The regeneration of Marxian distinction between labour power and labour: for a counter-neoclassical labour exchange theory

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1. Introduction

Marx held the lifelong view that the labour-capital power struggle being independent of the operation of market mechanisms is a major determinant of labour time, wages, and other working conditions.[1] Marx's theory, on the other hand, assumed a highly competitive capitalist economy, and refused the 'mercantile' notion that the appropriation of surplus value originates in monopoly, collusion, fraud, etc. From the perspective of neoclassical economists, however, such reasoning is self-contradictory, because they contend that competitive markets possess the automatism to bring them into equilibrium without any outside intervention, and the same is true of the labour market.

Of course, as neoclassical economists themselves have recognised, a lot of conditions are required for such market workability. Factors such as increasing returns, external economies, and imperfect information bring about market failure. But these impediments are eventually taken to be partial or reducible by advances in information technologies. Thus, most neoclassical economists have strongly believed the following statement as the fundamental principle of labour exchange: *all working conditions can be determined by the force of market mechanisms that adjust maximising agents' labour supply and demand, and so no room for the operation of extra-market forces exists there.* This tenet props up the trend toward the deregulation of industrial relations under the present-day market-directed capitalism. To withstand the tide, therefore, we need to present a stringent criticism of the underlying neoclassical principle.

Marxian economists have opposed such a market-oriented stand on the labour exchange. The drift of their arguments is as follows: *the worker's actual amount of* *labour is determined in the production process independently of market forces, and the employer's capacity to extract surplus labour by her domination over the worker is its prime determinant.* Here, the place of capitalist exploitation is that of simultaneous exertion of power. As J. E. Roemer (1982a, 1988) shows, however, exploitation in the Marxian sense can also be demonstrated by assuming a Walrasian model, which admits no exercise of extra-market power. This means that the issue of power ought to be distinguished from that of exploitation. However, Marxian economists have been prone to assimilate the former to the latter. As a result, they have failed to bring forward sound arguments against the neoclassical labour market theory.

In this paper, I will negate the neoclassical principle of the labour exchange by going into the particular characteristics of the exchange, and justify the Marxian conception that the extra-market worker-employer power relationship is a decisive determinant of working conditions, and thus income distribution and other outcomes in capitalist economies. What underlies this contention is the emphasis on the distinction between labour power and labour. Marxists have placed this perception as the basis for their exploitation theory. But I will explore another potential of it in line with the above aim. In section 2, I will develop arguments to confirm the inevitability of extra-market power intervention in the labour exchange, and refer to its implications. In the light of the problem with labour quantification revealed there, section 3 discusses limitations of traditional Marxian thinking as an opponent of the neoclassical view of the labour exchange. The final section provides a brief summary.

2. Labour exchange and power

The cornerstone of neoclassical economics is the uniform marginal and maximum principles-based market doctrine being applied to each and every object of trade. Neoclassical labour market theory, a component of it, has dominated the academic world as the accepted standard for interpreting the labour exchange until today. But is the theory really credible? To investigate this, we must begin by delving into the fundamental nature of the labour exchange.

Now, one of the requisites for a market to be strictly structured is that unit representation for the object of trade there should be strictly defined. Evidently, this unit representation is meaningless unless it warrants that all units based on it be identical in terms of the service they provide. Concerning material objects like goods and land, the unit representation satisfying this requirement is given on the basis of the physical properties they have, for the physical homogeneity among things guarantees the homogeneity of their service. It is indubitable, to be sure, that every one litre of oil of the same components actually provides the same service.

However, the situation is different for labour power. To begin with, it is highly doubtful that working abilities embodied in the worker as a human existence are reducible solely to her physical or physiological properties. There is, however, a more crucial problem. The worker, while she is restricted in her labour capacity, has some latitude in her labour performance because of its characteristic as 'an intentional human activity rather than an object' (Bowles and Gintis, 1990a, p. 167), or, more fundamentally, owing to the 'incompleteness' that the human activity inevitably entails. As Marx put it, indeed, labour capacity is 'itself merely the possibility of labour, available and confined within the living body of the worker' (Marx, 1988, pp. 39-40). Hence, there is even no guarantee that each hourly labour of one and the same worker will perform the same service, much less of different workers. That is, no unique and predetermined correlation exists between a certain labour power and labour it actually provides. On account of this peculiar relationship between the factor (labour power) and the service (labour), we cannot find any appropriate unit representation for the strict formation of the labour market either in labour power itself or in labour time.

