Monetary Economies of Production
Banking and Financial Circuits and the Role of the State
Essays in Honour of Alain Parguez

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4. Time of production, time of circulation and turnover time: exploring the guts of Marx’s circuits of capital

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As long as [capital] remains in the production process it is not capable of circulating; and it is virtually devalued. As long as it remains in circulation it is not capable of producing... As long as it cannot be brought to market it is fixated as product. As long as it has to remain on the market, it is fixated as commodity. As long as it cannot be exchanged for conditions of production, it is fixated as money. (Karl Marx, Grundrisse, 1973, p. 62)

The vision of capitalism of Alain Parguez is first and foremost of a monetary production system. In the work of Parguez, this vision manifests as a crystal clear depiction of capitalism’s systemic drive for profits and wealth – for ever-increasing market share and rising value of assets. This is reminiscent of Marx and Keynes, of course, but Parguez recalls them not only in terms of analytical substance, but rhetorically and stylistically. In particular, Parguez’s voice can be at turns dramatic, acerbic, satirical and humorous.

I first had the opportunity to meet Alain Parguez at the ‘Money in Motion’ conference that brought together scholars working broadly in the post-Keynesian and monetary circuit traditions, held at the Levy Economics Institute in 1990 (Deleplace and Nell 1996). At the time, I was a graduate student at the New School for Social Research, assisting my professor, Edward Nell, in organizing the conference.

One day, during the planning of the conference, Ed asked me, ‘Whose portrait had pride of place in Sraffa’s rooms at Cambridge?’ My first guess was the obvious one, Ricardo. Wrong. Marx? Incorrect. Who? Ed smiled. ‘It was Quesnay.’ Ed went on to say that Sraffa wrote Production of Commodities by Means of Commodities, but we also need to study the circulation of commodities by means of money. This is the focus of the theorists of the monetary circuit, but it was also portrayed magnificently in Quesnay’s Tableau Économique.
Quesnay's *Tableau* is a sectoral input–output system depicting a monetary production economy. This could just as well be a description of Marx's schemes of reproduction. These are the concerns of Marx in Volumes 2 and 3 of *Capital*. Volume 1 was devoted to the production process and the labor theory of value.

Few today would be likely to associate the labor theory of value with Keynes. In *The General Theory*, however, Keynes wrote:

I sympathise, therefore, with the pre-classical [sic] doctrine that everything is *produced by labour* . . . and by the results of past labour, embodied in assets . . . It is preferable to regard labour as the sole factor of production . . . This partly explains why we have been able to take the unit of labour as the sole physical unit which we require in our economic system, apart from units of money and of time. (1936, pp. 213–14)

In 1983, celebrating the centenary of Keynes's birth, Sir John Hicks wrote in *The Economist* that 'The Keynes model is not just formally expressed in wage units -- it is on a labour standard':

A labour standard expresses the value of money in terms of labour, just as the gold standard expressed it in terms of gold. But the old gold standard did not just express it, it fixed it, for it had a mechanism for fixing it. Central banks stood ready to exchange money for gold, so long as their gold reserves lasted. When the reserves gave out, the standard would break down; but in normal times, if suitable measures were taken, one could be confident that this would not happen. The weakness of a labour standard is that it has no reserves. There is no bank, no authority, which can guarantee the convertibility of money into labour. So it is only a pseudo-standard . . . the major weakness of the Keynes theory, and of the policies that had been based on it, remained its labour standard. Why should the level of money wages be dependable? (Hicks 1983, p. 18)

Hicks highlights here what he considers the two requirements necessary for a labor standard to function. Firstly, there must be an authority that stands ready to convert money into labor. Secondly, money wages must be dependable. Because he did not see how these requirements would be fulfilled, Hicks viewed the labor standard as a major weakness of Keynesian theory and policy.

Alain Paroux (1998) was an early and enthusiastic supporter of a proposal that would satisfy the institutional requirements for a functioning labor standard. In Warren Mosler's *Soft Currency Economics* (1995), the federal government (viewed as a consolidated Treasury and Central Bank) acts as the employer of last resort, converting money into labor at a fixed money wage. The scheme provides full employment and price stability, just as (in theory) the gold standard 'fully employed' gold and maintained stable prices by fixing the price of gold in terms of the currency.
Labor, money and time are central to the Quesnay–Marx–Keynes–Parguez vision of capitalism as a monetary production system. While many heterodox economists reference Marx's M-C-M', much work remains to be done when it comes to the 'guts' of Marx's circuits of capital, and not merely the outer shell. The remainder of the chapter begins to explore some of these issues as they relate to the turnover time of capital.

PRODUCTION AND CIRCULATION OF COMMODITIES AND MONEY

Marx's project was to identify and investigate the economic 'laws of motion' of the capitalist mode of production. 'Laws' here indicates fundamental tendencies internal to the process itself, yet historically specific to capitalism. These laws are 'of motion', that is, what Marx sought to capture in his analysis were the necessary tendencies of movement, in another word, change.

