The Rate of Exploitation and Contemporary Capitalism

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Introduction

In the simplified model of the capitalist economy discussed in Volume I of *Capital*, the basic categories of value of labour power, surplus value and the rate of exploitation have a powerful simplicity. All production is carried out by 'productive' workers, under capitalist relations of production. There is no trade with separate capitalist countries, petty commodity producers, or any other modes of production. All activities of the state are abstracted from. The value of labour power is the amount of time socially necessary for the working class to produce the commodities which are required to reproduce it at the current 'historical and moral' level——what we may call the 'necessary product.' Surplus value is the amount of labour time required to produce the consumer goods and additional means of production appropriated by the capitalists——the surplus product. The surplus value is realised by the capitalist class purchasing the surplus product with its profits. The rate of exploitation measures the ratio between the time worked for the capitalists to produce the surplus product and the time worked to produce the necessary product; with commodities exchanging at their values it is also equal to the ratio between what the capitalists receive in the form of profits and what they pay out as wages. The production of surplus value, its realisation in the form of profits and its accumulation by the capitalists forms a basic outline of the motion of capitalism of great penetrative power.

But contemporary capitalism does not correspond to this simplified model. Prices are not proportional to values. Technical progress is continually devaluing commodities leading to ambiguities in the notion of surplus value. Workers consume, and capitalists appropriate commodities produced abroad, and by the state and petty commodity producers within the country. The government taxes, pays grants and provides free facilities of various kinds. Workers do not spend all of their incomes but save and earn interest on their savings. Many workers, even inside the capitalist sector, fall into categories regarded by Marx as unproductive. How do these various phenomena affect the fundamental categories of surplus value, the value of labour power and the rate of exploitation? This is surely an important question if we are to use the basic Marxist categories for interpreting the movement of contemporary capitalism.

Prices and Values—The Transformation Problem etc.

The justification for bothering with value categories is that price phenomena——wages and profits——are conceptually completely inadequate to understand exploitation[1].

1) The next paragraph summarises part of the argument in Armstrong, Glyn and Harrison (1978). The present paper attempts to extend the "defence of value theory" by discussing concrete phenomena other than joint production.

To conceptualise exploitation in terms of the ratio between profits and wages is a contradiction, or to be more precise is consistent only with a weak, and completely 'un–marxist' notion of exploitation. Profit represents the money form of price of production of the surplus product, just as aggregate wages represents the money form of the price of production of the aggregate wage bundle. But when analysing exploitation we have to penetrate the money form to see what portion of society's real production that money represents. Of course the price of production *is a* measure of the resources used up in the production of a commodity. But it includes not only the wages paid, materials, depreciation but also *advance of capital.* So to use prices as an adequate measure of the portion of society's resources used up in the production of a commodity (or bundle of commodities appropriated by a class) is to admit the advance of capital to be a productive contribution. If we do this we are reduced to regarding exploitation as occurring only when factor prices do not reflect true contributions (rate of profit less than 'marginal product of capital') or, in a slightly stronger version, that exploitation exists because the capitalist class monopolises the return representing the contribution of the means of production. In either case the fundamental notion that exploitation derives from the compulsion on workers to perform surplus labour is lost.

By contrast location of exploitation in production flows directly from value theory; an adequate conceptual measure of such exploitation must be made in terms of the labour time required to produce the surplus product and the necessary product, not in terms of the prices of production these commodities sell at.

Now if all commodities sold at their values then, whilst it would still be essential to *conceptualise* exploitation in terms of values, the rate of exploitation would be numerically equal to the ratio between profits and wages. The monetary expressions of the surplus and necessary products——that is profits and wages——would be proportional to their values. But commodities do not exchange at their values, because of differing organic compositions and impediments to equalisation of the rate of profit. This means that profits——the aggregate price of production of the surplus product——will bear a different ratio to wages——the aggregate price of production of the necessary product——than the ratio of surplus value to variable capital[2]. The necessary equivalence between the ratio of what the classes appropriate in money, and what they receive in value, is broken when prices of production diverge from values. One of the aspects of the rate of exploitation in the simplified model ——that its money form necessarily corresponds numerically to its real substance——no longer holds. This makes it all the more important to understand clearly the relation between prices and values, and the necessity of locating exploitation in the value system.

