THE PERMANENT ARMS ECONOMY

by PHIL SEMP

TONS

120,000

100,000

AMERICAN
BOMBING

80,000

60,000

INDOCHINA
Total 7 M tons

40,000

20,000

N. VIETNAM
Total 1 M tons

1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972

MARCH '68
LBJ stops bombing
MAY '68
Paris peace talks open
NOV '68
Nixon elected

APRIL '72
Nixon resumes bombing
of N. Vietnam
OCT '72
Nixon restricts bombing
NOV '72
Nixon re-elected
DEC '72
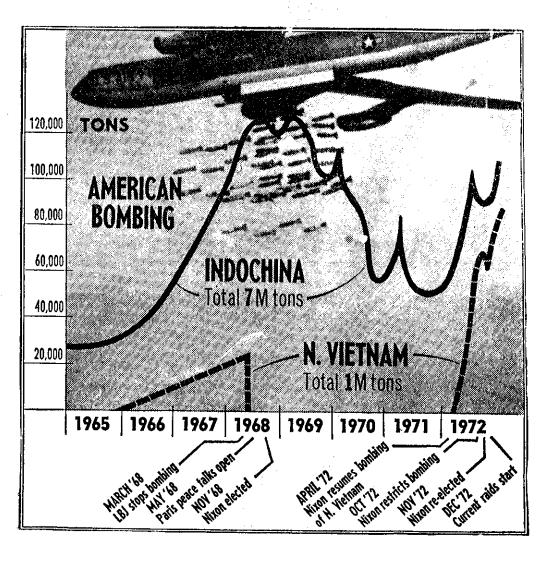Current raids start

In the immediate post-war period, the majority of the world's Trotskyists, not only expected general world slump to follow but interpreted the world as it was in slump terms. The expectations were fully reasonable and fully in accordance with Marxist method. On the basis of the post World War I experience (that is of the inability of capitalism to develop) and the decline of the productive forces in the '30,'s bearing out as they did the Marxist conception of the decisive decline of capitalism in its imperialist stage, the crisis perspective for all Marxists was inescapable.

Marxism is neither a blueprint, applicable for all times and places, nor a means of divining in some materialist crystal ball future concatenations and their resulting laws of motion. Marxism must be checked off, upheld and renewed out of the evolving process in society and in the struggles of the proletariat. On the other hand, it is not a method which junks the old, casually or light-mindedly and begins all over again with each new situation - as does the "method" of pragmatism. Deviations from the norm must be tested to see whether they assert the theory from a negative point of view.(*1) It is this that the Revolutionary Marxist forces did when approaching the immediate post-war period. With the benefit of hindsight, it's easy to scoff and say how wrong the Trotskyists were. But had they innovated in the given situation without experiencing the economic developments which set in after the post 1944-47 revolutionary wave had been defeated, and BEFORE the defeat had occurred they would have been either mystics or revisionists - certainly not Marxists.

As the post-war boom wore on, the various fragments of the revolutionary movement adjusted to it in different ways. As we know, certain sections continued to uphold 'unremittingly' "the slump round the corner" perspective, others liquidated, and others offered distinct explanations. It is one of the supposed strong points of I.S. theory that it had had an explanation of the post-war boom since the early or middle fifties (I won't haggle over the date).

Since the continuance of the boom for years ahead was a part of the theory - and the boom did continue - it is taken for granted that the theory was correct. That is one possible interpretation of validity. However, it is also possible that the theory can be accommodated into a wider frame work, in which case it will only provide a partial explanation, albeit an incorrect one when taken as the main determinant. This I feel is the correct status of the theory of the Permanent Arms Economy. And it is this that I want to deal with.