In Marx's vision of capitalism, expansion of value takes place in the sphere of production, where the capitalization of surplus-value constitutes capital accumulation. Accumulation or, more precisely, accelerated accumulation is one of the ongoing processes subject to the 'laws' Marx sought to uncover. Marx realized that identifying these laws required a rigorous examination of every stage of the circuit of industrial capital, each sphere of capitalist reproduction, to determine whether, and in what manner, they affect or modify value-expansion and/or accumulation.

In its process of self-expansion, capital takes on different forms: money capital (M), productive capital (P), and commodity capital (C). Capital in the form of money purchases labor power (LP) and means of production (MP), which include machines, tools and other instruments of labor. These combine in the production process to produce commodities that contain surplus-value and are put on the market to exchange for money. Marx expressed the circuit of industrial capital as:

\[ M \rightarrow C \{MP, LP\} \ldots (P) \ldots C' \rightarrow M' \]  \hspace{1cm} (4.1)

Where \( C' = C + AC \) and \( M' = M + AM \), and \( C' > C \) and \( M' > M \). Labor power has its own circuit:

\[ LP \rightarrow W \rightarrow MS \]  \hspace{1cm} (4.2)

where \( W \) is the wage bill and MS are the historically and morally (and not merely biologically) determined means of subsistence. Wages are paid in
money to workers, who use them to purchase the means of subsistence. Both MP and MS were previously part of C', the output of production processes.

IT'S ABOUT TIME . . .

Time is a device invented to keep everything from happening at once. (Joan Robinson, 1964; attributed to Henri Bergson)

Space is a device to stop everything happening in Cambridge (Geoffrey Harcourt 1969; attributed to Dharma Kumar)

Marx proposed various categories with which to qualitatively distinguish time periods and, where necessary, sub-periods, in the circuit of industrial capital. The length of these time periods may vary, and thus Marx examined the effects that changes in the absolute and relative duration of these periods might produce on such factors as value expansion and accumulation.

The time from when capital in a particular form is advanced and goes through an entire circuit until returning in its original form is its turnover time. Capital therefore spends a certain amount of time in each of its forms, and goes through each of the stages of the circuit of industrial capital, in one turnover. Capital in its productive form is in the sphere of production and capital in its money and commodity forms is in the sphere of circulation. The time during which capital is in the sphere of production is called its time of production, and the time during which capital is in the sphere of circulation is called its time of circulation. The turnover time of a particular capital is therefore equal to the sum of its time of production and its time of circulation.

The period during which labor-power is actively combined with means of production and instruments of labor in the production process, when value is preserved and expanded, is working time. The time of production, however, may not be comprised entirely of working time.

One interruption of working time within the time of production occurs as a result of limitations particular to the commodity labor-power. Every worker must have a historically and morally determined period of rest per day required for the reproduction of labor-power. Raw materials, machines and instruments of labor are in the sphere of production yet idle at noon when the worker eats lunch, in the evening when the worker leaves the workplace, and at night while the worker sleeps. Capitalists will attempt to both minimize this time and institute shifts so that factories may operate around the clock, though the latter may affect the total variable capital that must be advanced.
Another period of the time of production that is not working time is that period during which the labor process is interrupted so that natural processes may take place that are required to produce the finished product. Such is the case with the fermentation of wine and spirits, the maturation of trees for lumber, the growth of agricultural crops for produce and certain textiles, and the drying processes of wood and clay. The time period required for some of these, such as those associated with drying and bleaching, may be shortened by artificial means through the use of technical advances such as new chemical applications. Nevertheless, natural processes that interrupt the labor process increase time of production without adding to working time.

It is during the time of production, and more specifically working time, that surplus value is produced. It is during the time of circulation, however, that capital in the form of finished commodities is transformed into money and, therefore, that surplus value is realized and – if accumulation is to take place – committed to the next run through the circuit of industrial capital. Thus there would be no reproduction, nor accumulation, without the sphere of circulation. In fact, there would be no production, because circulation precedes production by transforming capital in the form of money into productive capital.

USEFUL, NECESSARY, AND . . . UNPRODUCTIVE

In order to fully examine the relation of time of circulation to the expansion of value and accumulation, Marx introduces the distinction between productive and unproductive labor. This should not be confused with the distinction between necessary and unnecessary labor, nor is it the same thing as the difference between goods and services. Productive labor is labor that produces surplus value, while unproductive labor, although it may be both useful and necessary for reproduction, does not.