The Devaluation of Capital

Surplus value is that part of value of the product after subtracting the value of the variable capital and the value transferred to the product from raw materials and fixed capital. Fixed capital transfers its value to the product over the course of its economic life, so that when it is scrapped the capitalist has accumulated a value equivalent to what he originally invested. But equivalent in what sense? The simple conception is that he must have accumulated

2) For a very clear explanation of why it is meaningless to seek for the numerical equality of surplus value and profits, value of variable capital and wages see M. Itoh (1976); the real issue can only be of equality of *ratios* of price and value magnitudes.

sufficient value to purchase an identical machine——the "use value" of his capital must be reconstituted. To do this, during each year of the machine's life it must transfer to the product a value corresponding to the replacement value of the 'part' of the machine 'used up.' Surplus value is then the value of product after deducting the value of labour power and this 'value transferred.'

But to reconstitute the *use value* of the machine does not imply that the *value* of the machine is recouped, if the value of the machine has declined since original purchase due to productivity growth in the sector producing it. While the value of capital is expanded by the accumulation of surplus value, it is simultaneously being reduced by such devaluation of capital. Accumulation of surplus value is no longer identical to an increase in the value of capital as in the simplified model.

Such an identification could be maintained by a second approach defining surplus value so that it is calculated after the maintenance not of the use value of capital, but rather of its value——that is that value transferred would comprise not simply the replacement value of the use value of capital used up, but in addition the devaluation of all the fixed capital in existence due to technical progress. Now the fundamental idea of exploitation is surely that the working class is exploited to the extent that it produces use values for the capitalists over and above those necessary to replace the use values used up in production (including the appropriate part of fixed capital). But this second approach would have to deny the existence of exploitation and surplus value even if the capitalists were accumulating use values, simply because the value of capital was not increasing due to the devaluation of capital. The first approach also maintains the link with profits——that profits are the aggregate price of production of the surplus product which contains the surplus value. To maintain the link by redefining profit to be the price of production of the surplus product after the maintenance of the *value* of capital, suggested as a possibility by Okishio (1978), seems to involve too violent a redefinition of profit to be helpful[3]. In the simplified model both the simple links between profits and surplus value, and between accumulation of surplus value and expansion of capital value can be maintained. Technical progress requires one to be abandoned and the latter seeme less fundamental.

Productive/Unproductive Labour

As is well known Marx insisted that labour employed by capital in the circulation process was simply involved in transforming the form of value of commodities into money and could not be regarded as productive of value. Whilst there are some ambiguities in his analysis

3) To illustrate the point from the Japanese National Accounts for 1979 (pp. 36/37). The rate of profit, before tax, for non-financial enterprises, on their fixed assets and stocks was 10.2%. Assuming an underlying growth rate of productivity in producing means of production at 5% a year, this means that one half of what is appropriated as profit in fact has to be devoted to compensating for the devaluation of capital if the value of capital, in Marx's sense, was to be maintained. I prefer to maintain the conventional definition of profit and the definition of surplus value which corresponds to it based on 'use value' depreciation. Note that this question is quite separate from the impact of inflation on depreciation——replacement cost estimates of capital consumption such as are used in the national accounts are based on applying the use value concept of depreciation in a situation of rising prices——that is capital consumption has to provide a sum sufficient to buy an identical machine. But where there is devaluation of capital this money sum still represents a smaller value.

(see Gough (1972) for example), the category of unproductive workers is usually extended to include workers in the production process whose activities reflect wholly the capitalist form of the labour process(supervisory workers, etc.). All these unproductive workers are regarded as being paid for out of surplus value, rather than out of variable capital. The surplus labour they perform (since they work for longer than is required to reproduce their wage goods), does not constitute an addition to surplus value, rather it means that the capitalists have to devote less of the surplus value produced by the productive working class to supporting unproductive labour than would be the case if the unproductive workers received commodities requiring as much time to produce as they themselves work. The workers are exploited by capital, since they perform surplus labour for capital, but this surplus labour does not take the form of surplus value, even though it does increase the profits appropriated by the capitalists (by requiring a smaller diversion of surplus value as explained above).

It is not possible, or appropriate here, to undertake a detailed examination of Marx's distinction, though I am myself far from convinced that the fundamental point of Marx——that it is the labour of workers in the production process which creates value, not the buying and selling of commodities——actually requires treating workers in the circulation sphere as unproductive. But there clearly is a sense in which these workers, and those undertaking supervisory jobs, etc., are performing functions geared wholly to the capitalist form of society, in a more fundamental way than those on the production line (even though their work processes as well are of course conditioned by capitalist relations of production); and so there is a sense in which they are being supported by the production workers. What has to be pointed out here is that maintaining Marx's distinction does *radically* affect the notion of the rate of exploitation. For instead of representing the ratio between (the value of)what is appropriated by the capitalists and the working class, it represents the ratio of (the value of) what is appropriated by capitalists (including what they have to divert to 'unproductive workers') and what is received by the productive workers. Part of the surplus value is realised not by the capitalists purchasing commodities but rather by spending by part of the working class. An increase in surplus value no longer means an increase in what is available for accumnlation if there has been a corresponding increase in the proportion of the working class employed in unproductive jobs.