By the way, the cognisance of the variability in labour elicited from a given labour power, or the distinction between labour power and labour in such a sense, was the groundwork for Marx's theory of labour exchange and capitalist exploitation. From there Marx maintained that the actual amount of labour generated by a worker is determined not by the employment contract, but in the ensuing production process, and that the labour extraction is up to the employer's exertion of power over the worker.[2]

If, however, we should be able to quantify 'living labour', or labour itself performed by the worker, in such a way as to give an adequate trading unit for it, then the worker's actual amount of labour can be determined in the marketplace on the basis of that unit. Thus we further need to examine the possibility of labour quantification. Since quantity of labour here is the real magnitude of working activity – being distinct from formal labour time – it is the quantification of labour intensity that we must consider. The variability in labour intensity was also discussed by Marx. He stressed that intensification of labour developed 'great importance' after the establishment of working day regulations by the Factory Acts (see Marx, 1996, pp. 412-420, pp. 524-527). The issue of labour intensity, however, had long been slighted. The present-day efficiency wage theory has revived economists' attention to it. Along with the informational asymmetry between the worker and the employer, the changeability in labour intensity is a basic assumption in the efficiency wage theory. Thereon efficiency wage theorists formulate the way the employer elicits the maximum-profit-bringing real labour from the worker (see, for example, Yellen, 1984; Shapiro and Stiglitz, 1984). S. Bowles and H. Gintis' contested exchange theory has had a strong effect on contemporary radical economics as an attempt to demonstrate the power exertion in competitive economies. The labour exchange model presented by Bowles and Gintis, however, is also a prototypical efficiency wage model (see, for example, Bowles and Gintis, 1990a, pp. 177-187). So their notion of power there is not greater than that implicit in the efficiency wage theory.[3]

Exponents of the efficiency wage theory and its absorbers like Bowles and Gintis express the amount of labour intensity by the term 'effort', and they include 'effort' among the arguments of production function. Despite the surpassing importance of its meaning to them, however, they have never carefully discussed in what manner 'effort' could be quantified (see, for example, Yellen, 1984; Shapiro and Stiglitz, 1984; Bowles, 1985; Bowles and Gintis, 1990a). In addition, while underscoring that the worker's 'effort' is hard to specify by contract and costly to measure, Bowles and Gintis in their labour exchange model assume that not just the worker but the employer can perceive 'effort' quantitatively (see Bowles and Gintis, 1990a).

Under the circumstances, M. Currie and I. Steedman (1993) denounce theoretical overuses of 'effort'. They write: 'What are the *units* in terms of which care, attentiveness, and initiative are to be measured?' (emphasis in original; Currie and Steedman, 1993, p. 136). Currie and Steedman argue that 'effort' is multi-dimensional and at least one of the dimensions is typically only ordinally measurable, and that, therefore, concepts like the diminishing marginal product of 'effort' postulated in efficiency wage literature are devoid of significance (*ibid.*, pp. 134-135). [4]

In fact, the quantitative cognisance of yet-to-be-objectified labour has unconquerable limitations. Whether 'effort' is multi-dimensional or not, and even if the worker should be able to measure her own 'effort' cardinally in her subjectivity, there will be no way the employer can have the same perception about the worker's labour. Accordingly, from there it is impossible to obtain a trading unit on the basis of which a labour market is formed. This is likened to the observation that even if utility should be cardinally measurable for each consumer, utility itself cannot be a trading unit in any commodity market.

Now, Bowles and Gintis' assumption about the perception of 'effort' is not merely unrealistic. Suppose, as they do, that the employer as well as the worker could perceive 'effort' quantitatively. Then there would be no denying the likelihood that market bargaining would be conducted in terms of the 'effort' unit which is commonly cognisable by suppliers and demanders, and that the labour market would clear in some way; albeit, because of the uncertainty about the worker's implementation of the agreed 'effort' level, this market might require such a risk premium as the posting of labour bonds by workers (see Roemer, 1990, p. 244). Thus, the employer's extra-market power exertion over the worker which Bowles and Gintis think to be feasible by keeping the wage rate above its market-clearing level becomes doubtful (see, for example, Bowles and Gintis, 1990a, pp. 177-184). This reveals the weakness of Bowles and Gintis' contested labour exchange theory that falls back on the Post-Walrasian notion of informational imperfection in general, rather than the insight into the labour exchange-specific characteristics. [5]

Now that the quantification of non-objectified labour as a basis for the formation of labour market is impossible, the only way we are left with is the recourse to objectified labour, or product. As H. Braverman (1974, p. 316) put it, 'Labor in general is a process whose determinate forms are shaped by the end result, the product'.[6] Marx regarded payment at piece rates as the wage system based on labour intensity, and therefore as 'the form of wages most in harmony with the capitalist mode of production' (see Marx, 1996, pp. 550-558). Also, performance-based pay is widely prevalent today.

