of public affairs was thought 'to be a man, not that meddles with nothing (*apragmôn*), but that is good for nothing (*achreios*)' as Pericles reminded his audience in the Funeral Oration (Thuc. 2.40, Thucydides 1648: 194). A private person was an *idiotês*. A slave, on the other hand, was a 'tool with a soul' to be directed about (EN 1161b4-7). The purpose of work also mattered. If someone pursued an art 'for the sake of oneself or one's friends, or on moral grounds, it was not illiberal (*aneleutheron*), but the man who followed the same pursuit because of other people would often appear to be acting in a menial (*thêtikon*) and servile (*doulikon*) manner' (Pol. 1137b1-22). The terms in which work was performed made all the difference (slave or not; for yourself or for others).

The attitude of the ancient Greeks to manual work, slave or non slave, was utterly contemptuous (Marx 1863: 259). For Aristotle, the slave is a slave by nature and he must be ruled by his master for his own good. Non-slave wage labour is almost equally — occasionally even more — contemptible. When the Stagirite discusses the various modes of wealth-getting by way of exchange, he

states that 'wage earning' or 'labour for hire' (*mistharnia*) (Pol. 1258b25) concerns 'the mechanic arts and that of unskilled labourers who are useful only for bodily service'. Wage earning is an unnatural mode of wealth-getting, together with trade and money lending: 'Those whose function is the use of the body and from whom this is the best that is forthcoming ... are by nature slaves' even if they are not actually slaves (Pol. 1254b18-19). Plato shared this contempt: the 'servitors who in the things of the mind are not altogether worthy of our fellowship, but whose strength of body is sufficient for toil (*ponos*), sell the use of this strength and call the price wages, are designated wage-earners (*misthōtoi*)' (*Republic* 371e, see also *Statesman* 290a; Garnsey 1980; esp. Garlan 1980). The word for manual labour (*banausia*) was used in a highly pejorative sense and only in very few cases we see work as such actually praised.² In English translations of Greek texts, *banausos* is rendered as 'vulgar'. Even commanding and supervising slaves was onerous; those 'who can avoid toil occupy themselves with philosophy or with politics' (Pol. 1255b35-6).

The very concept of labour as an abstract category did not exist in Greece, or indeed in Rome (Vernant 1965; Applebaum 1992; Veyne 1997; Sadlek 2004). The ancient economy was oriented to use-values; it was the objects of work that mattered, not the labour of the producer. Activity, however strenuous, by the upper classes was not considered labour but a productive manifestation of leisure. The Greeks and the Romans had no aversion to idleness as such, but socio-economic circumstances prevented them from even imagining that labour could serve as a measure of value.

In ancient Rome and the later Roman Empire, no analytical work on economics proper emerged. There were certainly considerations of labour in Roman Law regarding, for example, the contractual hire of labour and laws about slaves. There was even the legal concept of *specificatio* which conferred rights of property under certain conditions to those who transformed raw materials into a *nova species* by their own labour (Gaius 1904: 167). But these were no 'precursors' to any analytical treatment of labour.

The Scholastics

It was only in the 13th century, in the Scholastic 'economic', but in fact *ethical*, doctrine that labour assumed a distinct role as one of the possible explanations of value. The two great Dominican doctors of the church, Albert Magnus and Thomas Aquinas, wrote extensive commentaries on Aristotle. But as Baldwin (1959: 74) notes: 'they did not stop at that point. Beginning with Albert, the two theologians added a second basis for value, which was foreign to the text of Aristotle. Value was also based upon the factors of labor and expenses'. *Labor et expensae* was offered as a possible measure of what should constitute the *justum praetium*, the just price in commercial transactions (Baeck 1994: 157; Kaye 1998: 68). The Scholastics ultimately believed that the just price of a thing should reflect the common estimation of the community. This was a non-analytic attitude: the just price of a commodity *should* be such that those who produced it and those who bought it preserved their status in the divinely ordained social hierarchy.

Thus the *dignitas*, or status, of a person entered implicitly, yet decisively, in the calculation (Wilson 1975; Worland 1977).

Christian theologians did not share the ancient Greeks' and Romans' contempt for labour. The moral value of manual work was upgraded under scriptural influence and the practices of the monastic orders.³ According to certain Scholastic authors, such as John of Paris, 'true lordship' of things is acquired by individuals 'through their own skill, labour and diligence' (*De potestate regia et papali*, cited in Garnsey 2007: 145). In later Scholasticism and with the development of trade, a purely ethical theory of price determination more suited for a static economy could not be maintained without frictions. Merchants should be able to trade without putting their immortal souls in danger (Tortajada 1991). They could perhaps get off the hook by justifying their profits, or even usury, as remuneration for labour (*stipendium laboris*, LeGoff 1988: 73), but a change in emphasis was clearly required. Yet, as Meek (1973: 14) observed, 'the habit of thinking of "value" in terms of producers' cost ... was later to prove itself as one of the most influential legacies of the Schoolmen.'

From the Scholastics to Classical Political Economy

The concept of *labor et expensae* persisted in natural law philosophy, even though the theory of value as price became more complex. Thus Grotius writes (1625/2005: ii.xii §14) that 'in that common and current Price of Things, we usually have a Regard to the Pains and Expences [*laborum & expensarum*] the Merchants and Traders have been at'. Similarly, Samuel Pufendorf (1673/2003: i.xiv §6) writes that 'the *Vulgar* Price, which is not fix'd by the Laws, admits of a certain *Latitude*, ... , and often is, either taken or given, according to the *Agreement* of the Persons *dealing*; which yet for the most part, goes according to the Custom of the *Market*. Where commonly there is Regard had to the Trouble and Charges [*laborum & expensarum*] which the Tradesmen generally are at'. Yet these scholars also enumerated a plethora of market and non-market factors, including the 'dignity' and 'fame' of the artisans and the need of the seller or buyer. In 18th century Natural Law Philosophy, additions and clarifications to Grotius and Pufendorf, for example made by Gershom Carmichael and Francis Hutcheson led away from labour to a *scarcity* (*indigentia*) and *difficulty of acquisition* theory of value (Carmichael 1724: 106; Hutcheson 1742). From the 17th century onwards, there was an accumulation of texts acknowledging the role of labour in the production of things, rather than attempting to use labour to explain value (Meek 1973).

Thomas Hobbes and John Locke were the most important and influential authors of the period in this respect. In Hobbes' *Philosophical Rudiments*, first published in Latin in 1642, we find the notion that 'there are two things necessary to the enriching of Subjects, *Labour* and *thrif*' (1651/1841: 13.14, p. 176) [*Labor et parsimonia*], in the Latin edition (1642/1760)]. In the *Leviathan* (1651/1991: 24.127, p. 170) he states that 'As for the Plenty of Matter, it is a thing limited by Nature, to those commodities, which from (the two breasts of our common Mother) Land and Sea, God usually either freely giveth or for labour selleth to

man-kind. ... Insomuch as Plenty dependeth (next to Gods favour) meerly on the labour and industry of men' (see Aspromourgos 1996: 70).