How and why the theory arose, and the use to which it has been put is not the central concern of this critique. Suffice to make the following remarks. In the given context of the fifties and sixties the permanent arms economy theory fitted in very nicely with the general passivity of I.S. and its abandonment of the theoretical conquests of the revolutionary move - ment on Russia and on the question of the Revolutionary Leninist party.(*2) If capitalism was generally stable for the forseeable future due to a new mechanism, this fitted the inescapable implications of the theory of state capitalism ie. of capitalism as an expanding world system, and made the anti-Leninist conceptions of the party almost reasonable. Different adherents of the theory within I.S. drew slightly different conclusions. However, the overall notion was that capitalism would remain stable and continue to expand for the foreseeable future. (*3) This was so with Kidron, the "inventor" of the theory in its present forms. As late as the 1967 version of his book "Western Capitalism Since the War" in which the theory is elucidated in most detail, Kidron concluded by saying that the elements of instability were merely "spots on the horizon." In keeping with the fashion for expurgated versions, in the latest Penguin edition, responding empirically to May 1968, the heightened class struggle of the last couple of years, and the palpable evidence for a definite slowing up of the world capitalist economy, Kidron states in conclusion that Western capitalism is once again creating conditions for the convergence of working class protest and revolutionary politics that could change the world." (*4)

THEORETICAL ROOTS

Sweezy's theory-:

One of the first developments of the "permanent war economy" thesis was that of Sweezy in his book "The Theory of Capitalist Development" (first English Edition). Implicit in this was a theory of capitalist crisis, popularly known as the "under consumptionist" theory.(*5) This states, in its various forms, that the basic cause of capitalist crisis of over production is the relatively low purchasing power of the masses, compared with the production capacity of industry.

To back this contention, Sweezy cites one quotation from Marx, taken from Vol III of Capital (page 484 in the Moscow 1966 Edition, in which the wording has been slightly modified from that of Sweezy's reference - but the sense remains the same).

"The last cause of all real crises always remains the poverty and restricted consumption of the masses as compared to the tendency of capitalist production to develop the productive forces, in such a way, that only the absolute power of consumption of the entire society would be their limit."

This statement is so obvious, as Marx himself noted on many occasions. Marx devoted Capital precisely to demonstrating how this state of affairs comes about; how it is immanent in the contradicitions of the capitalist production process; how production and consumption in capitalism are antagonistic sides of a process whose unity necessarily erupts in crisis from time to time because of the very driving forces of capitalist production. In fact, the quotation in question is abstracted one sidedly from Marx's whole approach to the question. Not only that, but even if the previous sentence is quoted, it puts a

little life into the proposition.

".....as matters stand, the replacement of the capital invested in production depends largely upon the consuming power of the non-producing classes; while the consuming power of the workers is limited partly by the laws of wages, partly by the fact that they are used only as long as they can be profitably employed by the capitalist class." (my emphasis P.S.)

These points were elucidated by Marx in the central part on capitalist crisis in Part III of Vol.III (The Law of the Tendency of the Rate of Profit to Fall). The previous sentence AND the one quoted by Sweezy are very shorthand, incidental remarks in the section on "Money Capital and Real Capital."

That this is so can be seen from the following quotation which summarises Marx's discussion in his chapter "The General Law of Capitalist Accumulation" on the effects of increasing demand for labour and therefore, general wage rises, in a boom period.

"If the quantity of unpaid labour supplied by the working class.....increases so rapidly that its conversion into capital requires an extra-ordinary addition of paid labour, then wages rise, and, all other circumstances remaining equal, the unpaid labour diminishes in proportion. But as soon as this diminution touches the point at which the surplus labour that nourishes capital is no longer supplied in normal quantity, a reaction sets in; a smaller part of revenue is capitalised, accumulation lags, and the movement of rise in wages receives a check. The rise of wages therefore is confined within limits that not only leave intact the foundations of the capitalistic system, but also secure its reproduction on a progressive scale." (my emphasis P.S.)(*6)

And - "It is sheer tautology to say that crises are caused by the scarcity of effective consumption, or of effective consumers. The capitalist system does not know any other modes of consumption than effective ones.... That commodities are unsaleable means only that no effective purchasers have been found for them, ie. consumers (since commodities are bought in the final analysis after productive or individual consumption). But if one were to attempt to give this tautology the semblance of a profounder justification by saying that the working class receives too small a portion of its own product and the evil would be remedied as soon as it receives a larger share of it and its wages increase in consequence, one could only remark that crises are always prepared by precisely a period in which wages rise generally and the working class actually gets a larger share of that part of the annual product which is intended for consumption .... It appears, then, that capitalist production comprises conditions independant of good or bad will (emphasis P.S.), conditions which permit the working class to enjoy that relative prosperity only momentarily, and at that always only as the harbinger of a coming crises." (*7)