Simplicity of course is not everything, but it must be recognised that the distinction between productive and unproductive labour does involve a serious weakening of the simple set of relations between the wage bill——value of labour power——what is required to maintain the working class on the one hand and profits——surplus value——what is available for capitalists' consumption and accumulation on the other. These relations are of course complicated by other factors we are considering, but that is no reason for brushing aside the problems involved as a result of the productive/unproductive labour distinction, unless it can be shown to materially assist the analysis of the accumulation process. For such analysis *is* materially assisted by the simple relations, and these should only be abandoned on the grounds that the depth of the analysis is increased[4].

4) The question is of course a *far* from trivial one quantitatively. For Japan in 1977 if we just take 'clerical and related workers' (and most clerical work involves money transactions) sales workers and managers and officials (that is we regard all 'professional and technical' workers as productive), we would reach a figure for unproductive workers (whether employed by capitalists, government, etc.) of 35% of

Self-Employment

The capitalist sector to which the rate of surplus value applies includes all private enterprises employing wage labour, whether officially as classified corporations or unincorporated enterprises. But those self-employed who do employ wage labour do pose one conceptual problem, in that the surplus value they appropriate is mixed up with a return to their labour (at any rate in the case when they labour 'productivity' along with employees). What part of this 'income of unincorporated enterprises' corresponds to surplus value? Attributing the self-employed an average wage, necessary to reconstitute the value of their labour power and regarding the rest as surplus value appropriated is an obvious method. A slight refinement would be to regard everything they earn over and above that earnt by the petty producers who do *not* employ wage labour as constituting their appropriation of surplus value[5]. Of course where these self-employed workers are substantial employers of wage labour, performing essentially managerial functions, then the 'wage' attributed to them on the basis of the earnings of petty commodity producers, would have to be counted in with the earnings of unproductive workers.

But the self-employed who do *not* employ wage labour pose another type of conceptual problem for the analysis of exploitation[6]. They have to be treated as a separate sector of petty commodity producers which trades with the capitalist sector. The problem is that this means that the workers in the capitalist sector no longer themselves produce the entire bundle of wage goods, and similarly they do not produce all the commodities appropriated by the capitalists. Both classes receive some commodities produced outside by the petty producers, which are in effect exchanged against part of capitalist sector output. But what, then, happens to our basic category of surplus value, our understanding of profits as the price of production of the surplus product?

The basic ideas are best preserved if we now understand the 'necessary product' not as the bundle of wage goods consumed by the workers but as that part of the wage bundle which

total workers (including petty commodity producers) (*Year Book of Labour Statistics*, 1977, p. 12). Even in the manufacturing sector only two thirds of employees are classified as 'production and related employees' (p. 20). One is tempted to speculate that one of the attractions of Marx's distinction is that the inclusion of unproductive workers as paid for out of surplus value enormously increases the estimate of the rate of surplus value, and more importantly, means that it tends to increase relative to the profit wage ratio because the proportion of unproductive workers increases.

5) A trial calculation for the Japanese manufacturing sector for 1976 will illustrate the point. For that year we can calculate that, taking the income of two person unincorporated manufacturing enterprises as the standard——assuming they represent the average family enterprise employing no wage labour——that 39.2% of the income of unincorporated enterprises represents a surplus above this basic level, and which we could regard as reflecting the appropriation of surplus value. This estimation of the surplus value appropriated by the self-employed is as big as one quarter of total manufacturing corporate profits (*Annual Report on National Accounts*, 1978, p. 367, and *Japan Statistical Yearbook*, 1978 p. 320).

6) In Japan in 1977 there were 2. 88 million self-employed in agriculture without employees and around 90,000 with employees; obviously most of the 2.9 million family workers must have been working with the former. Outside agriculture there were 4.73 million self-employed including home handicraft workers without employees and 2.03 million with employees. In addition there were 3.20 million family workers(*JSY*, p. 55). The income of those not employing wage labour must have been very roughly one tenth of national income.

is produced within the capitalist sector, *plus* that portion of capitalist sector output which is exchanged with the petty producers for the remainder of the wage bundle. The value of labour power is then the time worked to produce both the capitalistically produced part of the wage bundle and the extra commodities which are exchanged with the petty producers for the rest of the wage bundle. Wages still remain the price of production of the necessary product. Part of the wage is used not to purchase the necessary product directly, but is rather used to purchase commodities from the petty producers. But what the workers pay for these commodities must be equal to what the petty producers pay for the commodities they buy from the capitalist sector——that is the price of production of that element of the necessary product actually consumed by the petty producers. Correspondingly surplus value represents the time worked to produce the goods actually appropriated by the capitalists and in addition those used to exchange with the petty producers for the things the capitalists need.