John Locke is seen as laying '... the basis for all the ideas of the whole of subsequent English political economy' (Marx 1863: 343), and is eulogised or condemned as the originator of the labour theory of value. In an often quoted passage in the *Second Treatise of Government* (1689/1988: §40), Locke writes: 'For 'tis *Labour* indeed that *puts the difference of value* on every thing; ... I think it will be but a very modest Computation to say, that of the *Products* of the Earth useful to the Life of Man 9/10 are the *effects of labour*: nay, if we will rightly estimate things as they come to our use, and cast up the several Expences about them, what in them is purely owing to *Nature*, and what to *labour*, we shall find, that in most of them 99/100 are wholly to be put on the account of *labour*'. Further down (§43) the effects of land are reduced to 1/1000 once all indirect labour is accounted for. This was, however, was not a labour theory of value, but an argument for a 'Right to Property' (§45). Locke however had a *market* theory of value in a work published two years later (1691) (Sewall 1901: 61; Böhm-Bawerk 1921: 319–320; Meek 1973: 22).

In similar vein, the views on value expressed in authors of the mercantilist period such as Bernardo Davanzati (1588), Nicholas Barbon (1690) or John Law (1705) were largely subjectivist.⁴ It is, however, with William Petty, with whom according to Marx (1859: 37), classical political economy truly began in England, that we have a notion of labour that can — well, sort of — be used for the determination of value. Petty took Hobbes' distinction between nature and labour to a higher analytical level and attempted 'to finde out a natural Par between Land and Labour, so as we might express the value by either of them alone as well or better than by both, and reduce one into the other' (1662: IV§18, pp. 44–5; cf. 1691: IX, p.181). He was unsuccessful in this quest.⁵ Value played a minor role in Petty's writings and his value theory was ambiguous (Marx 1859, 1863; Roncaglia 1985; Aspromourgos 1996: 50). Nevertheless, in Petty we find the germs of a labour theory of value, a scientific methodology based on 'sensible' (non-subjective) quantities and an analytical notion of surplus. As Marx (1859: 38) indicates, his 'conception of the source of material wealth ... leads to the political arithmetic, the first form in which political economy is treated as a separate science'. Thus, we find in Petty the concept of the division of labour, the notion of distribution of surplus between different classes and the concept of a normal price. Political economy proper has begun.

Hence in the late (or post) mercantilist and preclassical period, there emerged concepts that would eventually create the new science of political economy. These included theories of a 'natural price' (Meek 1973) and also the notion of an economy which is self organised between different classes of people increasingly mediated through the market. There was thus a need to explain the principles of exchange. An explanation in terms of demand and supply was a route never abandoned but, as Petty (1690: 244) noted, the correct method was 'to express [oneself] in Terms of *Number*, *Weight*, or *Measure*; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites, and

Passions of particular Men, to the Consideration of others'. It was labour as a measure of value which made it possible to make transparent how society was organised in terms of the market allocation of social resources. A number of authors in that period made this clear.

Josiah Tucker ([1755]/1931: 147) states that 'Industry and Labour are the only real Riches; Money being merely the Ticket or Sign belonging to them; and the Use of Money is to CERTIFY, that the Person possessing that Piece of Coin, hath likewise been in Possession of a *certain Quantity of Labour*, which he hath transferred into other Hands, and now retains the *Sign* of it. — Money therefore being nothing more than a Certificate of Labour, it necessary follows, that national Industry will always command as many of these Certificates.' In a youthful essay on the paper currency Benjamin Franklin notes that to 'facilitate exchange, men have invented MONEY, properly called a *medium of exchange* because through or by its means labor is exchanged for labor, or one commodity for another (1729: 264). He states further (p. 265) that, since 'silver itself is of no certain permanent value, . . . , it seems requisite to fix upon something else, more proper to be made a *measure of value*, and this I take to be *labor*. . . . Thus the riches of a country are to be valued by the quantity of labor its inhabitants are able to purchase, and not by the quantity of silver and gold they possess'. Hume (1752/1987: 261) in his *Essay of Commerce* writes that '[e]very thing in the world is purchased by labour; and our passions are the only causes of labour'. In Naples, the young *abbé* Ferdinando Galiani in his *Della moneta* (1751) defines value as a ratio composed of scarcity and utility, but makes labour (*fatica*) the major determinant of scarcity and thus the 'sole object that gives value to things'.

Classical Political Economy and Marx

Adam Smith

The embryonic theoretical concepts were now in place for Adam Smith to make a breakthrough that would fix ideas for more than a century. Smith offered labour as the single determinant of value. In one of the best known passages in the history of political economy, Smith (1776/1976: I.v) notes that, after the division of labour has taken place, each person cannot live on his own labour but must rely on the labour of others by acquiring goods through exchange. As wealth depends upon what one can command from the labour of others, it is thus labour that provides the measure of value in exchange.⁶

Smith, however, was unable to demonstrate how a labour theory of value can work in a capitalist economy. He attempted to deal with a number of issues. If labour is the measure of value of all things, then why is this done behind the back of the traders who keep measuring the exchange value of commodities in terms of money? It is because of convenience: prices are relative and we choose the good that has the traditional characteristics that facilitate exchange. How then are the multifarious types of labour differing in skill and hardship equated? Through the 'higgling of the market': the market prices and quantities which impute value to underlying labour. Comparability between time periods and relative permanence are also offered as reasons for measuring value in terms of

labour. However, even though Smith insists that labour remains the measure of value, he argues, inconsistently, that labour is not what *determines* the exchange value of things. This is the case in an 'early and rude' state of society where beaver and deerskins are exchanged in a ratio inversely proportional to the labour time required to hunt and skin them. Once, however, we are in a society with capitalists and landlords, profits and rents along with wages must be paid, so that the prices of commodities end up being the sum of the value of the three components. Labour's value is thus imputed, not determining but determined, not therefore a measure of value either.

In fact, Smith's concept of labour stands in a tradition that sees labour as essentially 'toil and trouble'. The relevant passage from the *Wealth of Nations* reads:

The real price of every thing, what every thing really costs to the man who wants to acquire it, is the toil and trouble of acquiring it. What every thing is really worth to the man who has acquired it, and who wants to dispose of it or exchange it for something else, is the toil and trouble which it can save to himself, and which it can impose upon other people. What is bought with money or with goods is purchased by labour as much as what we acquire by the toil of our own body. That money or those goods indeed save us this toil. They contain the value of a certain quantity of labour which we exchange for what is supposed at the time to contain the value of an equal quantity. (1776/1976: I.v.2.: 47–48, emphasis added).