So far, then, without analysing the mechanisms of crisis, Marx points out (i) there is a limit, imposed by the very needs of capital accumulation, on the rise in wage levels (ie. the consumption power of the masses) and (ii) eventually, (over what time scale depends on countertendencies at work) a greater share by the workers of total social production must lead to crisis.

The underconsumptionist view, in one-sidedly abstracting production from consumption, inevitably mystifies the central dynamics of the total process. It lends itself to notions that there are absolute proportions between workers' purchasing power and the social product for stability. In doing this, of course, it leads to distributivist notions, and, inevitably, to reformism. It is no accident that the social democratic leaderships should be most concerned with problems of " income distribution"; that

almost without exception they subscribe to ideological variants of the greatest under-consumptionist of them all - John Maynard Keynes.

But from a theoretical point of view (a) How can capitalist stability exist at all, given the fact that the whole history of capitalism has seen a progressive lessening in the proportion of living labour in the total social production? (b) If stability is acknowledged, then what is it in the very dynamics of capitalist production that gives rise to the instability and crises resulting in, on on the one hand a mass of products that can't be bought, on the other a mass of workers who cannot buy them? The under-consumptionist thesis is unable to do anything but state the obvious, the end result, the "last cause", as Marx himself called it precisely for that reason, without in any way contributing to an understanding of the dynamics that necessarily give rise to it.

The Marxist Theory of Crisis

The possibility of capitalist crisis is located in the dual nature of capitalism's fundamental unit, the commodity, as both a use-value and an exchange value. Insofar as primitive modes of production relied for exchange on barter, there could not be any crises of production due to the glutting of the "market" as production was predominantly for immediate consumption. Exchange was subordinate to this and was, to a great degree, optional. Not so for the commodity, which only exists as having use-value and exchange value in conditions where it must be exchanged against other goods having the same characteristics ie. it has to be sold of necessity, using the universal medium of exchange-money. Thus "The general nature of the metamorphosis of commodities – which includes the separation of purchase and sale just as it does their unity..... contains the possibility of a general glut." (*8)

Using Marx's terminology C=Commodity, M= Money, the chain of production and sale of one commodity and purchase of another can be represented by C-M-C. However, the conditions of sale and purchase are not identical logically or in space and time. Thus the transaction above is best represented by C-M ...... M-C. Thus capitalism has inherent in it both the unity and disjunction of production and consumption.

".... the unity of these two phases, which does exist and which forcibly asserts itself during the crisis, must be seen as opposed to the separation and antagonism of these two phases, separation and antagonism which exist just as much, and moreover are typical of bourgeois production."(*9)

This contradiction between sale and purchase, between production and consumption, between production and the circulation of money as a means of payment, Marx calls the simplest forms of crisis and to an extent, the simplest content of crisis. But this does not, as yet explain how and why this crisis erupts.

".... the content is not yet substantiated. Simple circulation of money and even the circulation of money as a means of payment – and both came into being long before capitalist production, while there are no crises – are possible and actually take place without crisis. These forms alone, therefore, do not explain why their crucial aspect becomes prominent and why the potential contradiction contained in them becomes a real contradiction." (*10)

So, what is the basis of capitalist production? Capitalism exists where commodity production becomes generalised; therefore a certain amount of "primitive accummulation" of capital must be a prior condition for this mode of production. How this takes

place is not the question here.(*11) However, what is important is that to develop the social productive power of labour on a capitalist basis presupposes methods for the increased production of surplus-value, which in its turn is the basic element of accummulation.

The question is, what is the motor of this process? The basic answer to this is – competition between capitalists. Capitalists face one another as independent commodity producers competing with each other.