What is lost, is the ready identification of the necessary product with living standards, or the surplus product with the actual consumption or accumulation of use values. Even if the value of labour power remains the same, and productivity is unchanged, workers living standards will change if the 'terms of trade' with the petty producers change (since that part of the necessary product which is exchanged with them will buy more or less use values). But this reflection of living standards seems a subsidiary, rather than a fundamental aspect of the value of labour power, which has to be given up when relations with other modes of production are considered. Preservation of the basic notion of exploitation seems much more important, and is adequately safeguarded by treating what is exchanged with petty producers for wage goods, 'as if' it had been consumed by the workers themselves.

Foreign Trade

Fundamentally an identical approach should applied to foreign trade; that the necessary product includes the goods produced by the workers which are exchanged for the imports which enter into the wage goods. It is true, that it is impossible to designate some particular exports as being exchanged for the import content of the wage bundle; in that sense there may be many different combinations of exports, with different values, which could be regarded as being exchanged for the import content of the wage bundle. Does this give the notion of the value of labour power an ambiguity? Only if we are searching for ambiguity, because it is surely reasonable to regard a proportion of the *average* bundle of exports as being exchanged for the import content of the wage goods. It is the time reqiured to produce that part of total exports which must be included in the value of labour power. So we can maintain the idea of wages and profits as the price of production of the necessary and surplus products which contain the value of labour power and surplus value, now remembering that the surplus and necessary products contain appropriate shares of total exports[7]. Just as with petty commodity production, of course, the terms of trade between domestic and foreign commodities affect living standards. But our approach, based entirely on domestic values, does maintain the fundamental relation of exploitation without having to juggle with the

7) It may seem strange to think of work to produce exports of heavy machinery as part of the necessary labour of the working class. But of course even the simple model of capitalism includes as necessary labour workers employed to reproduce the means of production used to produce workers' consumer goods, not simply those working directly in the consumer goods sector.

notoriously slippery concept of international value.

The State

The simplest approach to the question of the state is to regard all state activities as paid out of surplus value, so that the value of labour power is identified with the value of the commodities purchased by the workers out of their wages and salaries, after all taxes (direct and indirect). But this seems to insist on a subsidiary aspect of the value of labour-power in the simplified model——that it is what the workers buy directly out of their wages, at the expense of the much more basic idea that it represents the total time the workers work to produce the commodities necessary for their subsistence. Based on this consideration we would include in the value of labour power

(i) The value of the commodities purchased by workers out of the grants they receive from the state(pensions, etc.); essentially the state is redistributing the value of labour power within the working class to meet certain social norms (pensions, etc.) and to guarantee the reproduction of labour power (child benefit, unemployment pay).

(ii) The value of the commodities purchased by the state from the capitalists and distributed free to workers. Whether the commodities are physiologically necessary to maintain an efficient labour force (drugs), ideologically necessary (school history books) or purely enjoyable (parks) is completely irrelevant since the use values bought by the workers with their wages have all these functions as well.

Correspondingly all grants paid to the capitalists and commodities purchased for them by the state either for productive use (free factories) or to maintain the national and class nature of capitalist society (tanks, paper for police to keep files on) would have to be included as part of surplus value. Of course there are problems in allocating different items of state spending, but the conceptual distinction based on whether the use values are consumed by the working class or not, seems clear enough.

This development of the categories has to be taken a stage further when we deal with not only state spending on commodities produced by the capitalist sector but state *production*. In my view that part of state production which is marketed (mainly products of the nationalised industries, but including municipal housing as well), has to be integrated in with the capitalist sector. Workers in the nationalised industries perform surplus labour which takes the form of surplus value and which enters into the redistribution of surplus value via the equalisation (or otherwise) of the rate of profit. Certainly this part of surplus value is appropriated by the state, but this simply reflects the real elements of 'state capitalism' involved.

But what of the' non-marketed' use values produced by state workers in health, education, the army, state employment services, etc.? The simplest approach would be to regard them as all paid for out of surplus value, leaving the value of variable capital as the value of the commodities received by the workers in the capitalist sector ('private and state'), whether directly (as take home pay), or indirectly (government grants or free provision of commodities).