The notion of labour as toil goes back to Roman times. Cicero in the *Tusculan Disputations* (II.xv.35) writes that 'there is some difference between toil (*labor*) and pain (*dolor*); they are certainly closely related, but there is a difference: toil is a mental or physical execution of work (*opus*) or duty of more than usual severity; pain on the other hand is disagreeable movement in the body'.⁷ In Latin, classical and medieval, there is a distinction between *labor* with negative connotations (toil, exertion, distress and trouble) and *industria* (diligence, assiduity, positive effort) which has positive connotations (Hamesse 1990; Sadlek 2004: 66). The English word 'labour' assumed many of the negative connotations of toil and pain. The common expression 'labour and industry' was used to express both the disagreeable and productive aspects of work. The Italian economists preferred the word '*fatica*' to denote 'toil'. Marx (1859: 43) translates *Mühe*, while the term 'industry', which we find in Steuart (Marx, *ibid.*), stresses the productive capacity of labour. Jean Baptiste Say (1803/2006: 32) castigates Smith for using 'labour' (*travail*) instead of *industrie*, with its supposed wider meaning. While Smith also uses the word 'industry' he prefers the word 'labour', explicitly defined as 'toil and trouble'.

Thus Smith, curiously, adopted a subjective notion of labour and then proceeds to use this as a measure of value. Karl Marx, Böhm-Bawerk and Hilferding objected from different standpoints to such a subjective, or psychological, equation of toil and value.⁸ As Aspromourgos (2009: 298n55) points out, in Smith the 'appeal to labour pains is little more than philosophico-anthropological noise

to the science proper'. Smith, however, truly transcended the 'toil and trouble' tradition and made a scientific breakthrough even though his language retained connotations of the older concept.

David Ricardo

Ricardo is the classical economist with whom the labour theory of value is *par excellence* connected. It was with him that the initial concept developed by Adam Smith was reformulated, four decades after the publication of the *Wealth of Nations*, into the foundational part of a consistent theory of value and distribution. Ricardo had from the start struggled with the issue of value in exchange. His first attempt in the *Essay on Profits* in 1815 was a 'corn model'. There he posited that in the agricultural sector both the produce and the cost of production, wage cost included, were measured in physical units, thus providing a rate of profit that could be applied to the rest of the economy. Ricardo pointed out the contradiction in Adam Smith's *adding up* theory of prices and argued that, *pace* Smith, the labour theory of value was not limited to the 'early and rude state of society' but was applicable to a fully fledged capitalist economy.

In doing so, Ricardo raised the analytical status of political economy to a new level. He specified the applicability of his theory to goods that are reproducible at a cost with addition of inputs ('such commodities only as can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint'), leaving out of scientific theory supply and demand factors and treating scarcity as an uninteresting exception, limited to commodities that 'form a very small part of the mass of commodities daily exchanged in the market' (1951: 12). He, of course, specified that value in use was the *sine qua non* for the existence of value, but neither the cause nor the measure of value, doing away with utility notions ('Utility then is not the measure of exchangeable value, although it is absolutely essential to it' (1951: 11)). And he included in the quantity of labour embodied in goods 'not only the labour applied immediately to commodities ... , but the labour also which is bestowed on the implements, tools, and buildings, with which such labour is assisted' (1951: 22). His abstract model assumed a competitive economy in which the rate of profit was determined uniformly across the economy because it was equated among alternatives. He separated analytically the question of distribution from that of value determination by assuming the determination of the level of wages to take place outside the sphere of exchange and production.

There were two separate analytical problems which Ricardo had to solve. First, the difference in value between different types of labour, he cavalierly considered inessential since, 'If a day's labour of a working jeweller be more valuable than a day's labour of a common labourer, it has long ago been adjusted, and placed in its proper position in the scale of value (Ricardo 1951: 20–21). The second problem was trickier and it projected to what would be later called 'the time structure of production': since the uniform rate of profit must apply to all commodities, even goods that have the same embodied labour in different stages of production would have different relative prices depending on the rate of profit, thus prices would not be invariable to different distributions between wages and

profit. Ricardo struggled with this problem for the rest of his life, groping to an invariable standard of value which would be found in a commodity that would 'summarize', in some sense, the structure of the economy and which would itself remain invariant to changes in the distribution of factor shares. The inability to invoke such a commodity, a purely analytical problem which has since been resolved by Sraffa as late as 1960, later led to the abandonment of the labour theory of value proper. Ricardo, however, thought that this logical problem did not affect the basic truth of his theory and, moreover, did not himself see any even remotely plausible alternative.

Karl Marx

The economist, foundational as well as critical, who gave labour a centrality in his analytical system was Karl Marx. Marx started with a philosophical concept of labour as the affirmation and actualisation of the human essence (Wood 2004). In volume 1 of *Das Kapital* (1867/1909: 197–198, emphasis added) he writes:

Labour is, in the first place, a process in which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material re-actions between himself and Nature. He opposes himself to Nature as one of her own forces, setting in motion arms and legs, head and hands, the natural forces of his body, in order to appropriate Nature's productions in a form adapted to his own wants. *By thus acting on the external world and changing it, he at the same time changes his own nature.* . . . A spider conducts operations that resemble those of a weaver, and a bee puts to shame many an architect in the construction of her cells. But what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality. At the end of every labour-process, we get a result that already existed in the imagination of the labourer at its commencement. He not only effects a change of form in the material on which he works, but he also realises a purpose of his own that gives the law to his modus operandi, and to which he must subordinate his will.

However, 'Labour is *not the source of all wealth. Nature is*' (Marx 1875: 15, original emphasis). But 'to the extent that man from the beginning behaves toward nature, the first source of all means and subjects of labour, as an *owner*, treats her as belonging to him, *his labour becomes the source of use values*, and also of wealth' (*ibid.*, emphasis added). Labour determines exchange value only in a commodity economy where 'value plays the role of regulating the distribution of labor. Every distribution of social labor does not give the product of labor the form of value, but only that distribution of labor which is not organised directly by society, but is indirectly regulated through the market and the exchange of things' (Rubin 1972). Marx makes the distinction between *concrete* labour, that which is expended in the technical-material labour process, and *abstract* labour, that which is equalised through the process of exchange. In its quantitative form, abstract labour becomes *socially necessary labour*, i.e., the amount of labour time performed by the average worker with average degree of skill and productivity

using tools of average productive capacity. In the sphere of exchange, there is thus exchange of equivalents in terms of labour value. It is in the 'hidden abode of production', inside the labour process, where the creation of surplus value takes place. Marx makes the distinction between *labour power*, a commodity, and *labour*. In good Aristotelian form, the capitalist purchases in labour power the *potentiality* of labour which he has to realise in the labour process. The value of labour power, however, which is determined by what is necessary in value terms to socially reproduce the worker, is less than that of the labour the capitalist manages to extract inside the labour process, hence *exploitation* becomes an inherent feature of the capitalist system. Marx's analysis of the division of labour and the extraction of surplus value in the labour process provide one of the richest insights in any social scientist's treatment of labour. In analytical terms, the Marxian construct suffered from the same problems as Ricardo's, since the labour value of commodities can be a determinant of exchange values only subject to the restriction of a constant organic composition of capital across industries, given a uniform rate of profit and rate of exploitation. This so-called 'transformation problem' has become the major point of attack on Marx's system since the days of Böhm-Bawerk (1896/1949), though it was rather the political implications of Marx's theory that made it unwelcome into the halls of academia.⁹