We may thus say that a worker who makes two thousand pins works twice as hard as another worker who makes one thousand pins under the same conditions. If, however, in this way we measure labour by its product, it follows that the amount of labour is dependent on the output; or, more directly, the labour unit is identical to the product unit. Hence, the usual production functions that include the amount of labour in the independent variables do not hold good here. This also implies that such concepts vital for the neoclassical labour market theory as marginal productivity and disutility of labour do lose their meaning.[7]

We can reveal the same problem from another perspective. If we settle for a labour unit grounded on product, we have to suppose that the bargaining on the labour market is also conducted in terms of the unit. Since the labour unit is actually identical to the product unit in this case, however, labour demand is infinitely high as long as the wage rate is lower than the product price, and that labour demand is zero as long as the wage rate is greater than the product price. This labour market is therefore incapable of being brought into equilibrium by the normal supply-demand adjustment mechanism. If there were any adequate labour unit independent of product, then we could not negate the possibility that the labour market would thereby work well as neoclassical theory presumes. As we have seen, however, no such a unit can be found. So, in any case, we have to dismiss the notion that working conditions can be determined by the force of market mechanisms.

Thus the real nature of the labour exchange is incompatible with the neoclassical idea; the former cannot satisfy basic requirements for market formation that the latter needs. Yet working conditions must be somehow determined. And here is justified the Marxian conception that the extra-market worker-employer power relationship in their conflicts of interest makes a decisive determinant of working conditions. Of course, nothing prevents this determining factor from not remaining inter-individual, but expanding into collective or class strife. The implication, in this way, leads to the denial of neoclassical individualism.

From the above arguments we are in a position to clarify some important points. First, to the extent that the extra-market worker-employer power relationship is a wage determinant, it also affects the determination of capital profit, rent, and other income categories. Hence the marginal principle-based income distribution theory loses its validity.

Next, since the market adjustment function assumed by neoclassical economists cannot work in the labour exchange, there remain no legitimate reasons for denying that involuntary unemployment or the existence of an industrial reserve army is a normality of capitalist economies. Needless to say, power relations between workers and employers also have a decisive influence on the employment level of a society. Marx laid stress on the pressure being put by the industrial reserve army on the claims of employed workers (*ibid.*, pp. 623-634). This pressure would augment employers' dominance over workers and thus cause a spiral effect on employment.

While maintaining that the labour-capital class struggle is the prime determinant of working conditions, Marx did not recognise any wage differentials other than those based on the quality and quantity of labour (*ibid.*, p. 208, p. 554). Rather, he thought that the 'degradation' of the entire working class and petty bourgeois into simple labourers with the development of capitalist production would end up giving birth to class consciousness and solidarity among them, thereby preparing the way for the toppling of capitalism (see Marx and Engels, 1976). By contrast, present-day radical economists like Bowles, Gintis, and M. Reich argue that in order to frustrate the unity among workers that could strengthen their claims, employers do try to stratify and segregate them by implementing discriminatory hiring practices on grounds of gender, race, schooling, etc. (see, for example, Bowles and Gintis, 1981; 1990a; Gintis, 1976; Reich, 1981). [8] Employers' exercise of power over workers by such policies, which we routinely face, can also be accounted for by the discussions thus far. To the extent that the neoclassical-style market adjustment function is unworkable in the labour exchange, the law of indifference cannot hold good there either. Accordingly, there is no guarantee that all the workers who provide the same labour service are to receive the same wage. Thus is given a sufficient reason for forces unrelated to productivity to operate on wage differentials.

Hence, neoclassical economists' insistence that liberalisation of labour markets will get rid of employment discrimination is ill founded (see, for example, Friedman, 1962). Deregulation policies based on such an allegation, on the contrary, would probably make the discrimination run rampant by promoting division among workers, and so granting more power to employers. Employment fairness in this context does require political and social actions beyond market competition, for the labour exchange is furnished with no mechanisms that could harmonise workers' earnings with their performance, like the alleged marginal product of labour.