But this again does seem to do violence to the fundamental idea of the rate of exploitation to regard all state employees as paid for out of surplus value even when the services they perform(health, education, etc.) are consumed by the working class and thus contribute to the reproduction of labour power. The fundamental idea of the value of labour power as the labour performed by the workers under capitalist relations in order to produce the commodities required to reproduce themselves can be preserved by using the same approach as for relations with petty producers or foreign trade. Thus we regard the commodities consumed by the government workers engaged in reproducing labour power as part of the necessary product of the capitalist sector workers. This is not to include the labour time performed by the state workers as part of the value of labour power, but rather the labour time of the workers producing the commodities consumed by these state workers. This then avoids the charge of adding together labour times in the capitalist and non-capitalist sector. The analysis of the rate of exploitation is confined to the capitalist sector; all the necessary labour is labour of workers in the capitalist sector (to produce the commodities they themselves consume and those which are consumed by the state workers which contribute to the reproduction of their labour power); the surplus labour is the labour of the workers in the capitalist sector which produces the commodities which are available for the capitalists to consume, accumulate or use to support the 'faux frais' of capitalism. Surplus value is greater than it otherwise would be on account of the fact that state sector workers perform surplus labour, and thus they receive less commodities produced by capitalist sector workers than would otherwise be the case. In this sense, surplus value *depends* on the surplus labour of state sector workers, though it represents only the labour of capitalist sector workers (embodied in the various commodities appropriated by the capitalists).

There can be no dispute that those state sector workers producing use values consumed by the capitalists, or involved in the other 'overhead costs' of the capitalist system (army, police, courts, general public administration) must be regarded as paid for out of the surplus value produced by the capitalist sector workers. But this leaves a third category of state sector workers who produce non-marketed inputs into the production process. Some of these workers would be included in the 'unproductive' category, such as those operating the public employment exchanges, and on the conventional treatment of unproductive labour would be regarded as paid for out of surplus value. But this would still leave some others, like local council workers maintaining roads who are obviously both necessary for production and not dependent on capitalist production relations; the fact that they are not employed in the capitalist sector is an anomaly which necessarily confuses the analysis of the rate of exploitation. To treat them as wholly financed out of surplus value weakens the idea of surplus value as that which remains after all necessary production costs are met. To regard all their wages as comprising part of the value of labour power preserves that aspect of surplus value, but at the cost of fracturing the identification of the value of labour power with what is necessary to maintain capitalist sector workers. This idea can be preserved by regarding only a part of these workers——those whose output enters indirectly into the necessary product——as paid for out of the necessary product and those whose output enters into the surplus product as paid for out of the surplus product. This seems the best of an unsatisfactory set of alternative treatments[8].

8) Bob Rowthorn (1974) treats one part of state employment——education——as contributing to the value of capitalist sector output when it is transferred to the product through the performance of skilled labour. This approach could be extended to health workers (healthy labour!), road maintenance workers (whose labour could be regarded as transferred to the product when the road is used). It has the advantage of laying bare how the surplus labour of state workers contributes to the surplus value appropri-

State enterprises producing marketed commodities accumulate capital out of the surplus value they appropriate and from borrowing. The state also accumulates assets to fulfil its other functions (hospitals, roads, prisons), financed by taxation or borrowing, and these must all be regarded as financed from aggregate surplus value. These assets do not constitute capital, since they are not used with wage labour to produce commodities. Whether or not they are used to produce use values for workers—hospitals—or for the capitalist class—prisons—is irrelevant as accumulation inside the capitalist sector takes place in Departments I and II. When the finance for this investment does not come from taxation the state borrows part of the surplus value from the capitalists. Any real interest on this borrowing which is paid by the state constitutes a redistribution of surplus. Where the state is borrowing it is essential to avoid double counting——that is including the surplus value in the hands of the capitalists (post-tax profits) and again if it is lent to the state and used for investment say.

Workers' Savings and Borrowing

In the simplified model there is an identification of surplus value—savings—accumulation. In fact workers save a part of their income to provide for emergencies, future expenses like old age, etc. Should these savings be regarded as part of surplus value since they imply that workers incomes are greater (for the class as a whole) than is required to reproduce themselves? This would be too restrictionary a definition of the value of labour power; after all it should provide for the expansion of the working class which may require net savings to finance future expenses and in any case there is no reason why the 'moral historical' element in the value of labour power should not include the socially determined savings rate. The fact that capitalists can accumulate by borrowing workers' savings allows them to expand beyond the limits set by the surplus value they appropriate, but it would be ridiculous to extend the savings–surplus value link in the simplified model to an identification of surplus value with savings. But if part of the value of labour power is saved what is the corresponding necessary product? We have to regard a part of what is accumulated as comprising the necessary product, its value is part of the value of labour power and its price of production is part of the wage bill.