Thus by the last quarter of the nineteenth century, a political economy was in place that had labour as its major analytical concept in the explanation of value. The concept, however, that labour was the sole determinant of value could not be tolerated for long, particularly after the political climate that followed the suppression of the 1848 revolutions in Europe. A new paradigm was necessary in which academics could be seen to deliver disinterested scientific results that corresponded to the psychologically 'commonsense' and politically harmless intuition that it is our desire for objects coupled with the difficulty of acquiring them that confers value.

From the End of Classical Political Economy to Neoclassical Theory

Post-Classical Developments

Any labour theory of value always ran the ideological danger of implying that labour had a rightful claim to the full product. A number of radical theorists from William Thompson to Sismondi and Proudhon had already made that claim. By the end of the 19th century, such authors were numerous enough to make a distinct group worthy of a monograph (Menger 1899/1970; see also Dobb 1973: 137–140; Milgate and Stimson 2009). In defence of the rightful order, Böhm-Bawerk (1884 in 1921: vol. I, ch. XII, pp. 318–413) devoted almost one hundred pages to the 'exploitation theory' (*Ausbeutungstheorie*). An ideological moralist such as Henry Sidgwick (1887: 57) referred contemptuously to 'those Socialists who have perverted Ricardo's inconsistency into an argument against the remuneration of capitalists'. The subjective theory of value offered an alternative route: it crucially had on its side the 'empirical', or empiricist, 'common

sense' advantage that it was based on the 'direct' experience of market exchange and goods' consumption, thus avoiding the 'hidden abode of production' (*die verborgne Stätte der Produktion*).

In fact, the subjective theory was never dead, and the notion that utility and scarcity must be the final determinants of value was making a comeback. Even before Ricardo, the most important populariser of Adam Smith, Jean-Baptiste Say, an immensely influential economist, in his *Traité d'économie politique* first published in 1803, proclaimed that 'wealth consists of utilities' and insisted on a pregnant distinction among three 'agents of production': labour (or 'industry' as he called it), capital and natural agents of production, particularly land.

The tripartite division of the 'agents of production' did not originate with Say. As Edgeworth (1894/1926) pointed out (in his entry on the topic in Palgrave's dictionary), there are historically two *types* of taxonomy of 'agents of production': a first that 'appears more philosophical', and distinguishes between two classes: 'labour' and 'nature'; and a second — and presumably less philosophical — based on the tripartite and subsequently conventional empirical division: labour, capital and land. The first type of taxonomy is found in Hobbes, Petty and Cantillon, in classical political economy, continued by John Stuart Mill, Marshall (1890/1920: I.IV) and in Böhm-Bawerk. Despite major differences among these authors, none entertained the idea that labour alone was the sole producer of *use-value*. Mill (1848/1965: I.1§3: 28–29) put it succinctly:

The part which nature has in any work of man, is indefinite and incommensurable. It is impossible to decide that in any one thing nature does more than in any other. One cannot even say that labour does less. Less labour may be required; but if that which is required is absolutely indispensable, the result is just as much the product of labour, as of nature. When two conditions are equally necessary for producing the effect at all, it is unmeaning to say that so much of it is produced by one and so much by the other; it is like attempting to decide which half of a pair of scissors has most to do in the act of cutting.

By contrast, the so-called tripartite division of 'agents of production' purported to unravel the distinctive part played by each of these factors in the creation, ultimately, of utilities. The shift was away from any labour or factor theory of value into a theory that stressed subjective determinants. Thus, while in England followers of Ricardo, like McCulloch (1825), were expounding on the value of labour, proto-marginalists like Whately and Senior were going back to the concepts of utility and scarcity. Senior (1836: 138) made three points which were later to be picked up by marginalist economists.

- (a) It is scarcity that confers value and whenever labour creates values it is because it is scarce. More emphatically, Auguste Walras, Léon's father, argued that 'the value of labour comes from its scarcity' (*La valeur du travail vient de sa rareté*, 1832: 167). This was an inversion of Galiani's (1751) position who had argued that labour determines scarcity.
- (b) Since scarcity confers value, labour is on the same par with any other value causing agent. Thus, labour is dethroned as the determinant of value, and

- (c) The value of things can be determined solely through exchange. Senior's mentor, Bishop Whately had already suggested that the proper name for political economy should have been 'CATALLACTICS or the "Science of Exchanges"' (1831: 6, original emphasis).

Neoclassical Economics: The Dethronement of Labour

The Marginalist Revolution

With the advent of the marginal revolution, these three points were solidified into a corpus of analysis. There was yet a problem: scarcity alone could not help determine value. J. R. Hicks, commenting upon Auguste Walras's (1832) views, quipped that he 'was one of those excellent people (they seem to have existed since very near the dawn of history) who taught the true but unhelpful doctrine that value depends on scarcity (*rareté*)' (1934: 581). With the marginal revolution, scarcity, elevated to a higher analytical plane through the notion of diminishing marginal utility, provided the ground for a new subjectivist treatment of value.

The shift to the subjective in value determination meant that the analytical treatment of labour had to be mediated through its impact on utility-producing final goods. In fact, in the core marginalist/neoclassical model, labour, was not at all necessary to explain value at the highest level of abstraction. The necessary *Gedankenexperiment* was that suggested by Senior: 'if all the commodities used by man were supplied by nature without any intervention whatever of human labour' (1836: 138). This is common in the three fathers of the 'Marginal Revolution': Jevons in his *Theory of Political Economy* in 1871 explains value through the analysis of the exchange of two goods that belong to two 'trading bodies' (Jevons 1888). It is the analysis of the 'catallactic molecule' (Edgeworth 1881: 31) from which first principles are derived.

Menger in the *Grundsätze* (1871) is more cautious. He introduces from the start the concept of a good, and reasons that for a thing to have the quality of an economic good, it must ultimately satisfy a human need. There are things, however, which 'possess a goods character ... that cannot be put in any direct causal connection with the satisfaction of our needs.' These are goods of a 'higher order' which 'are indirectly, even if not directly, capable of satisfying human needs.'¹⁰ Labour services are among those higher-order goods. Note that we have no 'agents of production': we have a 'space of economic goods'. A 'journeyman baker's services' or 'a baking utensil' (1871/2004: 57) are on a par. Since subjective valuation is all that may exist, labour now becomes one more economic good and it is considered only in relation to its ability to produce goods that themselves produce use value. The concept was further developed by Marshall in his *Principles* (1890/1920) through the notion of 'derived demand' and assumed its mathematical form in Hicks' *Theory of Wages* (1932).