3. Labour quantification, power, and exploitation

The issue of labour quantification has been a blind spot in the history of economic thought. Smith, Ricardo, and other classical economists paid little attention to the difficulty (see, for example, Smith, 1975; Ricardo, 1951). This tendency was fostered by neoclassical economists since the 'Marginal Revolution'. They imperatively needed labour quantification in order to establish the marginal principle-based theoretical system. Participants in the 'Marginal Revolution' quantified labour input as if it had been self-explanatory, and included the amount in the arguments of production and utility functions (see, for example, Walras, 1954; Wicksell, 1977). Thus was provided a basis for the neoclassical labour market theory, where concepts such as marginal product and disutility of labour play a key role. That uncritical attitude toward labour quantification rules even the thinking of the most flexible-minded neoclassical economists of today (see, for example, Stiglitz, 1997, pp. 300-301).

Were opponents of the neoclassical school, then, free of such unquestioning treatment of labour? The answer is unfortunately no. J. M. Keynes' effective demand doctrine in the *General Theory* started with the attack on 'classical' principles of the labour market. However, the critique in the light of labour quantification was out of Keynes' consideration. This was revealed in his acceptance of the 'classical first postulate' that states the determination of the real wage rate equivalent to the marginal product of labour (see Keynes, 1973, pp. 17-18). Likewise, in his *Production of Commodities by Means of Commodities* P. Sraffa, one of the most acute critics in the twentieth century of neoclassical theories, showed no hesitation about specifying the quantity of labour input in equations of production (see Sraffa, 1960). The Cambridge Controversies of the 1960s, which were triggered by Sraffa's discussion about reswitching of techniques in the above book, brought the circular character of the neoclassical aggregate production function into the open. However, while controversialists in the British camp denounced the neoclassical notion of aggregate capital in terms of its measurement problem, they displayed little interest in the similar issue regarding labour (see Harcourt, 1972).

Marx's criticism of classical economists' views on the labour exchange was directed at its obscurity represented by their terminology 'value of labour' or 'price of labour'. Marx emphasised that it is labour power, being distinct from its use value or labour itself, which is valued and priced (see, for example, Marx, 1996, pp. 535-542). He did not neglect simple but crucial peculiarities of labour power as a factor of production that is inseparable from its seller, the worker. Marx perceived the most vital difference between labour exchange and exchange of commodities in general; that, while the buyer in the latter can enjoy the service of commodities at will once the purchase is completed, in the former the completion of the purchase of labour power never guarantees the enjoyment of any specific labour service to the buyer (see, for example, Marx, 1988, pp. 204-205).

In the *Economic Manuscript of 1861-63* Marx wrote:

Originally, it is true, we were able to measure *labour capacity* with money, because it was itself already objectified labour, and the capitalist could therefore buy it; but were unable to measure *labour itself* directly, for as bare activity it escaped our standard of measurement. Now, however, in the measure to which, in the labour process, labour capacity proceeds to its real manifestation, to labour, the latter is realised, appears itself in the product as objectified labour time. … At the end of a certain measure of labour time, e.g. hours, a certain quantity of labour time has been objectified in a use value, say twist, and now exists as the latter's exchange value (emphasis in original; *ibid.*, p. 83).

Here, Marx denies the immediate measurability of labour. Of course, this also negates the formation of a market for labour as such. As the passage suggests, Marx originally held that the amount of labour is recognisable only through the exchange value of objectified labour, or product. In so far as commodities have a certain exchange value relation, they must have a common standard to determine it. According to Marx, the only common property possessed by commodities is the property of being products of human labour. Thus he concluded that the exchange rate among commodities is determined by the amount of labour expended to produce each of them, and that the former therefore represents the latter; though labour here is an abstract form denuded of its concrete and incommensurable forms. Such are notions expressed at the beginning of Volume Ⅰ of *Capital* (see Marx, 1996, pp. 45-51).

For all Marx's certitude, the above thinking is not well grounded at least from the positivist perspective. As Roemer (1988) put it, 'Marx argued that the one property that all commodities had in common was their production by "abstract labor". It is hard to see why this should be regarded as the *one* property that all produced commodities have in common. They also share the property of being desired by people; and that property gives rise to a welfare-based theory of value' (emphasis in original; p. 49). In fact, Marx did not remain constant to such transcendental arguments as we have seen. In his actual theoretical development, Marx posited labour time as the standard of labour measurement. For Marx, indeed, the postulation of an objective measure of labour was indispensable in substantiating the exploitative character of capital profit acquisition based on his labour theory of value. As its price, however, the problem of the variability in labour intensity was relegated to the background.[9] This emasculates Marx's illuminating insight into the labour exchange, and comes down to the dehumanisation of labour power, or the worker.[10] Here, Marx failed to recognise that once he postulated labour time as the labour measurement standard, he could not deny the probability that a market in which labour time is the trading unit is formed, and thereby working conditions including the amount of labour are determined. This undermines Marx's view that the worker's actual load is determined through the labour-capital power struggle, independently of market forces.