Workers receive interest on these savings? Obviously this means that part of surplus value has to be diverted by the capitalist class. But note that this is only the case when workers savings earn a *real* interest rate, that is a rate (after tax) in excess of the rate of inflation. An interest rate which just balances inflation does not involve any transfer of surplus value at all——it rather constitutes a part repayment of the debt the real value of which (in use values not Marxian values!) is being eroded by inflation.

In fact when inflation is in excess of the post-tax interest rate, then the workers are suffering a transfer of value as the real value of their savings, even including accumulated interest, is eroded. The capitalists then accumulate in excess of the surplus value they appropriate, because the real value of their debts is diminished. This can of course take the form of an accumulation of real capital to the extent that workers are forced to save a part of their income in order to reconstitute the real value of their savings, and so the value they would

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ated by the capitalist sector. But it conflicts with the very basic idea that only workers producing commodities produce value.

otherwise have consumed is made available to the capitalists for accumulation[9].

In fact some of what workers save takes the form of real assets (notably houses). It seems clearest to include all such 'investment' as part of the value of labour power. Even though the value of these assets is not consumed immediately but rather over the life of the assets, and so the value of labour power cannot be identified with current consumption, the alternative of regarding such 'investment' as part of surplus value, even though it is financed from wage earnings, would be to completely abandon the fundamental idea of exploitation. To the extent that some workers borrow to finance these assets, and pay interest on them, we should subtract this interest from post-tax wages and include it in with surplus value. This of course again applied only to *real* interest in excess of the inflation rate. Nominal interest represents the repayment of part of the workers' real debt——in effect they are purchasing from the capitalist a part of (the value of) the asset that they borrowed money to pay for.

Conclusions

This paper has tried to suggest how the fundamental 'story' of the production, realisation and appropriation of surplus value of the simplified model of capitalism has to be amplified to deal with the concrete complexities of contemporary capitalism. One way of summarising is to see how the definitions of surplus value and profits are modified:

Simplified Model

Surplus value represents the time worked by the working class to produce the consumer goods and additional means of production for the capitalists.

Profits are the money form of the surplus value representing the price of production of the surplus product and they are realised by the capitalists' consumption and investment.

Contemporary Capitalism

Surplus value represents that proportion the labour time of the productive workers in the capitalist sector required to produce:

(a) The capitalistically produced commodities (cpc's) consumed or accumulated by the capitalists (after deducting a 'wage' element for those employers who labour productively);

(b) The cpc's exchanged with the foreign sector, and with petty commodity production inside the economy, in exchange for commodities accumulated or consumed by the capitalists;

(c) The cpc's required to maintain class rule, either as wage goods or inputs into these activities of the state, and the cpc's required to maintain the state sector workers producing inputs into the cpc's consumed or accumulated by the capitalists.

(d) The cpc's required to maintain those workers in the capitalist sector which are

9) We can calculate the interest paid on the financial assets held by households as averaging 6% in 1977 (*Annual Report on National Accounts*, 1979, p. 41 and p. 437). Since the rate of inflation was 4.8% it is clear that after taxation the real interest rate was negligible. In 1974 the inflation rate was 24% as compared with an average interest rate of 7.2%. For the average household financial assets (net of liabilities) was 63% of income (*Year Book of Labour Statistics*, 1977, p. 310). Thus workers had to save at least 10% of their annual income in order to maintain the real purchasing power of their savings. Shareholders gained through a huge decrease in the real value of corporate debt.

regarded as unproductive.

(e) Cpc's equivalent to the real interest paid to workers or the foreign sector.

less (f) Cpc's equivalent to value borrowed from the workers or foreign sector.

plus (g) Cpc's accumulated by the state to meet its various activities.