Walras was even clearer on the matter. The first edition of the *Éléments* (1874) contained a pure exchange model. Economic agents are endowed with final goods only, which they trade using the services of that fictitious creature, the *crieur*, mistranslated into English as the 'auctioneer'. Value is determined without recourse to whatever costs of production or any notion of labour: goods

fall like m different types of manna from the sky on each trader's parcel of land (Ferguson 1966: 354). Scarcity and utility are the only determinants of value. It is only in later editions of the *Éléments* that Walras deals with production, by introducing *holders* of factors of production who in turn sell them to the 'Sisyphus entrepreneur' (Screpanti and Zamagni 2005: 184) who makes no profits ('*ni bénéfice, ni perte*') and who transforms them into final goods. The holders of the factors of production receive income which they use in order to purchase the desired final goods. Labour thus becomes just another 'factor of production', even though Walras retains the old verbal distinction among Capital, Labour and Land. Heterogeneous labour is introduced, since the worker becomes the 'holder of personal faculties' ('*détenteur des facultés personnelles*'), (1926, 1954: L.18 §184)¹¹ and Walras conceptualises labour as the services produced by a kind of 'personal capital', one of the categories of social wealth (L.17 §171). In Walras, there are two types of markets: one for consumption goods, and one for services of the three types of capital (land, persons, capital assets proper). Final consumers are holders of the various types of 'capital' and sell their services to purchase final goods.

In the codification of neoclassical microeconomic theory attempted by the young Paul Samuelson, the equation of labour with other inputs is achieved by using a 'set of inputs (v_1, \dots, v_n)' (1947: 57). You cannot really tell which of the v s is which. In undergraduate micro, the distinction between variable K and variable L was kept in production functions and iso-quants. But even the input-output distinction was to disappear a few years later. In the axiomatic formalisation of general equilibrium theory the concepts of Menger and Walras were eventually fused. From Menger is kept the notion that all goods are similar. From Walras is retained the basic concept of a general equilibrium. In the Arrow-Debreu model (1954), although the distinction between goods and services is retained verbally, the analysis starts with the definition of a commodity as 'a good or a service completely specified physically, temporally and spatially' (Debreu 1959: 32). Certainly, '[t]he first example of an economic *service* will be human labor' but a 'more complex type of service is illustrated by the use of a hotel room' (Debreu 1959: 30–31). If in undergraduate microeconomic textbooks labour appears as a single letter in the simplified canonical production function $F(K, L)$, graduate students need not worry about it. In the almost 1000 pages long graduate textbook of Mas-Colell, Whinston and Green (1995), the standard staple of graduate courses, we cannot find in the index, between 'Kuhn-Tucker conditions' and 'Lagrange multipliers', an entry, or place, for 'labour'.

Marginal Productivity Theory

The dethronement of labour and its emplacement into a subjectivist analytical environment was not without problems. If labour was to be treated like all other commodities, then it should have a price that should be determined inside the system. That, however, came almost as a blessing. In classical political economy and Marx, the determination of wages was effected outside the market system. There was the concept of a 'natural wage' which was above a physiological minimum and included the 'habits and customs of the people' (Ricardo 1951: 97)

and a 'historical and moral element' (Marx 1867: 185). It was the result of social and power relations (Bharadwaj 1987; Stirati 1994). Now labour as a factor of production was paid in a manner that included its actual contribution to the system. It was the concept of *marginal productivity* that provided the new ethics of distribution. If in a labour theory of value, it was implied that workers were somehow robbed of their produce and exploitation was becoming a *terminus technicus*, as Böhm-Bawerk (1921: 327) complained, in the new economics workers were paid their actual contribution to the economy. All factors of production were paid their marginal product and since the product was 'exhausted' in remunerating the production factors involved there would not be any room for overpaying labour without slighting somebody else.¹² The ideological scare of 'exploitation theory' was thus averted.¹³ The marginal productivity doctrine was also helpful in another aspect. Adherence to it meant that the allocation of resources was optimal. If it were otherwise, reallocating a worker from one job to another with higher value of marginal product would be a Pareto improving move (Dorfman 1987).

The theory of marginal productivity was another move to the mystical and the unmeasurable, following utility. Labour time measurement was not without its problems, but the measurement of the marginal product was well-nigh impossible. Yet it was the theory itself that argued from first principles that workers must be paid their marginal product (see the Lester-Machlup (1946) debate).

Marginal productivity theory proposed yet another condition on labour: that the *marginal product of labour is diminishing*. As Piero Sraffa wrote (1925/1997: 325) 'the idea of interdependence between the quantity and the cost of production of a commodity produced under competitive conditions is not suggested by experience at all and could not arise spontaneously. ... [It was] the result of the change in the basis of the theory of value, from cost of production to utility'. Neoclassical theorists almost said so themselves (Wicksteed 1894/1992: 55–56, Douglas 1934: 40). In fact, in its attempt to explain the category of profit, neo-classical theory extended the classical law of diminishing returns on the land to a notion of aggregate capital the rate of return to which was associated with its marginal physical productivity (Pasinetti and Scazzieri 1987: 364). Thus eventually, concepts of a residual theory of wages were transformed into a theory of marginal productivity of labour. Labour was modelled in analogy with the two fundamental blocks of neoclassical theory: first, the theory of diminishing marginal utility, and second, the reward of capital.

Labour as Disutility

A pure subjectivist theory should also take into account the subjective feelings people have about working. Initially, however, neither Menger nor Walras saw a role for the supposed disutility of labour in their systems. For Walras this would mean that his system would be overdetermined — although, following criticism by Edgeworth (1889) he argued, rather unconvincingly, that the notion of negative utility of labour was included in his system in the concept of personal services (Marchionatti 2007). Menger (1871: 149n, 1871/2004: 171) thought that the value of inactivity (*Unthätigkeit*) for the worker was overestimated and that

people would keep on working even if they were not forced by lack of means to do so, albeit at a different intensity. Menger dispensed with the disutility of labour assumption in a footnote. His successor Böhm-Bawerk (1894/5, 1921/1959: vol. II Chapter 8 and vol. III, Essay 9) argued that the whole preoccupation with negative utility was a mistake that had its roots in Adam Smith's 'toil and trouble' (1921/1959: III, p. 122) and that (a) the law of value could apply even if the workers had no feelings about their jobs and (b) marginal disutility is not a relevant concept in an industrial environment where work hours are already set, and workers cannot choose between work and leisure.