It can hardly be said that Marxian economists have fully realised the above problem in Marx's theory and built up arguments to settle it. Both most Marxists and anti-Marxists have believed that Marxian economic doctrine stands or falls on the labour theory of value and the exploitation theory grounded on it. Consequently, debates about the justice of Marxian economics have chiefly been conducted as to that of those theories (see, for example, Sweezy, 1949; Samuelson, 1971). To convincingly counter anti-Marxists who regarded themselves as positivists there, many Marxian economists, explicitly or implicitly, came to develop their arguments on suppositions analogous to their adversaries' ones. As a result, labour-related assumptions by Marxian economists, too, became scarcely discernible from those by neoclassical economists. Needless to say, N. Okishio's and M. Morishima's epoch-making mathematical proof of Marx's fundamental theorem was also given by quantifying labour input expressly (see Okishio, 1963; Morishima, 1973). Thus, very few have cast grave doubts on the legitimacy of labour quantification, and Marx's critical stand on it, though not thoroughgoing, has been neglected even by his followers.

Meanwhile, Roemer, who also presumes the measurability of labour input, presented the dispensability of power struggle in industrial relations and even the existence of the labour market to capitalist exploitation (see Roemer, 1982a, 1988). Using simple Walrasian models, Roemer demonstrates that there is an exact correlation among wealth, class, and exploitation in the Marxian sense (The Class-Wealth, Class-Exploitation Correspondence Principle). His point here is that capitalist exploitation is a result of the division of society into classes arising from unequal ownership of the means of production, and that the class division and the resultant partition of society into exploiters and exploited are determined endogenously through agents' optimising behaviour given initial endowments. Roemer (1985, pp. 52-53) writes: 'exploitation … is essentially equivalent to initial inequality of assets'. Hence power struggle in industrial relations, he concludes, is not essential to capitalist exploitation.[11] Furthermore, Roemer shows that if we suppose an economy with a capital market but without a labour market, and even a primitive barter economy where neither a labour nor a capital market exists, the foregoing principle can be deduced as well (see Roemer, 1982a, pp. 28-55, pp. 87-95; 1988, pp. 90-103).

Roemer goes on to reveal limitations of Marxian labour theory of exploitation per se.[12] He argues that if we drop such assumptions as identical preferences and labour endowment, the correlation between wealth and exploitation in the Marxian sense does not generally hold good, and further that when assuming labour heterogeneity, we cannot find any general correlations among wealth, class, and exploitation in the Marxian sense (see Roemer, 1982a, pp. 174-186; 1985; 1988, p. 84, pp. 127-131). On those criticisms, Roemer proposes a property-relations definition of exploitation as being more universal than the conventional surplus-value one (see Roemer, 1982a, pp. 194-237; 1982b; 1988, pp. 125-149).

We may well say that the dissolution of the traditional Marxian system by Roemer was foreboded by the founder's ambivalent position. What underlay and motivated Marx's exploitation theory, without a doubt, was his charge against the illegitimacy of capitalist societies that the huge accumulation of wealth there originated from the relentless and strong-arm extraction of the worker's labour by the ruling class under the pretext of 'liberal and spontaneous exchange'. We can see this spirit in almost every part of Volume Ⅰ of *Capital*. Marx knew that such reality of industrial relations has its roots in the particular characteristics of labour power as a human-embodied factor. On the other hand, he felt the need to develop his economic doctrine through a quantitative approach; indeed, this direction was already established by classical economists. As a result, Marx's exploitation theory was formulated on the assumption of the existence of an objective measure of labour—by postulating labour time as such, to be specific. Admittedly, Marx's quantitative method and mathematical thinking based on it helped his economic thought to be well organised and influential. Marx's essentially pseudo-scientific labour quantification in defiance of his own critical perspective on the issue, however, finished up reifying labour power in contradiction to his fundamental belief.

