If Marx's theory of surplus-value is his most revolutionary contribution to economic science, his discovery of the basic long-term 'laws of motion' (development trends) of the capitalist mode of production constitutes undoubtedly his most impressive scientific achievement.

No other 19th-century author has been able to foresee in such a coherent way how capitalism would function, would develop and would transform the world, as did Karl Marx. Many of the most distinguished contemporary economists, starting with Wassily Leontief (1938), and Joseph Schumpeter (1942) have recognised this.

While some of these 'laws of motion' have obviously created much controversy, we shall nevertheless list them in logical orders rather than according to the degree of consensus they command.

(a) The capitalist's compulsion to accumulate. Capital appears in the form of accumulated money, thrown into circulation in order to increase in value. No owner of money capital will engage in business in order to recuperate exactly the sum initially invested, and nothing more than that. By definition, the search for profit is at the basis of all economic operations by owners of capital.

Profit (surplus-value, accretion of value) can originate outside the sphere of production in a precapitalist society. It represents then essentially a transfer of value (so-called primitive accumulation of capital); but under the capitalist mode of production, in which capital has penetrated the sphere of production and dominates it, surplus-value is currently produced by wage labour. It represents a constant increase in value.

Capital can only appear in the form of many capitals, given its very historical-social origin in private property (appropriation) of the means of production. 'Many capitals' imply unavoidable competition. Competition in a capitalist mode of production is competition for selling commodities in an anonymous market. While surplus-value is produced in the process of production, it is realised in the process of circulation, i.e. through the sale of the commodities. The capitalist wants to sell at maximum profit. In practice, he will be satisfied if he gets the average profit, which is a percentage really existing in his consciousness (e.g. Mr Charles Wilson, the then head of the US automobile firm General Motors, stated before a Congressional enquiry: we used to fix the expected sales price of our cars by adding 15% to production costs). But he can never be sure of this. He cannot even be sure that all the commodities produced will and a buyer.

Given these uncertainties, he has to strive constantly to get the better of his competitors. This can only occur through operating with more capital. This means that at least part of the surplus-value produced will not be unproductively consumed by the capitalists and their hangers-on through luxury consumption, but will be accumulated, added to the previously existing capital.

The inner logic of capitalism is therefore not only to 'work for profit', but also to 'work for capital accumulation'. 'Accumulate, accumulate; that is Moses and the Prophets', states Marx in Capital, Vol. I. Capitalists are compelled to act in that way as a result of competition. It is competition which basically fuels this terrifying snowball logic: initial value of capital -Â» accretion of value (surplus-value) -Â» accretion of capital -Â» more accretion of surplus-value -Â» more accretion of capital etc. Without competition, the fire of growth would burn out.

(b) The tendency towards constant technological revolutions. In the capitalist mode of production, accumulation of capital is in the first place accumulation of productive capital, or capital invested to produce more and more
The Laws of Motion of the Capitalist Mode of Production

commodities. Competition is therefore above all competition between productive capitals, i.e. ‘many capitals’ engaged in mining, manufacturing, transportation, agriculture, telecommunications. The main weapon in competition between capitalist firms is cutting production costs. More advanced production techniques and more ‘rational’ labour organisation are the main means to achieve that purpose. The basic trend of capital accumulation in the capitalist mode of production is therefore a trend towards more and more sophisticated machinery. Capital growth takes the dual form of higher and higher value of capital and of constant revolutions in the techniques of production, of constant technological progress.

(c) The capitalists’ unquenchable thirst for surplus-value extraction. The compulsion for capital to grow, the irresistible urge for capital accumulation, realises itself above all through a constant drive for the increase of the production of surplus-value. Capital accumulation is nothing but surplus-value capitalisation, the transformation of part of the new surplus-value into additional capital. There is no other source of additional capital than additional surplus-value produced in the process of production.