It was Stanley Jevons, the most Benthamite of the marginalist triad, who struggled with the disutility of labour. Jevons coined a new use for the term 'discommodity' 'to signify any substance or action which is the opposite of commodity, that is to say, anything which we desire to get rid of, like ashes or sewage' (1888: 58). Labour is defined as 'the painful exertion which we undergo to ward off pains of greater amount, or to procure pleasures which leave a balance in our favour' (1888: 167). At the point where marginal pain (from labour) and marginal pleasure (from its produce) are equated ('the final equivalence of labour and utility', 1888: 177), the supply of labour is determined. Labour is not universally painful: it is marginal disutility that counts. 'In some characters and in some occupations ... success of labour only excites to new exertions, the work itself being of an interesting and stimulating nature'. It is also a question of race: 'A man of lower race, a negro for instance, enjoys possession less, and loathes labour more; his exertions, therefore, soon stop'. He quotes approvingly Bishop Berkeley in asking 'whether, if our (Irish) peasants were accustomed to eat beef and wear shoes, they would not be more industrious?' (1888: 183). In a striking pre-Taylorist analysis, he explains the task of the 'Economics of Labour' to find the optimal balance between load of work and reward: 'In a regular and constant employment the greatest result will always be gained by such a rate as allows a workman each day, or each week at the most, to recover all fatigue and recommence with an undiminished store of energy' (1888: 209).

Alfred Marshall, the great consolidator, incorporated this insight in the *Principles* offering more relevant reasons for the discommodity of labour,¹⁴ impressing readers with the vivid blackberry-picking boy example (1890/1920: V.II.1, p. 331) and providing a mathematical analysis (1890/1920: *Mathematical Appendix*, Note XII, pp. 844–5). He used the marginal disutility of labour to produce a supply price schedule for labour whose vestiges found their way into Keynes' *General Theory* (1936: 5).

Labour as Absence of Leisure

The notion of labour as disutility led to a further transformation of the concept of labour: it was analysed not *per se* but as the absence of leisure. Gossen (1854) had already written of the allocation (at the margin) of given time between alternative activities. Soon after the publication of Marshall's *Principles*, David I. Green and John Bates Clark suggested the notion of labour as an opportunity cost (Spencer 2003). In Wicksteed's *Common Sense* (1910: II.4, p. 524) the 'irk-someness of labour' is visualised as 'only a negative expression of one element

in the desirability of rest or leisure.' The worker 'sells his time with a system of reserved prices, which constitutes his own demand for it; just as the stall-keeper sells her plums.' The fully fledged canonical model of labour supply was only a few decades away (Black 1939; Scitovsky 1951; Derobert 2003), even though we had to wait till Becker (1965) to have a full model of the allocation of time, with labour being just one of its alternative uses. We thus have now, as Derobert (2003: 198) observes, an 'epistemological paradox... in the omission of labor in the standard modeling of its supply. Labor, both the word and the concept, vanishes in the leisure-income analysis shaping a paradoxical labor-less labor supply model'.

So at the level of theory, labour was first equated with all other 'requisites', 'agents', 'factors of production', or 'inputs', its reward seen as a special case of marginal productivity and then equated analytically with any other commodity. In the case of the supply of labour, the subjective and unmeasurable interpretation of labour led to its eventual analytical disappearance, as an absence of leisure. The analytical treatment of labour was now a 'special case of the general theory of value' (Hicks 1932/1963: 1). Even recently, one of the best labour economists of his generation feels obliged to explain why the analysis of the demand for labour warrants separate treatment (Hamermesh 1993: 4–5).

Neoclassical Puzzle-Solving

Once the theory of marginal productivity of labour became the default explanation, it was necessary to explain those cases where the principle failed to apply owing to market imperfections (monopolies and monopsonies, non-wage costs, quasi-fixed factors of production, search models, specific training, long term contracts, etc.). The image of the worker as a 'holder of personal faculties', or rather 'a vector of productive characteristics', begot a research programme in which the constituent elements of worker efficiency would be studied separately and their various aspects analysed. Productivity traits could now be examined either as acquired or acquirable — in which case the economics of their acquisition had to be determined, as in the case of human capital — or as endowed by nature or nurture, in which case their interaction with the market could be studied and explanations of earnings distribution offered. On the subjective side, the disagreeableness of labour could be used for explaining the market equilibria between job characteristics and job preferences thus providing an explanation of wage differentials (and job design) that, given enough ingenuity, could have accounted for the overwhelming evidence for the negative relationship between adverse job characteristics and pay. With the Pareto optimal implications of free market theory, regulatory frameworks, whether based on government, the legal system or institutions of collective bargaining, could also be analysed using the tools of marginal analysis, only to demonstrate the deleterious welfare implications of such well-meaning but ill-conceived interventions. The role of market imperfections was seriously underplayed: historical and institutional arrangements were seen as 'the grit and treacle gumming up market mechanisms' (Brown and Nolan 1987: 346).

The Openness and Indeterminacy of the Employment Relationship

*Phase I: 'Non ragioniam di lor, ma guarda e passa.'*¹⁵ *The Triumph of the Chicago School*

Practitioners of labour economics reported a complexity in the determination of wages and employment that was not compatible with marginalist analysis (Kerr 1994: 98). In the United States, the Institutionalists — particularly the Wisconsin School (Barbash 1994) — drew on painstaking field work and thorough understanding of the institutional environment to suggest that the world was different from the neoclassical paradigm. The first textbook on *Labor Economics* by Solomon Blum in 1925 was more concerned with labour legislation, trade unions and collective bargaining than with economic matters and was highly critical of the marginal utility theory of wages (McNulty 1980: 156–159; Kaufman 1993: 84). Blum's chapter on the determination of wages was in the plural: 'Theories of wages'. Even those who adhered to the doctrine theoretically, found it difficult to follow it in practice. As Paul Douglas said in 1948 in his Presidential Address to the American Economic Association: 'I have known professors, who teaching both theory and labor economics, have instilled the pure theory of John Bates Clark during one hour, and then during the next hour have taught as economic gospel the bargain theories of Sidney and Beatrice Webb' (cited in McNulty 1980: 159). Douglas himself, in his highly influential and authoritative *Theory of Wages* (1934), even though he subscribed to the 'specific productivity theory', clearly demarcated the areas in which its postulates had varying degrees of validity (1934: 94).