In general, it can be stated that productive labor is that labor performed in the sphere of production and therefore during the time of production, while unproductive labor is that labor performed in the sphere of circulation and thus during the time of circulation. There are, however, some cases where the production process extends into the sphere of circulation, such as with some transportation and storage. Marx argues that in the transportation of finished commodities, value is added to the product by the labor-power expended in those activities. In addition, value is transferred to the product through consumption of the means of transportation. He emphasizes, however, that these are special cases where the production process appears in the sphere of circulation.
The general law remains that capital in the sphere of circulation, though essential to the realization and capitalization of surplus-value, does not produce value or surplus-value. On the contrary, the costs of unproductive labor and other costs of circulation must be paid out of surplus-value. Therefore, these costs limit the extent to which surplus-value may be capitalized. In addition, time of circulation represents time during which capital is tied up in unproductive forms. This time may be reduced through improvements in communications, but is lengthened by factors such as gluts, which may result from insufficient demand for certain commodities, and hoards, which may result from shortages in means of production. The shorter time of circulation is in relation to turnover time, the greater the time of production will be in relation to turnover time, the more time capital will spend in its productive form and the greater the amount of surplus-value a given amount of capital will be able to produce.

TURNOVER TIME, THE RATE OF EXPLOITATION AND THE VALUE RATE OF PROFIT

Having seen the effects that both the ratio of time of production to time of circulation in the turnover of a given capital and the costs of circulation may have on the expansion of value and potential accumulation, it is now necessary to examine the implications of changes in the duration of the period of turnover, or turnover time. The unit of analysis will be one year, i.e., a decrease in the turnover time means an increase in the number of turnovers per annum. It will be assumed initially that the entire turnover time consists only of time of production, that there is a straight-line depreciation of fixed capital, and that the organic composition of capital is constant.

A decrease in turnover time will result in a higher annual rate of exploitation (rate of surplus-value). For example, if the value of variable capital advanced \( V \) is 1000, the rate of exploitation is 100 percent, and there is one turnover on the year \( n = 1 \), the annual rate of exploitation \( (s(n)/V) \) will be 1000(1)/1000 or 100%. If, however, there are two turnovers in the year (turnover time is reduced by 50 percent), the annual rate of exploitation will be 1000(2)/1000 or 200 percent. In the latter case, the same variable capital is exploited twice as much in the same time period (or, variable capital is equally exploited in half the time).

The annual value rate of profit:

\[ s(n)/(C^T + V) \]  \hspace{1cm} (4.3)
or

\[ \frac{[s(n)/V][(C/V) + 1]}{((C^T)/V) + 1}] \tag{4.4} \]

will likewise be affected. It can be seen that there is a positive relation between the profit rate and the rate of exploitation, and a negative or inverse relation between profit rate and the organic composition of capital. Therefore, given the relation of turnover to the rate of exploitation, as long as the organic composition of capital is constant it is logical to expect a similar result with the value rate of profit. If the value of total constant capital advanced \((C^T)\) is 2000, and the value of variable capital advanced \((V)\) is 1000, the total value of capital advanced is 3000. Assuming the rate of exploitation is 100 percent, if there is one turnover in the year the annual value rate of profit will be \(1000/(2000 + 1000)\), or 33.33 percent. If there are two turnovers in the year, the annual rate of profit will rise to \(1000/(2000 + 1000)\), or 66.66 percent.

THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING

Given the effect of turnover time on the rate of profit, it is clear that prices of production will also be affected. Because prices of production are a function of the general rate of profit, the effect in this case is most clearly seen at the level of aggregate social capital. If the turnover time of aggregate social capital increases, the annual rate of exploitation, and therefore the total mass of annual surplus value, will rise. Organic composition of capital constant, this will result in a rise in the profit rate, which will cause prices of production to rise.

While it has been shown how time of production, time of circulation and turnover time may affect value-expansion and the potential for accumulation, it is important to emphasize that turnover affects prices and not values. Orthodox economics wrongly viewed circulation as the source of the self-expansion of capital because it is only in circulation that surplus-value is realized as profit. This is abetted by the fact that prices of production and the money rate of profit are influenced by turnover time.

Other important economic variables affected by turnover time include sales value, unit price and the profit margin. Marx distinguished not only between constant and variable capital in his analysis, but also between fixed and circulating constant capital. Here it is important to recall that variable capital is also circulating capital. Sales value, then, will be equal to:
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\[(C^f \cdot \tau/n) + C^c + V + s \quad (4.5)\]

where \(\tau = (1/t)\), and \(t\) is the turnover time for fixed capital in years. Unit price will be this sales value (equation 4.5) divided by \(x\), the number of units of output.

TURNOVER, CRISIS AND INSTABILITY

Marx cites numerous ways in which economic crisis and instability may result from interruptions in the circuits of capital and disturbances in the realization of commodity capital. Disproportionalities, imbalances, shortages and misallocations all may be expected. In many of these disturbances of capital reproduction and accumulation 'money plays a role, not just as means of circulation, but also as money-capital ... on the basis of the spontaneous pattern of this production, this balance is itself an accident' (Capital, Volume II, Chapter 21). Furthermore, Alain Parguez's work has demonstrated that economic instability and financial crises are related not only to, as Marx writes, 'where the surplus-value comes from but whence the money comes from into which it is turned' (Capital, Vol. II, Ch. 17).

REFERENCES

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