Marx distinguishes two different forms of additional surplus-value production. Absolute surplus-value accretion occurs essentially through the extension of the work day. If the worker reproduces the equivalent of his wages in 4 hours a day, an extension of the work day from 10 to 12 hours will increase surplus-value from 6 to 8 hours. Relative surplus-value accretion occurs through an increase of the productivity of labour in the wage-goods sector of the economy. Such an increase in productivity implies that the equivalent of the value of an identical basket of goods and services consumed by the worker could be produced in 2 hours instead of 4 hours of labour. If the work day remains stable at 10 hours and real wages remain stable too, surplus-value will then increase from 6 to 8 hours.

While both processes occur throughout the history of the capitalist mode of production (viz. the contemporary pressure of employers in favour of overtime!), the first one was prevalent first, the second one became prevalent since the second half of the 19th century, first in Britain, France and Belgium, then in the USA and Germany, later in the other industrialized capitalist countries, and later still in the semi-industrialised ones. Marx calls this process the real subsumption (subordination) of labour under capital, for it represents not only an economic but also a physical subordination of the wage-earner under the machine. This physical subordination can only be realized through social control. The history of the capitalist mode of production is therefore also the history of successive forms of - tighter and tighter - control of capital over the workers inside the factories (Braverman, 1974); and of attempts at realising that tightening of control in society as a whole.

The increase in the production of relative surplus-value is the goal for which capitalism tends to periodically substitute machinery for labour, i.e. to expand the industrial reserve army of labour. Likewise, it is the main tool for maintaining a modicum of social equilibrium, for when productivity of labour strongly increases, above all in the wage-good producing sectors of the economy, real wages and profits (surplus-value) can both expand simultaneously. What were previously luxury goods can even become mass-produced wage-goods.

(d) The tendency towards growing concentration and centralisation of capital. The growth of the value of capital means that each successful capitalist firm will be operating with more and more capital. Marx calls this the tendency towards growing concentration of capital. But in the competitive process, there are victors and vanquished. The victors grow. The vanquished go bankrupt or are absorbed by the victors. This process Marx calls the centralisation of capital. It results in a declining number of firms which survive in each of the key fields of production. Many small and medium-sized capitalists disappear as independent business men and women. They become in turn salary earners, employed by successful capitalism firms. Capitalism itself is the big ‘expropriating’ force, suppressing private property of the means of production for many, in favour of private property for few.

(e) The tendency for the ‘organic composition of capital’ to increase. Productive capital has a double form. It appears in the form of constant capital: buildings, machinery, raw materials, energy. It appears in the form of variable capital:
capital spent on wages of productive workers. Marx calls the part of capital used in buying labour power variable, because only that part produces additional value. In the process of production, the value of constant capital is simply maintained (transferred in toto or in part into the value of the finished product). Variable capital on the contrary is the unique source of 'added value'.

Marx postulates that the basic historic trend of capital accumulation is to increase investment in constant capital at a quicker pace than investment in variable capital; the relation between the two he calls the 'organic composition of capital'. This is both a technical/physical relation (a given production technique implies the use of a given number of productive wage earners even if not in an absolutely mechanical way) and a value relation. The trend towards an increase in the 'organic composition of capital' is therefore a historical trend towards basically labour-saving technological progress.

This tendency has often been challenged by critics of Marx. Living in the age of semi-automation and 'robotism', it is hard to understand that challenge. The conceptual confusion on which this challenge is most based is an operation with the 'national wage bill', i.e. a confusion between wages in general and variable capital, which is only the wage bill of productive labour. A more correct index would be the part of the labour costs in total production costs in the manufacturing (and mining) sector. It is hard to deny that this proportion shows a downward secular trend.

(f) The tendency of the rate of profit to decline. For the workers, the basic relation they are concerned with is the rate of surplus-value, i.e. the division of 'value added' between wages and surplus-value. When this goes up, their exploitation (the unpaid labour they produce) obviously goes up. For the capitalists, however, this relationship is not meaningful. They are concerned with the relation between surplus-value and the totality of capital invested, never mind whether in the form of machinery and raw materials or in the form of wages. This relation is the rate of profit. It is a function of two variables, the organic composition of capital and the rate of surplus-value. If the value of constant capital is represented by c, the value of variable capital (wages of productive workers) by v and surplus-value by s, the rate of profit will be s/(c + v). This can be rewritten as [s/v]/[(c+v)/v] with the two variables emerging ((c + v)/v obviously reflects c/v).