Just as neoclassical economists had to quantify labour input explicitly in order to build up their marginal principle-based labour market theory, so Marxian economists were to do the same as long as they held to their master's labour theories of value and exploitation, and were urged to expound them in a positive way. This assimilation did result in depriving Marxian economists, who had elaborated few powerful market theories of their own, of conclusive reasons for their refutation of the neoclassical labour market principle. Indeed, they would have no other means than to resort to factors whose market-hampering effects were all too familiar to neoclassical economists. Thus was opened the road to Roemer. Bowles and Gintis' contested exchange theory was a meaningful challenge to break such a deadlock, and provide grounds for the intervention of power in the labour exchange.[13] We have seen, however, that the theory, which relies on Post-Walrasian notions that lack a thorough critique of labour quantification, has inconsistent contents that turn out to frustrate its purpose.

Hence, to turn the above drift around, it is necessary to revert to the insight at the basis of Marxian distinction between labour power and labour, and shed light on other possibilities that Marx and his followers did not pursue. By denying the labour quantification stemming from the reification of labour power, it obliges us to renounce the traditional labour theories of value and exploitation. However, we can thereby afford a secure foundation for the rehabilitation of the Marxian concept of the labour exchange that stresses its class strife-dominated nature. Thus unlike Roemer, who, on the neoclassical-style notion of the labour exchange, sees power struggle in industrial relations as secondary to the essence of capitalism, I propose the regeneration of a theory that features the worker-employer power relationship as a deciding factor in the course of capitalist economies.[14]

4. Concluding remarks

Based on reconsideration of the possibilities of Marxian distinction between labour power and labour, I have brought forward arguments to rebut the neoclassical principle of the labour exchange, and validate the role of the extra-market worker-employer power relationship as a decisive determinant of working conditions. This, I have also argued, entails criticism of traditional Marxian thinking. The recent dreary decline of Marxian economics is not attributable solely to such 'outer' factors as the collapse of socialist states and the overall weakening of leftist power. Its logical contradictions and limitations in applicability have widely been exposed not merely by its adversaries but sympathisers. So it is now evident that we cannot solve this predicament without overhauling the Marxian system, and establishing a new direction as a replacement for it. One of the purposes of this paper lies in furnishing a clue for this rebuilding.

At the same time, the arguments in this paper have the more aggressive aim of supplying firm grounds for the protest against the tide of contemporary capitalism and its upholders. What characterises the world trend after the end of the Cold War and the stalemate of welfare states is the inclination towards the globalisation of market-directed capitalism. In this drift, industrial relations, too, become a target for deregulation policies, and their advocates claim a labour-management harmony through market mechanisms. Obviously, the neoclassical principle of the labour exchange underlies this current of thought. Thus, as a requisite for comprehensive criticisms of present-day capitalism, we need to cogently argue against the principle. Labour theories of value and exploitation, which have played a central role in the Marxian system, are not only helpless against this challenge but also doomed to be assimilated into the neoclassical labour market doctrine. By exploring a potential of Marxian distinction between labour power and labour that is different from the labour theory of exploitation, however, we can bring the fictitiousness of the neoclassical conception of the labour exchange to light. This tells us that involuntary unemployment and such unfairness as sexual and racial employment discrimination, which the fiction suppresses, are immanent in capitalist economies.

Notes

[1] '*Wages* are determined through the antagonistic struggle between capitalist and worker' (emphasis in original; Marx, 1975, p. 235).

'The capitalist maintains his rights as a purchaser when he tries to make the working day as long as possible, and to make, whenever possible, two working days out of one. On the other hand … the labourer maintains his right as seller when he wishes to reduce the working day to one of definite normal duration. There is here, therefore, an antinomy, right against right, both equally bearing the seal of the law of exchanges. Between equal rights force decides' (Marx, 1996, p. 243).

As for wage determination, Marx watered down its class strife-dominated nature by regarding the wage level as eventually being equal to the reproduction cost of labour power.

[2] 'The variation of the working day fluctuates … within physical and social bounds. But both these limiting conditions are of a very elastic nature, and allow the greatest latitude' (Marx, 1996, p.241). 'One consequence of the peculiar nature of labour power as a commodity is, that its use value does not, on the conclusion of the contract between the buyer and seller, immediately pass into the hands of the former. … The alienation of labour power and its actual appropriation by the buyer, its employment as a use value, are separated by an interval of time' (*ibid.*, p.184). See also, Marx, 1988, pp. 204-205.

