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THE LABOUR THEORY OF VALUE  
AS AN ANALYTICAL SYSTEM

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# The Labour Theory of Value as an Analytical System

## Introduction

Joseph Schumpeter, in Capitalism, Socialism and Democracy, described Marx as a learned and painstaking analytical economist.<sup>1</sup>

It may seem strange that I should think it necessary to give such prominence to this element in the case of an author whom I have called a genius and a prophet. Yet it is important to appreciate it... This incessant endeavor to school himself and to master whatever there was to master went some way toward freeing him from prejudices and extra-scientific aims, though he certainly worked in order to verify a definite vision. To his powerful intellect, the interest in the problem as a problem was paramount in spite of himself; and however much he may have bent the import of his final results, while at work he was primarily concerned with sharpening the tools of analysis proffered by the science of his day, with straightening out logical difficulties, and with building on the foundation thus acquired a theory that in nature and intent was truly scientific whatever its shortcomings may have been.

It is easy to see why both friends and foes should have misunderstood the nature of his performance in the purely economic field. For the friends, he was so much more than a mere professional theorist that it would have seemed almost blasphemy to them to give too much prominence to this aspect of his work. The foes, who resented his attitudes and the setting of his theoretic argument, found it almost impossible to admit that in some parts of his work he did precisely the kind of thing which they valued so highly when presented by other hands.

It is clear that orthodox academic economics has been very much impoverished by refusal to take Marx seriously. The shallow theory of the Austrians, which Bukharin mocked as the Economic Theory of the Leisure Class, Marshall's conceptions of the rate of interest as the "reward of waiting", which was reduced by J.B. Clark to the "marginal productivity of capital," and the elaboration of the

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1. Op.cit., Chapter III.

Walrasian model of the general equilibrium of exchange in a market where production itself is treated as a kind of exchange, were all built up as a defence against Marxism. They are all now palpably disintegrating both through internal criticism which the academics attempt to repress because they cannot answer it, and through its obvious inability to offer any means to deal with the problems of the present crisis in the world market economy. This pitiable state of academic teaching is largely the result of refusal to take account of the questions raised by Marx.

At the same time Marxism has been impoverished by refusal to refine and develop the analytical apparatus that Marx bequeathed. Schumpeter observed that Marx was both a prophet and a scientist. The difference between the pronouncements of a prophet and of a scientist does not lie in what is said but in how it is received. The duty of the pupils of a scientist is to check his results and redefine his hypotheses as knowledge advances; the duty of the disciples of a prophet is to believe what he says. Beliefs easily slip into dogmatism, for a disciple can never be sure that he has understood the doctrine correctly; the safest thing is to repeat the lessons of the master in his own words.

Marxists in the West have been so battered and trampled upon by the academics that they adopt Marx's terminology as a defence mechanism and refuse to translate it into language that would deprive academics of the excuse that it is incomprehensible. Now that the orthodox academics are in evident disarray, this way of arguing is

impeding rather than promoting the renaissance of political economy that Western Marxists are intending to promote.

## II

### The Nature of Capitalism

Marx founded his economic analysis upon the English classics, particularly Ricardo, but he imported into it an element that they lacked - the view of capitalism as a particular economic system that had grown up in particular historical circumstances and would evolve according to its own inherent characteristics.

The emergence of industrial capitalism required the existence, on the one side, of a proletariat - that is many families who had no rights in land or possession of means of production so that a great number of individuals were available to be employed for wages - and, on the other side, a few families with large accumulations of wealth which could be used to employ them in such a way as to yield profits. I do not think that any academic economist could deny this obvious fact, but they have elaborated their theories in such a way as to conceal it.

A proletariat was created in England by the introduction of capitalism into agriculture at the same time as a population explosion was going on. Instead of growing numbers of cultivators being absorbed into agriculture by fragmentation of peasant holdings, the ratio of labour to land was limited by the numbers that it was profitable to employ at the going wage rate.

There is a sharp break between the economic theory of the Physiocrats and that of Adam Smith. The Physiocrats took it for granted that producers, that is tenant farmers and artisans, own and manage their own working capital, which they continuously reproduce, and their working capital includes the subsistence of their families. (The peasants have to pay rent; their reproduction yields a surplus, while the artisans earn gross receipts from sales of their products which permits the just to live and to maintain their stock of inputs.) Adam Smith took it for granted that workers are employed at wages and that a surplus is extracted in the form of profits to their masters.