Marx postulates that the increase in the rate of surplus value has definite limits, while the increase in the organic composition of capital has practically none (automation, robotism). There will be a basic tendency for the rate of profit to decline.

This is however absolutely true only on a very long-term, i.e. essentially 'secular', basis. In other time-frameworks, the rate of profit can fluctuate under the influence of countervailing forces. Constant capital can be devalorised, through 'capital saving' technical process, and through economic crises (see below). The rate of surplus-value can be strongly increased in the short or medium terms although each strong increase makes a further increase more difficult; and capital can flow to countries (e.g. "Third World" ones) or branches (e.g. service sectors) where the organic composition of capital is significantly lower than in the previously industrialised ones, thereby raising the average rate of profit.

Finally, the increase in the mass of surplus-value - especially through the extension of wage labour in general, i.e. the total number of workers - offsets to a large extent the depressing effects of moderate declines of the average rate of profit. Capitalism will not go out of business if the mass of surplus-value produced increases 'only' from £10 to 17 billion, while the total mass of capital has moved from £100 to 200 billion; and capital accumulation will not stop under these circumstances, nor necessarily slow down significantly. It would be sufficient to have the unproductively consumed part of surplus-value pass e.g. from £3 to £2 billion, to obtain a rate of capital accumulation of 15/200, i.e. 7.5%, even higher than the previous one of 7/100, in spite of a decline of the rate of profit from 10 to 8.5%.

(g) The inevitability of class struggle under capitalism. One of the most impressive projections by Marx was that of
the inevitability of elementary class struggle under capitalism. Irrespective of the social global framework or of their own historical background, wage-earners will fight everywhere for higher real wages and a shorter work day. They will form elementary organisations for the collective instead of the individual sale of the commodity labour power, i.e., trade unions. While at the moment Marx made that projection there were less than half a million organised workers in at the most half a dozen countries in the world, today trade unions encompass hundreds of millions of wage-earners spread around the globe. There is no country, however, remote it might be, where the introduction of wage labour has not led to the appearance of worker's coalitions.

While elementary class struggle and elementary unionisation of the working class are inevitable under capitalism, higher, especially political forms of class struggle, depend on a multitude of variables which determine the rapidity with which they extend beyond smaller minorities of each 'national' working class and internationally. But there too the basic secular trend is clear. There were in 1900 innumerably more conscious socialists than in 1850, fighting not only for better wages but, to use Marx's words, for the abolition of wage labour and organising working class parties for that purpose. There are today many more than in 1900.

(h) The tendency towards growing social polarisation. From two previously enumerated trends, the trend towards growing centralisation of capital and the trend towards the growth of the mass of surplus-value, flow the trend towards growing social polarisation under capitalism. The proportion of the active population represented by wage-labour in general, i.e. by the modern proletariat (which extends far beyond productive workers in and by themselves), increases. The proportion represented by self-employed (small, medium-sized and big capitalists, as well as independent peasants, handicraftsmen, trades-people and 'free professions' working without wage-labour) decreases. In fact, in several capitalist countries the first category has already passed the 90 per cent mark, while in Marx's time it was below 50 per cent everywhere but in Britain. In most industrialised (imperialist) countries, it has reached 80-85 per cent.

This does not mean that the petty entrepreneurs have tended to disappear. 10 or 15-20 per cent out of 30 million people, not to say out of 120 million, still represents a significant social layer. While many small businesses disappear, especially in times of economic depression, as a result of severe competition, they also are constantly created, especially in the interstices between big firms, and in new sectors where they play an exploratory role. Also, the overall social results of growing proletarisation are not simultaneous with the economic process in and by itself. From the point of view of class consciousness, culture, political attitude, there can exist significant time-lags between the transformation of an independent farmer, grocer or doctor into a wage-earner, and his acceptance of socialism as an overall social solution for his own and society's ills. But again, the secular trend is towards growing homogeneity, less and less heterogeneity, of the mass of the wage-earning class, and not the other way around. It is sufficient to compare the differences in consumer patterns, attitudes towards unionisation or voting habits between manual workers, bank employees and government functionaries in say 1900 and today, to note that they have decreased and not increased.