In order to survive as a capitalist, it is necessary for the individual capitalist to sell on the general market in opposition to other capitalists; and precisely because of the unevenness of capitalist development, the differential possibility to compete in the first place, this struggle takes on a particularly intense form. To sell more (or often even to sell) on the market the capitalist is compelled to attempt to cheapen his commodities. He can only do this (with exceptions of fraudulence etc - which cancel out between capitalists, often with violent disruptions which themselves are stimulated by more fundamental forces at work, (as indicated later) by decreasing the amount of necessary labour time required to produce the commodities in question. This can only be performed by increasing the productivity of labour, which means, on the whole, introducing more effective instruments of production. These techniques become general in response to the lowering of the price by the particular capitalist and group of capitalists. Thus, overall the value of these new means of production embody more socially necessary labour time than the previous means of production (or augment these means of production). Furthermore, the increase in the value of the means of production is proportionately greater than the increase in the value of the labour power that they can set in motion (as a general rule there are exceptions to this, but the whole history of the development of capitalist production is as stated.)

Since machinery and raw materials only reproduce their value in being consumed in the production process, they are called by Marx constant capital (c). As labour power produces value in the process of being actualised this is known as variable capital (v).

Most of the surplus value, (which is the difference between the value after the application of living labour and the initial value of constant and variable capital) is used to acquire more constant and variable capital. So, capital produces capital on an ever increasing scale as a necessity." The reciprocal influences of the capitalist process of production, (the inherent competition between capitals) on the accumulation of capital bring about ..... that change in the technical composition of capital by which the variable constituent becomes always smaller as compared with the constant." (*12) The development of the capitalist mode of production results in an ever increasing organic composition of capital (c/v) and together, with the growth of capital, as more variable capital is set to work a greater mass of surplus value (s) produced by this.

Now since labour is the source of all value, (since only variable capital produces value), even though the mass of surplus value increases, its rate in relation to the total capital employed declines – that is the Rate of Profit $\frac{s}{v + c}$ unless there is a corresponding increase in the rate of exploitation of labour, in the proportion of the paid to the unpaid parts of labour (s/v) – but this can only continue for a greater or lesser period, not indefinitely) Thus, the inherent logic of the capitalist process of production, with competition as the spur, manifests itself in a growing mass of profit and a falling rate of profit. This is law for capitalism.

"As the process of production and accummulat-

ion advances, therefore, the mass of available and appropriated surplus-labour, and hence the absolute mass of profit appropriated by the social capital, must grow...... Hence, the same laws produce for the social capital a growing absolute mass of profit, and a falling rate of profit." (*13)

CAPITALIST CRISIS

Marx called the law of the falling rate of profit, together with the other "laws" of capitalist production, tendency laws.(*14)

Hence the absolute mass of profit appropriated by the social capital must grow .... Hence, the same laws produce for the social capital a growing absolute mass of profit, and a falling rate of profit.

(a) The capitalist who works with improved, but as yet not generally adopted methods of production, is able to sell below the market price, as previously indicated. However, he sells above his individual price of production. Thus his rate of profit rises until competition levels it out; the new methods of production become general and the overall rate of profit falls. During this equalisation process the expansion of the invested capital takes place and the mass of profit tends to rise.

As the rate of profit falls this hastens the concentration of capital and its centralisation, as minor capitalists and certain new independant capitals are unable to function at the new rate of profit. With their given capital, or even with an accummulation of capital they are unable to produce the goods with the socially necessary amount of labour time.

The fall in the rate of profit is not compensated by the increased mass of profit. Thus, these capitalists go bankrupt or sell off their capital at prices below their value.

This development is immanent in the capitalist process of production. BUT IT HAS CERTAIN CONSEQUENCES WHICH GIVE RISE TO CAPITALIST CRISIS.

"At a certain high point this increasing concentration in its turn causes a new fall in the rate of profit. The mass of small dispersed capitals is thereby driven along the adventurous road of speculation, credit, stock swindles and crises."(*15) They have to attempt to extract more surplus value out of their existing workforce by intensifying its exploitation. For a diminished workforce this has CERTAIN

limitations. Their capital becomes depreciated, they cannot meet their obligations (even with ext-ension of credit which has its limits): the condit-ions of production, presupposing certain value relations are disturbed accordingly.