The expulsion of a potential labour force from agriculture in no way guarantees employment in industry. In England in the 13th century, some large fortunes had been accumulated from commerce in the hands of families who did not have the aristocratic traditions of generally extravagant so that capital was available to be invested in industry.

There was a third ingredient in the historical development of capitalism - the scientific revolution from which developed the growth of technology. The factory system was a means of getting more work out of a given labour force than they would have been willing to form as self-employed artisans, and as Steve Marglin has pointed out, Adam Smith's division of labour was rather a means of enforcing discipline than a source of technical economies. All the same, industry would not have got very far by such means.

The essence of the application of science to technology was harnessing energy (at first only the flow of streams) as an adjunct to human muscle. This required the employment of large groups of workers under a single control and it required an investment of finance that no individual artisan could command. From this, industrial capitalism took off. (There was a fourth requirement for the development of industry which Marxists have not sufficiently emphasised - the emergence of a sufficient surplus of the products of agriculture over its own requirements to supply the needs of urban population and of national administration and warfare.)

Marx described the development of capitalism in terms of the labour theory of value. Profit is surplus value extracted from the toil of the producers, or unpaid labour; investment and technical progress result from the greed for ever more surplus value that actuates the capitalists. A class war arises from the struggles of the workers over the share of wages and conditions of work. The apparatus of the state is erected to help the capitalists to keep labour repressed.

This way of describing the system carries a powerful charge of ideology, intended to help the workers in their struggle, but freezing it into dogmatism has impaired its usefulness as a method of analysis.

There are two serious weaknesses in the theory of exploitation. First, while it gives a convincing description of the origin of the industrial revolution, and of its penetration today into many ex-colonial territories, it cannot easily be reconciled with the great rise that

has taken place in the level of consumption of goods and services by the working class in the successful capitalist nations.

On a straight-forward reading, Volume I of Capital seems to predict that the level of real wages will remain more or less constant as capitalism develops. When accumulation overtakes the growth of population, so that the reserve army of labour is absorbed into employment, real wages rise; for that very reason, accumulation slows down, while the growth of numbers continues; at the same time, labour-saving inventions reduce the number of jobs per unit of investment; thus a reserve army is recruited again and the temporary rise in real wages is reversed. In Volume III (which Marx never completed to his own satisfaction) it is clear that real wages are expected to rise, because it is assumed that the rate of exploitation will remain roughly constant while technical progress goes on. A constant rate of exploitation is a constant share of wages in net product; when net product is a rising flow of output of commodities, real wage rates are rising. There are many passages in the writings of Marx and Engels where rising wages are mentioned but they evidently did not foresee to what an extent modern capitalism could buy off the revolutionary indignation of its outcast force. To tell these workers that their standard of life is kept up by the super-exploitation of the Third World is politically unfortunate since it feeds racism and analytically not more than a half or quarter true.

The second drawback of using the language of labour value and exploitation in discussing the modern world is connected with the theory of socialism. Marx expected the revolution that would supersede capitalism to break out in the most advanced industrial centres, where

great historic task of accumulation and technical development would have been fulfilled. The class war could then come to an end and society could thenceforth make use of its resources in a rational manner to meet its social needs.

Socialism is no longer a day-dream. There are now in existence a number of what the United Nations documents delicately refer to as "fully planned economies." Contrary to Marx's prediction, revolutions have so far taken place in industrially backward countries. Their prime need, therefore, was rapid accumulation and planning has proved to be an effective means of carrying it out.

Accumulation means working to produce means of production (and means of defence) which are not available to be consumed. The extraction of an investible surplus, in the Soviet sphere, is naturally not described as exploitation. Under capitalism, it is said, surplus value is extracted by the capitalists for their private benefit; under socialism, workers are carrying out investment for their own future. But the future is a long way off and meanwhile industrial technology imposes much the same conditions of life wherever it is set up.

The "law of value", in the Soviet sphere, has completely changed its meaning. There it means the need to maintain a balance between supply and demand in the market for consumer goods - a concept which is closer to academic economics than anything in Marx.