[3] In particular, Bowles and Gintis' labour exchange model assumes the worker's maximisation behaviour based on her subjective preferences, and the employer's position as the wage setter with the knowledge of the worker's preferences in the manner of a Stackelberg model (see, for example, Bowles and Gintis, 1990a, pp. 178-181). Because of this neoclassical setting, Bowles and Gintis' understanding of power exercised in the employer's extraction of labour from labour power is substantially different from Marx's one laying emphasis on the role of broad political and social strife. For the criticism of neoclassical traits in Bowles, Gintis, and other U.S. radical economists' methodology, see Spencer (2000, 2002).

[4] Gintis (1995) replied to Currie and Steedman's criticisms by claiming 'all dimensions of effort (or care, or quality) are in principle cardinal'. As Currie and Steedman (1995) pointed out, however, Gintis did not offer any persuasive arguments in support of this contention.

[5] This trait in Bowles and Gintis' thinking is indicated by the fact that they apply the same principle as in their labour exchange theory to capital and product markets, too (see Bowles and Gintis, 1990a, pp. 187-192, pp.204-205; 1990b, p.308). J. Stiglitz (1987) develops a comprehensive Post-Walrasian theory of labour, capital, and product markets. We can hardly detect any critical difference between it and Bowles and Gintis' contested exchange theory. For the affinity between the latter and the Post-Walrasian approach, see Stiglitz (1993).

[6] 'For capital, the work relation appears only as external object, having commodity form' (De Angelis, 1996, p. 13).

[7] This problem is akin to the vicious character of the neoclassical notion of aggregate capital and production function attacked by the English camp in the Cambridge Controversies of the 1960s. Note, however, that the criticism of the measurement of labour here is more universal in that it holds true at the micro level as well as at the macro level, independently of aggregation problems.

[8] This paper has no room to go into the arguments. I only add my view that they are not successful in providing ample theoretical grounds for employment discrimination.

[9] 'Marx considers labor-time the measure of labor, and the intensity of labor has only a supplementary and subordinate role' (Rubin, 1973, p. 157).

[10] M. A. Lebowitz (2003) criticises Marx's neglect of the worker's autonomy.

[11] Roemer recognises that in the real world working conditions cannot be fully specified by the labour contract, and so the labour exchange takes on a contested nature. However, he denies the centrality of the fact to the understanding of class structure and exploitation (see, for example, Roemer, 1982b, pp. 311-312; 1988, pp. 86-87). For Roemer's criticisms of Bowles and Gintis' contested exchange theory in this regard, see Roemer (1990).

[12] Roemer also refutes the labour theory of value (see, for example, Roemer, 1988, pp. 47-51).

[13] For Bowles and Gintis' counterarguments against Roemer's criticisms of their contested exchange theory, see Bowles and Gintis (1990b).

[14] I do not mean to negate the importance of property-relations emphasised by Roemer. Distribution of assets will surely affect industrial relations. Their causality, however, is never unilateral, for the worker-employer power relationship makes a determinant of distribution of assets in turn through its impact on income distribution.

Bibliography

Bowles, S. 1985. The production process in a competitive economy: Walrasian, neo-Hobbesian, and Marxian models, *American Economic Review*, vol. 75, March, 16-36

Bowles, S. and Gintis, H. 1981. Structure and practice in the labor theory of value, *Review of Radical Political Economics*, vol. 12, Winter, 1-26

Bowles, S. and Gintis, H. 1990a. Contested exchange: new microfoundations for the political economy of capitalism, *Politics & Society*, vol. 18, June, 165-222

Bowles, S. and Gintis, H. 1990b. Reply to our critics, *Politics & Society*, vol. 18, June, 293-315