The process of circulation and reproduction of capital is disrupted, men are laid off, capital – means of labour, and necessities of life are "over-produced" – while at the same time there is a rel-ative overpopulation (relative to their possibilities to be employed under the given conditions of product-ion). Too little capital is the cause of too much capital.

This overproduction in one sphere can lead to what Marx called a "relative overproduction" in others. If this effects enough leading products, then the crisis becomes a generalised crisis of overproduction. The forcible disjunction between production and consump-tion. It is thus inherent in the capitalist process of production.

Embodied in the crisis are also the preconditions for the recovery and boom. During the crisis capital values are destroyed, as prices tumble. However, use values are not necessarily, in fact rarely, dest-royed. If the bankrupt capitalist has to sell off his business "what one loses the other gains." Values used as capital are prevented from acting again as capital in the hands of the same person ..... A large part of the NOMINAL. capital of the society, ie. of the exchange value of the existing capital is once for all destroyed, although this very destruct-ion, since it does not affect the use value, may very much expedite the new reproduction." (*16)

The organic composition (the ratio of constant to total capital) of capital falls, but the social prod-uctivity is dependent on the use values of the capital and this considerably rises. Hence, increased surp-lus labour, an increase in the rate of profit and re-newed accumulation on an extended basis takes place, thus setting off the old process, with an increase once more in the organic composition of capital and a falling rate of profit,

(b) Under certain circumstances there can arise a general overproduction of capital. Of course, cap-ital consists of commodities, (ie. it's wrong to talk about over production of capital as distinct from commodities), but general over-production can arise having its source in an over production of commod-ities not intended for individual consumption, but for productive consumption (the boundary line between the two is shifting and tenuous, but nevertheless, obvious distinctions can and must be made at any given time.) This is the case when the increased capital produces only as much, or even less, surplus value than it did before the increase. In such cases there would be a drastic fall in the general rate of profit, but the source of this is not necess-arily to be found in the development of the prod-uctive forces, but in a rise in the money value of the variable capital (increased wages) and the corres-ponding reduction in the proportion of surplus labour to necessary labour time. Clearly, this can be off-set by extending the absolute working time of workers, and not correspondingly increasing wages, or by increasing the relative surplus working time ie. the greater intensity of exploitation. However, when the limits of these are reached and wages contine to rise the above effect sets in. There is a tendency for this to happen precisely as a consequence of boom, where workers are able to push up wage levels – unless counter tendencies offset this decline in surplus labour.

Hence, the progress of capitalist production sets inherent limits on the level of consumption of the masses at any particular time, in order that crisis does not erupt in the way described. But, whatever the level of consumption of the masses, crisis will eventually erupt anyway. The crisis is not to be offset by increasing the consumption power of the masses within capitalist society.

In the event of general over production of capital, the partial destruction of capital, (exchange and use value wise) takes place. The loss of each capitalist would depend on competitive struggle, those with special advantages, previously captured posit-ions, being the least hit. Thus, the depreciation of capital values and similar effects as in (a). The tend-ency here would be, in the crisis situation, especially as men are laid off and relative over-population sets in, to lower wages in order to accumulate more surplus value. Hence, the over production – under consumption nexus necessarily erupts, conditioning each other. In this case (b) we witness the phenom-enon of the falling rate of profit and a falling mass of profit. (c) Overproduction of capital can also rise due to disproportions in production as between branch-es of production. This disproportionality is built into capitalist production. The cohesion imposes it-self as a blind law, often as a result precisely of crisis, which bring about a temporary adjustment of the branches of production one to the other.

"All equalisations are ACCIDENTAL and although the proportion of capital employed in indiv-idual spheres is equalised by a continuous process, the continuity of this process itself equally pre-suposes the constant disproportion which it has continuously, often violently to even out." (*17)

These disproportionalities can be especially marked between those sectors producing means of production (dept I in Marx's terminology) and those producing means of consumption (Dept II). These tend to erupt for the following reasons –

(i) Given the greater organic composition of capital in Dept I, the productivity of labour here tends to be much greater. As such the mass of products turned out in Dept I can be very easily outstrip their use-value in Dept II. Thus, over-production of means of production, even with an increased demand for the mass and value of machin-ery.