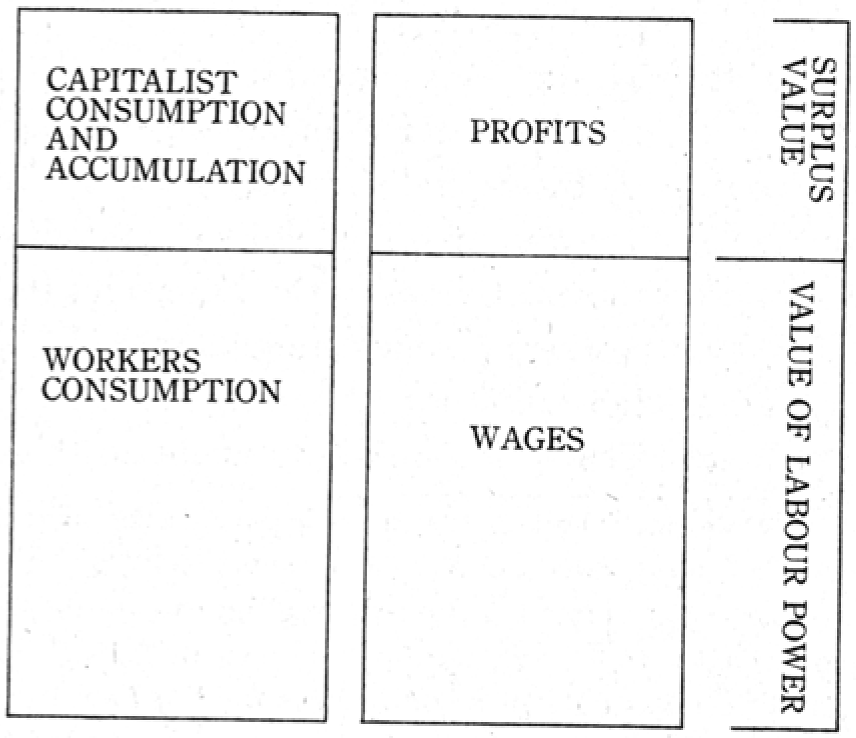
Profits, before tax, represent the money form of the value immediately accuring to the capitalists as a result of the production process and with no necessary link with surplus value. Post-tax profits represent the money form of that part of the surplus value directly appropriated by the capitalists and represents the price of production of that part of the surplus product (most of (a) and (b) above) which is realised by the capitalist spending.

We also illustrate some elements of the complex situation, in comparison with the simplified model, in the diagrams below. The modifications are extensive of course but the fundamental relation of exploitation is still maintained. Surplus value is still increased by the intensification of labour, increased hours of work, higher labour productivity, a cut in real wages. We now have to add that a cut in government expenditure on the social services has the same effect, as does increased taxation to pay for the overhead costs of capitalism or to finance government aid to the capitalists.

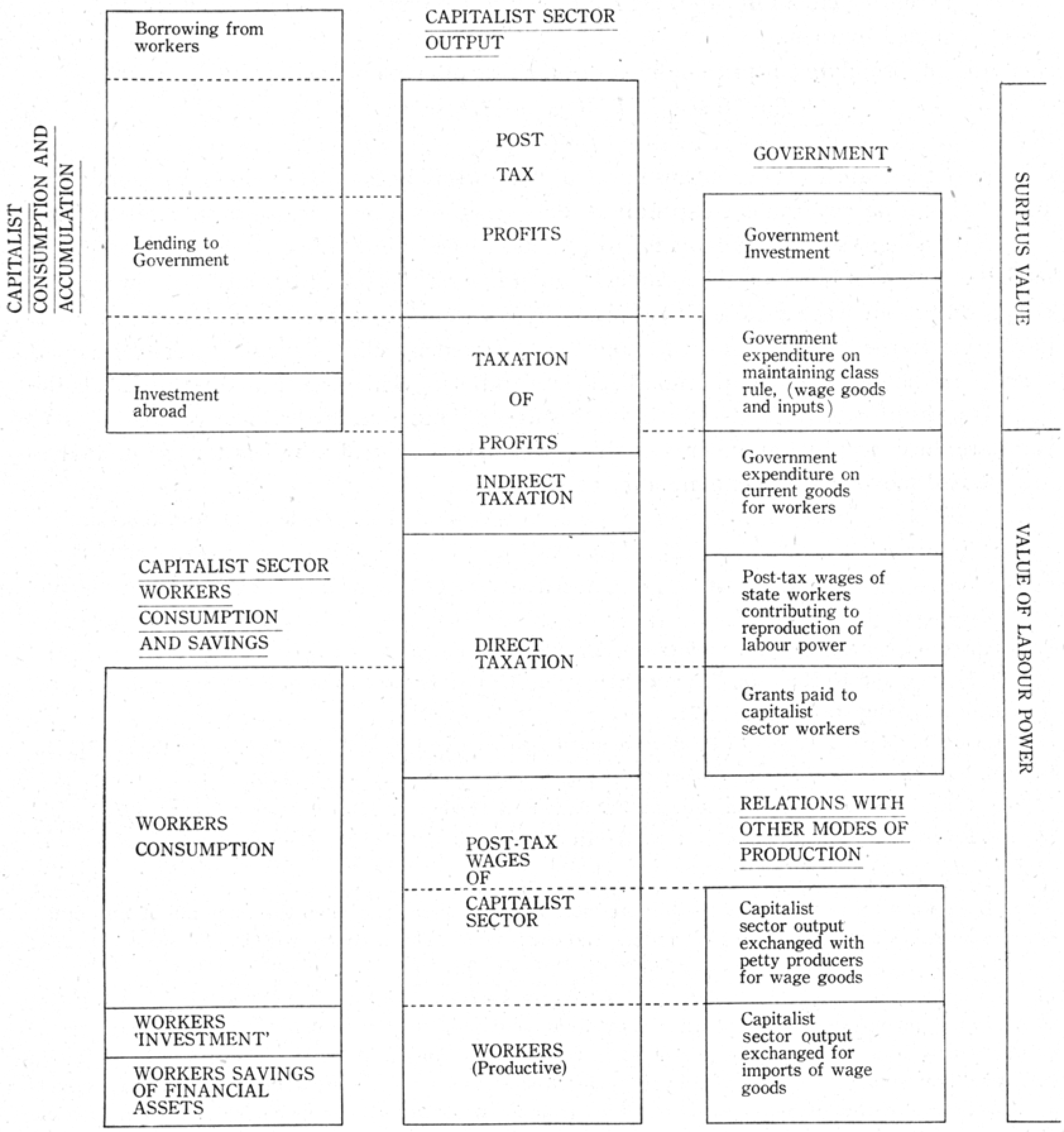
Price Magnitudes and Measuring Exploitation