(i) The tendency towards growing objective socialisation of labour. Capitalism starts in the form of private production on a medium-sized scale for a limited number of largely unknown customers, on an uncontrollably wide market, i.e. under conditions of near complete fragmentation of social labour and anarchy of the economic process. But as a result of growing technological progress, tremendously increased concentration of capital, the conquest of wider and wider markets throughout the world, and the very nature of the labour organisation inside large and even medium-sized capitalist factories, a powerful process of objective socialisation of labour is simultaneously set in motion. This process constantly extends the sphere of economy in which not blind market laws but conscious decisions and even large-scale co-operation prevail.

This is true especially inside mammoth firms (inside multinational corporations, such 'planning' prevails far beyond the boundaries of nation-states, even the most powerful ones!) and inside large-scale factories; but it is also increasingly true for buyer/seller relations, in the first place on an inter-firm basis, between public authorities and
firms, and more often than one thinks between traders and consumers too. In all these instances, the rule of the law
of value becomes more and more remote, indirect and discontinuous. Planning prevails on a short and even
medium-term basis.

Certainly, the economy still remains capitalist. The rule of the law of value imposes itself brutally through the outburst
of economic crises. Wars and social crises are increasingly added to these economic crises to remind society that,
under capitalism, this growing objective socialisation of labour and production is indissolubly linked to private
appropriation, i.e. to the profit motive as motor of economic growth. That linkage makes the system more and more
crisis-ridden; but at the same time the growing socialisation of labour and production creates the objective basis for a
general socialisation of the economy, i.e. represents the basis of the coming socialist order created by capitalism
itself, within the framework of its own system.

(j) The inevitability of economic crises under capitalism. This is another of Marx's projections which has been
strikingly confirmed by history. Marx ascertained that periodic crises of overproduction were unavoidable under
capitalism. In fact, since the crisis of 1825, the first one occurring on the world market for industrial goods, to use
Marx's own formula, there have been twenty-one business cycles ending (or beginning, according to the method of
analysis and measurement used) with twenty-one crises of overproduction. A twenty-second is appearing on the
horizon as we are writing.

Capitalist economic crises are always crises of overproduction of commodities (exchange values), as opposed to pre-
and post-capitalist economic crises, which are essentially crises of underproduction of use-values. Under capitalist
crises, expanded reproduction - economic growth - is brutally interrupted, not because too few commodities have
been produced but, on the contrary, because a mountain of produced commodities finds no buyers. This unleashes a
spiral movement of collapse of firms, firing of workers, contraction of sales (or orders) for raw materials and
machinery, new redundancies, new contraction of sales of consumer goods etc. Through this contracted
reproduction, prices (gold prices) collapse, production and income is reduced, capital loses value. At the end of the
decreasing spiral, output (and stocks) has been reduced more than purchasing power. Then production can pick up
again; and as the crisis has both increased the rate of surplus-value (through a decline of wages and a more 'rational'
labour organisation) and decreased the value of capital, the average rate of profit increases. This stimulates
investment. Employment increases, value production and national income expand, and we enter a new cycle of
economic revival, prosperity, overheating and the next crisis.

No amount of capitalists' (essentially large combines' and monopolies') 'self-regulation', no amount of government
intervention, has been able to suppress this cyclical movement of capitalist production. Nor can they succeed in
achieving that result. This cyclical movement is inextricably linked to production for profit and private property
(competition), which imply periodic over-shooting (too little or too much investment and output), precisely because
each firm's attempt at maximising profit unavoidably leads to a lower rate of profit for the system as a whole. It is
likewise linked to the separation of value production and value realisation.

The only way to avoid crises of overproduction is to eliminate all basic sources of disequilibrium in the economy,
including the disequilibrium between productive capacity and purchasing power of the 'final consumers'. This calls for
elimination of generalised commodity production, of private property and of class exploitation, i.e. for the elimination
of capitalism.

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