In the United States, the so-called 'neoclassical revisionists' like John Dunlop, Clark Kerr, Richard Lester, and Lloyd Reynolds, who were active during the 1940s and 1950s, accepted in principle the theoretical basis of neoclassical theory, but tried to examine the effects of social structures and behaviour on economic structures and behaviour (Kaufman 1988; Kerr 1988, 1994). They accepted the operation of competitive labour markets only in very special and limiting cases. The debate, however, was not mainly about theoretical principles, but about the 'strength and effectiveness of competition in actual labor markets' (Reynolds 1956: 2). By the 1960s, however, neoclassical revisionism was laid to rest. The 'neoclassical restorationists' (Kerr 1994) of the Chicago School, Milton Friedman, George Stigler, H. Gregg Lewis and Gary Becker reigned supreme. The requirements of mathematical formalism imposed by the School excluded those labour economists who had a more interdisciplinary training and approach to labour matters, and the discipline of industrial relations absorbed the research of those who did not share the marginalist paradigm.

The victory of marginalism had two corollaries; first, 'anomalies' were explained away from within the paradigm, and second, the basic tenets of methodological individualism and rational *homo economicus* were applied to fields hitherto untouched by economic analysis, through what Becker (1976) had called 'the economic approach to human behaviour'.

Phase II: Agency Problems and Personnel Economics: The Economics of Loafing

Up to the late 1960s, neoclassical economics had stubbornly refused to open the black box of the production function or look into production processes. In the 1970s, however, neoclassical theory extended the basic model of human behaviour to incorporate in a more systematic way uncertainty and information asymmetry (Stiglitz 1991, 2002). A neo-institutionalist sub-paradigm, situated well inside neoclassical economic theory, attempted to explain the differences between markets and 'hierarchies', as efficient allocation mechanisms (Williamson 1975). The agency model (Ross 1973; Stiglitz 1987; Laffont 2003) was applied in a systematic way. This changed the manner in which labour was viewed by neoclassical economists. The new theoretical developments attempted to explain labour productivity, 'efficiency', or 'effort', as a response to incentives. A separate field started in the 1980s, attempting to explain economic institutions as optimal 'incentive-compatible mechanism designs', a research that was deemed worth a Nobel Prize in Economics (Royal Swedish Academy of Sciences 2007). A new branch of labour economics called 'personnel economics' originated in the late 1970s and took off in the mid-1980s and 1990s (Lazear 1999; Lazear and McNabb 2004; for a graduate textbook treatment see Cahuc and Zylberberg 2004, ch. 7).

Early marginalist economists had taken the regulation of productivity as unproblematic. Jevons (1888) had thought that it was an issue of optimally tweaking pay to produce the optimal level of effort.¹⁶ Among the major neoclassical economists, Marshall had by far paid the most attention to the matter of labour efficiency from early on, by arguing that even though Time Wages are not equalised through competition, Task Wages are. Marshall wrote of 'efficiency wages or earnings' in the *Economics of Industry*,¹⁷ but the issue received little analytical development in the *Principles*.

The new extension of the neoclassical paradigm, with its agency problem, information asymmetry and uncertainty, produced results that provided at least partial explanation for a number of 'anomalies' on which neoclassical labour economics had long remained silent. It could be used, for example, to explain why wage setting under competitive conditions could fail to clear the labour market, and also to explain the deviation between wages and the value of marginal product. Since wages were not only the price signal to hire labour, but also had the function of 'motivating and retaining' labour, a non-market clearing wage could actually be the result of an optimal contract. The employment relationship was resurrected and its neoclassical analysis provided a number of explanations for efficiency wages (Akerlof and Yellen 1986), hierarchical organisations and time-earnings profiles (Lazear and McNabb 2004). The concept of labour was now that of a worker who had signed a wage-effort contract with her employer and who maximized her utility function that was positive in wages and negative in effort. Since effort monitoring is imperfect or costly and dependent upon uncertain states of nature, and since the worker knows her effort level but her boss does not, the question now becomes one of devising an optimal incentive-compatible contract that will elicit an amount of effort that both parties would

like to agree to, but that the worker cannot make a credible commitment that she would have stuck to, in the absence of such a contract (Parsons 1986; Malcomson 1999). At last, neoclassical theory recognises the worker as a sentient being, but with a twist. Up to now, the economic agent was a rational *homo economicus*, but also a decent human being — not necessarily an egotist but certainly what Wicksteed (1910: I.V, p. 180) called a ‘non-tuist’, shunning sociality in its transactions. The agent has now, however, become a thorough knave — an opportunist, ‘self-seeking with guile’ (Williamson 1975: 26).

Yet this opportunist worker is thoroughly predictable. Given the parameters of the contract, the desired level of effort can be credibly achieved. This predictability is in fact the Achilles’ heel of the theory. Labour is thoroughly sanitised as a commodity belonging to a worker-owner of the faculty. This worker makes choices that involve a bilateral relationship between her and the employer, where her preferences are given. There is no room for a social determination of either these preferences, or of behaviour that is determined at the level of production through interaction with co-workers. In fact, even the very expression of collective behaviour, trade-unionism, is analysed by neoclassical theory with the same tools of methodological individualism and utility maximisation (Booth 1995). There is, however, a large body of work from the industrial relations and sociology of work literature which shows that the determination of effort is either hard to quantify (e.g. Baldamus 1951) or that workers react strategically to attempts by management to set rules by which the latter try to control them.¹⁸ Issues of trust, not contractually achievable, become paramount (Fox 1974). In the industrial relations literature, it is a commonplace that the motivation of workers is related to notions of fairness, unrelated to the opportunistic worker (Hyman and Brough 1975). Job evaluation schemes, for example, are less linked to the external labour market and more aimed at creating a wage and salary structure that respects norms of fairness (Doeringer and Piore 1971; Krimpas 1975: ch. 4; Theocarakis 1991: ch. 5). Research from experimental economics demonstrates that in labour contexts, notions of instrumental rationality do not apply (Fehr and Gächter 2000). Moreover, both trade union involvement through collective bargaining and the statutory protection of individual employment rights are manifestations of society’s interest in protecting the employment relationship from the inherently asymmetric power relationship between employer and employee, thus acknowledging that a simple contractual arrangement is insufficient to regulate employment (Brown 2004: 400).

Conclusion

The concept of labour as a source of social and economic value did not exist in the ancient authors and it was only in the Middle Ages that labour was suggested as a possible explanation of an ethical, but also practical, theory of value. In mercantilist thought, and to a lesser extent in natural law theorists, a utility/scarcity theory of value existed alongside a cost and labour theory, but it was eventually under the influence of Locke’s theory of property, that labour becomes even more prominent as a tentative explanation of value in a society that increasingly wanted to reflect on how it was itself organised. Adam Smith made the

first decisive break by offering labour as the single determinant of value, even if he was unable to demonstrate how a labour theory of value might work in a capitalist economy. It was with Ricardo's major analytical breakthrough that a fully developed theory of value entered political economy and reigned almost supreme for half a century. Marx gave this theory philosophical substance and provided a forceful critique of classical political economy, but he remained truly Ricardian as a political economist.