Since we argued that only value magnitudes are adequate *conceptually* for analysing exploitation we have attempted to extend the analysis of the rate of exploitation in contemporary capitalism on the basis of the value content of such price flows as taxes, government expenditure, exports, etc. But can we use the price flows as *indicators* for obtaining empirical estimates of the rate of exploitation? This can be justified on the ground that for bundles of commodities, like the surplus and necessary products, there is no reason to assume that the average ratio of price to value will differ because the average organic composition, and average 'degree of monopoly' are likely to be very similar for aggregates of very various commodities. To the extent that the surplus product and necessary product are much less identified with particular types of commodities in contemporary capitalism than in the simplified model (because of foreign trade, state spending, workers saving, etc.) this argument is strengthened. Even if we admit that the price magnitudes will not be precise indicators of the level of value magnitudes, it is reasonable to use them as indicators of *changes* in relative magnitudes, whilst being on the watch for particular circumstances which would cause a systematic divergence (such as huge increase in house rents after rent decontrol).

SIMPLIFIED MODEL



CONTEMPORARY CAPITALISM



If this is accepted we can readily utilise national income data to calculate indicators of the rate of exploitation in contemporary capitalism. Writing

W for wages before tax of all workers producing commodities, but including the wage element of self-employed employers

P for profits before tax, including real interest paid by workers

T_W is taxation of workers, direct, indirect and social security

G_W that part of government spending which we regard as being paid for out of the necessary labour of capitalist sector workers because it represents use values consumed by them.

then we can formulate our price indicator of the rate of exploitation as[10]:

$$\frac{P+T_W-G_W}{W-T_W+G_W}=\frac{P}{W}\cdot\frac{I+(t-g)\,W/P}{I-(t-g)} \quad \text{where } t \text{ is } T_W/W,\ \ g \text{ is } G_W/W$$

Obviously there are severe problems in calculating precisely the taxes paid on wage incomes, and in allocating government expenditure between the various categories in a satisfactory way. But enough data is available for most countries to allow reasonable estimates to be made[11]. Moreover breaking the formula down in this way has a certain utility as well. For the pre-tax profit wage ratio (P/W) is primarily determined by the accumulation of capital in relation to the demand for labour but also affected by class struggles over wages and changes in the degree of competition between capitalists, while the second term reflects the various pressures on the state which affect spending and taxation[12]. The next step is to translate the conceptual arguments of this paper into some real numbers for use in analysing the real movement of contemporary capitalism.

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10) If we want to use the productive/unproductive labour distinction then the wage bill of unproductive workers, uw, has to be added to P and subtracted from W. This leaves us with the following formula:

$$\frac{W}{P}\cdot\frac{I+[(t-g)+u(I-t+g)]\,W/P}{(I-u)[I-(t-g)]}$$

11) Input–output tables may be utilised to circumvent some of the problems of assuming prices proportional to values though the calculations are complex and lags in data availability are long. But in any case they would have to be used in conjunction with national accounts data on types of state spending, taxation, self-employment and all the other complications we have discussed. The interesting article by Egaitsu and Kuroiwa (1976), which uses input-output tables to calculate the rate of exploitation does not deal with any of the issues discussed in this paper. It also appears to suffer from a confusion between value produced in a sector and value appropriated by it, though this does not affect their results for the rate of exploitation.

12) This is only approximately the case since indirect taxes are not part of the cost of employing labour and so pre-tax profits and wages do not comprise the whole of the product (the difference between factor cost and market prices).