Braverman, H. 1974. *Labor and Monopoly Capital: The Degradation of Work in the*

Twentieth Century, New York and London, Monthly Review Press
Currie, M. and Steedman, I. 1993. Taking effort seriously, *Metroeconomica*, vol. 44, June, 134-135
Currie, M. and Steedman, I. 1995. Really taking effort seriously, *Metroeconomica*, vol. 46, June, 211-212
De Angelis, M. 1996. Social relations, commodity-fetishism and Marx's critique of political economy, *Review of Radical Political Economics*, vol. 28, December, 1-29
Friedman, M. 1962. *Capitalism and Freedom*, Chicago, University of Chicago Press
Gintis, H. 1976. The nature of labor exchange and the theory of capitalist production, *Review of Radical Political Economics*, vol. 8, Summer, 36-54
Gintis, H. 1995. Taking effort seriously: a reply to Currie and Steedman, *Metroeconomica*, vol. 46, June, 202-210
Harcourt, G. C. 1972. *Some Cambridge Controversies in the Theory of Capital*, Cambridge, Cambridge University Press
Keynes, J. M. 1973. *The General Theory of Employment Interest and Money*, in *The Collected Writings of John Maynard Keynes, Volume 7*, London, Macmillan
Lebowitz. M. A. 2003. *Beyond Capital*, New York, Palgrave Macmillan
Marx, K. 1975. *Economic and Philosophic Manuscripts of 1844*, in *Karl Marx Frederick Engels Collected Works, Volume 3*, pp. 229-346, Moscow, Progress Publishers
Marx, K. 1988. *Economic Manuscript of 1861-63*, in *Karl Marx Frederick Engels Collected Works, Volume 30*, Moscow, Progress Publishers
Marx, K. 1996. *Capital*, *Volume I*, in *Karl Marx Frederick Engels Collected Works, Volume 35*, New York, International Publishers
Marx, K. and Engels, F. 1976. *Manifesto of the Communist Party*, in *Karl Marx Frederick Engels Collected Works, Volume 6*, pp. 477-519, Moscow, Progress Publishers
Morishima, M. 1973. *Marx's Economics: A Dual Theory of Value and Growth*, Cambridge, Cambridge University Press
Okishio, N. 1963. A mathematical note on Marxian theorems, *Wirtschaftliches Archiv*, vol. 91, 287-299
Reich, M. 1981. *Racial Inequality: A Political-Economic Analysis*, Princeton, Princeton University Press
Ricardo, D. 1951. *On the Principles of Political Economy and Taxation*, in *The Works and Correspondence of David Ricardo*, *Volume I* , Cambridge, Cambridge University Press
Roemer, J. E. 1982a. *A General Theory of Exploitation and Class,* Cambridge and London, Harvard University Press
Roemer, J. E. 1982b. Property relations vs. surplus value in Marxian exploitation, *Philosophy & Public Affairs*, vol. 11, Fall, 281-313
Roemer, J. E. 1985. Should Marxists be interested in exploitation?, *Philosophy & Public Affairs*, vol. 14, winter, 30-65
Roemer, J. E. 1988. *Free to Lose: An Introduction to Marxist Economic Philosophy*, Cambridge, Harvard University Press
Roemer, J. E. 1990. A thin thread: comment on Bowles' and Gintis' "contested exchange", *Politics & Society*, vol. 18, June, 243-249

Rubin, I. I. 1973. *Essays on Marx's Theory of Value*, Montréal, Black Rose Books

Samuelson, P. A. 1971. Understanding the Marxian notion of exploitation: a summary of the so-called transformation problem between Marxian values and competitive prices, *Journal of Economic Literature*, vol. 9, June, 399-431

Shapiro, C. and Stiglitz, J. E. 1984. Equilibrium unemployment as a worker discipline device, *American Economic Review*, vol. 74, June, 433-444

Smith, A. 1975. *An Inquiry into the Nature and Causes of the Wealth of Nations*, in *The Glasgow Edition of the Works and Correspondence of Adam Smith*, *Volume II*, Oxford, Oxford University Press

Spencer, D. A. 2000. The demise of radical political economics? An essay on the evolution of a theory of capitalist production, *Cambridge Journal of Economics*, vol. 24, September, 543-564

Spencer, D. A. 2002. Shirking the issue? Efficiency wages, work discipline and full employment, *Review of Political Economy*, vol. 14, July, 313-327

Sraffa, P. 1960. *Production of Commodities by Means of Commodities*, Cambridge, Cambridge University Press

Stiglitz, J. 1987. The causes and consequences of the dependence of quality on price, *Journal of Economic Literature*, vol. 25, March, 1-48

Stiglitz, J. 1993. Post Walrasian and post Marxian economics, *Journal of Economic Perspectives*, vol. 7, winter, 109-114

Stiglitz, J. 1997. *Economics*, New York and London, W. W. Norton & Company

Sweezy, P. M. ed. 1949. *Karl Marx and the Close of His System by Eugen von Böhm-Bawerk & Böhm-Bawerk's Criticism of Marx by Rudolf Hilferding*, New York, Augustus M. Kelley

Walras, L. 1954. *Elements of Pure Economics*, London, George Allen & Unwin

Wicksell, K. 1977. *Lectures on Political Economy*, *Volume I*, Fairfield, Augustus M. Kelley

Yellen, J. L. 1984. Efficiency wage models of unemployment, *American Economic Review*, vol. 74, May, 200-205