The great vision of an international labour movement was shattered in August 1914, yet it was that war which created the setting for the first revolution made in the name of Marxism. Instead of



trying to fit everything that has happened since into the lines of Marx's predictions, it is better to try to use Marx's own method of historical analysis to understand why those predictions have not been fulfilled.

### III

#### A Measure of Output

One aspect of the labour theory of value is the method which Marx used to describe a process of production. The value of a commodity consists of the hours of labour time required to produce it. The flow of output, say per annum, resulting from the employment of a given labour force, is represented by a flow of labour-time performed. Ricardo had been tormented by the search for a unit of absolute value in which to measure national income. Marx jumped over the problem by taking labour time as the unit. This had the great advantage that he was able to ~~do~~ in quantitative terms without getting entangled in the old puzzle about the relation of value in use to value in exchange.

He had a clear grasp of the distinction between gross and net output. In the formula  $c + v + s$ ,  $c$  means the depletion of a pre-existing stock of means of production, while  $v + s$ , wages plus surplus, is the value of the excess of output over replacement of the stock, that is, net product.

Marx treats  $c$  as value which was put into the stock when it was produced in the past, released as it is currently used up. This is not quite satisfactory. As we are all now well aware, part of the



materials and energy used in current production result from mining irreplacable resources; their contribution cannot be evaluated as only the labour that went into extracting them. However, Marxian notation enables us to see this point clearly, while in the academic treatment of "capital" everything is muddled up.

The value of the flow of net output,  $v + s$ , consists of all the man-hours of work performed over the year;  $v$  is the value of the wage-goods consumed by workers and  $s$  is the value of rentier consumption and investment, that is, the expenditure of profits.

This method of aggregation suited Marx's way of thinking, but it is not the only possible one. Last year's national income for a particular country is something that actually happened. It is part of objective reality. It consisted of actual flows of goods produced and actual flows of money payments. No simple way of representing it can be quite satisfactory, for it is an extremely complex entity. Any measure has to be used self-consciously with due regard to its limitations. Since nowadays statistics are available in terms of flows of money payments they provide the best measure to use. We are not betraying the labour theory of value and surrendering to the view that profits measure the "productivity of capital" by making use of information that is presented in terms of "bourgeois" categories.

The rate of exploitation  $s/v$  can be interpreted as the ratio of net profit to the wage bill for industry as a whole. The share of wages in value added is a useful and important piece of information and we should not reject it because it does not fit exactly into the Marxian categories of value.

If we know the average money wage per man year and the amount of employment, we know the wage bill, corresponding to  $v$ . If we know the rate of exploitation we know the money value of the flow of net profits corresponding to  $s$ . Adding replacement cost of  $c$  we know the flow of gross profits. The calculation in terms of money is more convenient than in value for two reasons: statistics, though never perfect, are easier to get, and gross and net profits in terms of money influence the decisions of businessmen, who know nothing about value.

#### IV

#### Prices

Marx took over the theory of the determination of the prices of commodities from the classical economists. For them, a theory of value was an essential and puzzling problem and Marx acquired from them the sense of its great importance as a key to understanding the nature of capitalism.

He took over from Adam Smith the doctrine that in a precapitalist economy exchanges of commodities (beavers and deer) must have taken place at prices proportionate to labour cost. Thus he believed that in an economy of simple commodity production - independent artisans - products would be exchanged at values. This seems to me to be quite unconvincing. Exchange entails specialisation. If every family could catch the type of game or produce the type of goods that it needed for its own use, there would be no exchanges and no prices (though there might be differences in subjective costs for goods and

or harder to get). Artisans are specialised by the skill and lore of their trades, so that every type of labour is different and cannot be compared only in terms of hours. The artisans own each the appropriate equipment and manage their own working capital, which as we have seen, includes the subsistence of their families. Maintenance of stocks as well as work is comprised in their costs of production. Their earnings may be set by some concept of a just price or they must be influenced by supply and demand. In fact, the orthodox theory of market price applies to this sort of economy, not to capitalism.