The concept, however, that labour was the sole determinant of value could not be tolerated for long, particularly after the political climate that followed the suppression of the 1848 revolutions in Europe. A new paradigm was necessary in which academics could be seen to deliver disinterested scientific results that corresponded to the psychologically 'commonsense' and politically harmless intuition, that it is our desire for objects coupled with the difficulty of acquiring them that confers value. This was the project that marginalist economists had before them and which they attempted to solve through introspection: by positing a mystical quality — *utility* — that had the property of diminishing when we keep increasing the consumption of the goods we desire. The value-creating abode of production was now out of sight, out of mind. Political economy, now renamed economics, did not need the hypothesis of labour any longer.

The state of current labour economics is one of increasing formalism that derives all equilibria from first principles of maximising individuals under varying scenarios. The centrality of the concept of labour disappeared in a number of phases: first, labour has become a commodity, its price regulated through the market in a manner exactly similar to other factors of production. Then the difference between factor of production and any other commodity was effaced. In the determination of the supply of labour of the canonical model, even the very concept of labour vanished, being substituted by the absence of leisure. Finally, when the theory recognised that the worker was a sentient being, it equipped him or her with preferences created outside the environment of work and a rationality that was instrumental and dishonest. Instead of seeing labour as part of a social process, it opted for a worker that never was.

Notes

1. I wish to thank Yanis Varoufakis for heated theoretical discussions on the arguments advanced in this paper. G. E. Krimpas made copious and substantial comments on an earlier draft. His suggestions were gratefully incorporated into the text. More important was his influence before I even started writing it. The usual disclaimer applies to errors (but not to fallacies). I would like also to thank Anne Junor, Executive Editor of this Review, for her comments and suggestions that led to a more focused and improved text.
2. One such exception was the Sophist and Plato's contemporary Prodicus of Ceos. In his account of Herakles at the Crossroads choosing between Virtue and Vice, work is actually praised and seen as the only legitimate source of enjoyment (Xenophon, *Memorabilia*: II.1.21–34).
3. The 'sweat of thy brow' is, of course, the original Adamic curse (*Genesis* 3:19). On the other hand, manual work was considered imperative by Paul: 'For

- even when we were with you, this we commanded you, that if any would not work, neither should he eat' (2 Thessalonians 3:10). For attitudes on work in the Middle Ages, see Le Goff (1980, esp. pp. 58–70). Even from the 4th century, St. Augustine (*De opere monachorum* 1887) was instrumental in emphasising the moral value of manual work (Baeck 1999; Sadlek 2004: 63–66).
4. The discussion on labour matters in the mercantilist era concerned the idleness of the working poor who should be kept at subsistence wages lest they reduced the supply of their labour and the relationship between high wages and industriousness. See Groenewegen (1969).
 5. Cantillon (1755) also tried to find such a parity by estimating the area of land necessary to maintain a labourer.
 6. Smith gave short shrift to subjectivist notions through the water and diamonds paradox, an old canard in economics put into variously different uses. This short shrift of utility theories exasperated and infuriated marginalist theorists. See the splenetic attacks on this passage reported in Robertson and Taylor (1957). On the water and diamonds paradox, see also Robertson and Taylor (1957) and Theocarakis (2006: 26).
 7. Labour and toil was, strictly speaking, confined to the labouring classes. Upper classes cherished their leisure (*otium*) which was an *otium cum dignitate*. But it should not be an idle leisure (*otium otiosum*) but a productive one. This attitude can be found even in the English Moralists (e.g. Shaftesbury 1699/1897: 52).
 8. Karl Marx (1859: 44) observed that Adam Smith 'mistakes the objective equalisation of unequal quantities of labour forcibly brought about by the social process for the subjective equality of the labours of individuals.' And Böhm-Bawerk (1921: 375) argues that toil (*Mühe*) cannot be the foundation of value: 'That I have given myself trouble about a thing is *one* fact; that the thing is worth the trouble (*Plage*) is a second and a separate fact; and that the two facts do not always go hand in hand is too well corroborated by experience for any doubt about it to be possible.' Rudolf Hilferding notes (1904/1949: 185): 'If labor regarded as "trouble" be the basis of our personal estimate of value, then the "value of the labor" is a constituent, . . . , of the value of commodities. But it need not be the only one, for a number of other factors which influence the subjective estimates made by individuals . . . have an equal right to be regarded as determinants of value.'
 9. There is a large literature on the transformation problem. See e.g. Steedman et al (1981), Mandel and Freeman (1984). For a more recent attempt to resolve the problem and a history of the controversy, see Kliman (2007). Marx himself tried to resolve the issue in vol. 3 of *Das Kapital* (Marx 1894: 164–181).
 10. A concept similar to the 'order of goods' was developed by Hermann Heinrich Gossen (1854/1983: 31).
 11. The concept of a worker as an owner of human qualities goes back to the post-Physiocratic economist Achylle-Nicolas Isnard (1781/2006: 120).
 12. The exhaustion of the product presupposes of course Euler's theorem. See Wicksteed (1894/1992), Robinson (1934), Stigler (1941).

13. 'While there is no danger that any theory may establish a permanent reign of practical socialism, there is a general and not unfounded fear of agitations and attempts in this direction; and systems of economic science must submit to be judged, not merely by their correctness or incorrectness, but by their seeming tendency to strengthen or to weaken the social fabric' Clark (1883: 363). See also Böhm-Bawerk's (1921: I, p. 318) comment that 'to-day [1884, exploitation theory] forms the theoretical focal point around which move the forces of attack and defence in the struggle of organising human society'.
14. 'The discommodity of labour may arise from bodily or mental fatigue, or from its being carried on in unhealthy surroundings, or with unwelcome associates, or from its occupying time that is wanted for recreation, or for social or intellectual pursuits' (1890/1920:IV.1.52).
15. 'Let us not speak of them, but look and pass', Dante, *Inferno*, Canto III, verse 51.
16. In the nineteenth century, the issue of the relationship between high wages and labour productivity was raised by empirical or 'amateur' economists like Thomas Brassey (see Petridis 1996). The insights of Francis Amasa Walker (1867/1888) from the other side of the Atlantic, who discussed the issue extensively, were never developed, since he was outside the existing schools of the time. J. Shield Nicholson (1902) analysed the issue of efficiency of labour taking into account a large number of factors.
17. See the discussion on labour efficiency and wages in Marshall and Marshall (1879: II.VII–VIII, II.XI and III.III.§4-7).
18. Arthur Marsh (1979: 37) offers a litany of names for restricting output: 'ca'canny, go-slow, slow-gear strikes, lazy strike, folded arms strike, stay-in strike, working without enthusiasm, restrictive practices, protective practices, craft control, quota restriction, gold bricking'. After the publication of Braverman (1974), a new area of research has been opened, but the old sociology of work literature was also full of insights, see Littler and Salaman 1982. For an alternative view of managing remuneration and productivity see especially the work of William Brown (1979, 1989, 2004; Brown and Nolan 1988).

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