Ricardo's theory of prices under capitalism, as it has been reconstructed by Piero Sraffa, is perfectly coherent. The rate of return on capital is determined by the technical conditions of production - including the length of the turn-over period for each commodity - and the cost of production of wage goods. To eliminate the influence of rent, production is considered on marginal, no-rent land. The real wage is not fixed at subsistence but is something like Marx's value of labour power. The cost of each type of commodity is then determined by the labour-time required to produce it plus an allowance for profit at the ruling rate on the value of the capital invested over the period of production and of bringing goods to market. The divergence of prices of commodities from their labour values depends upon the capital to labour ratios involved in the various techniques of production.

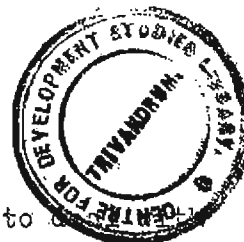
Marx starts the other way round. He begins with a uniform rate of exploitation so that the share of profits in proceeds is given. In one sense the share of profits is much more important than the rate of profit. It represents actual flows of payments and of incomes, while

the rate of profit is a mental calculation. In Volume I of Capital, the argument is all conducted in terms of values and there is no discussion of the relations of the values of commodities to their prices. In Volume III a uniform rate of profit is introduced and "prices of production", which correspond to Ricardo's prices, are worked out (Marx did not complete the calculation exactly). There has been an enormous amount of confused controversy about the relation of prices values but it is all a fuss about nothing. Sraffa provides a clearly specified one-technique model which shows the meaning of value, the labour-time directly and indirectly required to produce a commodity, he shows how values are systematically related to prices by the level of the rate of profit. This gives a simplified picture of how exploitation works in a capitalist economy which is producing output at a steady rate, without crises.

Incidentally, it has the great advantage of having knocked out the academic theory of profit as the measure of the "productivity of capital."

#### Accumulation and Effective Demand

One of the most valuable parts of Marx's analysis is the schema of expanded reproduction. It was on this basis that Michal Kalecki produced his version of what became known as Keynes' theory of employment and his treatment of accumulation in capitalist, socialist and underdeveloped economies.



The argument as Marx left it has to be adopted to modern problems. Marx described the exchanges between departments being made in terms of value but it is more convenient to deal with prices; and second, Marx treated the process of creating value by employing labour as separate from the process of realising surplus value by selling commodities.

In Kalecki's model the two aspects of profits are integrated. Expenditure on Department I, that is, gross investment, and expenditure out of rentier income on Department III, luxury goods, accounts for the total flow of profits, while the wage bill of all three sectors purchases the flow of output of necessaries, produced in Department II.

When there is a reserve of unemployed labour, an increase in investment increases profits and increases employment in all three sectors. When prospects of profit fall off, for any reason, investment slackens and there is a decline in actual profits and in employment. These are the short-period aspects of realisation.

There are also long-period relations to be considered. When accumulation has been going on for some time faster than population has been growing, the reserve army of labour is absorbed into employment. The bargaining power of the workers is then strong and real wage rates may be pushed up, so that the share of profit falls. This may decrease investment, but it does not necessarily do so. If the competitive urge to accumulate is strong, the shortage of labour is a stimulus to technical innovations designed to raise output per man employed, this may cause an increase in investment that offsets the tendency for the rate of profit to fall.

The broad sweep of Marx's analysis of accumulation and the development of crises provides the basis for the understanding the history of capitalism and the problems of planned economies, but his treatment of technical change is blemished by some confusion in the concept of organic composition of capital and by the view that innovations which require a rise in the capital to labour ratio cause the rate of profit to fall.

This trouble arises because Marx measures output only in value and does not have any unit for physical product. The essence of technical progress is to raise output per unit of value. Technical innovations even if they are capital using, permit the rate of profit to rise when real wages remain constant, or wages to rise at a constant rate of profit. There is nothing to compel capitalists to install equipment for techniques that increase investment per man employed unless they increase profit per man employed correspondingly. It would always be open to them to go on using the old technique if nothing better offered.

The rising capital to labour ratio in modern technology is creating extremely serious problems, not because it reduces the rate of profit but because it reduces the requirement for labour and threatens the highly developed economies with permanent unemployment, even if it is a short-period boon. This is a problem which planned economies, in principle, should be able to avoid.