(ii) Since the production of means of production is logically and temporally prior to production of means of consumption, (because these must already be available on the market), the production of means of production is governed not by the immediate demand, by the immediate level of production or re-production, but by the rate of expansion to this demand.

To illustrate let us take as an example a man-ufacturer of machinery. We will assume that he produces 100 machines a year (at constant value) and that the life cycle of a machine is five years.

In the first year he'll produce 100 machines which will be ordered by Capitalist(s). I. Next year, in order to sell, the capitalist class will have to be expanding their production at the same rate. Thus the machine manufacturer will have to sell 100 machines again (to capitalists 2) in order only to operate at the same level of production. The same in the following year until the sixth year. Hence, so far there has to be a constant increase in the rate of accumulation of the values of that machine in order that the manufacturer can stay in business even at the same level of production. Of course, producing in the dark, in the sixth year, the capitalist will produce one more machine to take into account the expected expansion in demand, plus one other to replace the machine worn out by the capitalists (1). This process can be represented in the following way:-

5 YEAR CYCLE

Year	Supply	Demand				
1	100	100 -	ordered by capitalist(s)			1
2	100	100 -	"	"	"	2
3	100	100 -	"	"	"	3
4	100	100 -	"	"	"	4
5	100	100 -	"	"	"	5
6	100	100 -	"	"	"	1 (replacement)
	100	100 -	"	"	"	6
7	100	100 -	"	"	"	2 (replacement)
	100	100 -	"	"	"	7
11	100	100 -	"	"	"	1 (replacement)
	100	100 -	"	"	"	6 (replacement)
	100	100 -	"	"	"	11

Obviously Caps (1) (2) (3) etc are not necessarily all different. The same capitalists can and must expand business from year to year.

Regardless of whether the values of the machines alter (ie the example above needs to be translated into value terms), the accumulation by the capitalists using the machinery will have to increase steadily in order that the particular machine-supplying capitalist can maintain production at a steady rate, without himself even accumulating. If he is to accumulate, then the increase in accummulation by the machine-users must be even greater.

From the above example, it can be seen that if the capitalists who use the machinery in question expand their demand for the machines, but at a slower rate than in the preceding year, then this can have a deleterious effect on the machine supplying capitalists. For example, if in year 3 the demand for new machinery is only 50, instead of 100, this can mean a 50 per cent drop in the production of machines (on the flow of production) with men being laid off, capital lying idle. Or, even assuming the machines worn out are replaced in year 7, an increase in demand of 50 instead of 100 would mean a relative overproduction of machines by $33\frac{1}{3}$ per cent. If this sort of development takes place on a large scale, then overproduction will grip several spheres of production. When crises of overproduction take place, the largest fall in production is always in those sectors producing means of production. (*18)

Crises of overproduction stemming from the falling rate of profit can become magnified precisely by the fall off in the demand for new capital. Proportionate production becomes disproportionate production with the progress of the cycle.

(d) A relative overproduction of capital can also arise with an increase in the machines put on the market which outstrip the level of production of raw materials (even if this rises) ie. the social use value of the machinery is thereby diminished. The price of raw materials will rise, the value relations will become disturbed, with the attendant disruption to production. The same phenomenon can arise through scarcity of raw materials from one year to the next.

(e) With the progress of the boom, the expansion of production on a broader basis, with much increased productivity of labour, the volume of goods will tend to increase not just in proportion to the extra capital employed. The same exchange value will be spread over many more use-values and will have to be realised in order to maintain prdouction at the given rate. In this situation, even if each individual commodity contains the necessary labour time to produce it, if it contains more than the socially necessary labour time (ie. more than that which can be absorbed in demand at that time) then there is overproduction of particular commodities.

But, precisely because the capitalist must continue to expand to capture as much of the market as possible and to accummulate to survive, he must appropriate the greatest possible amount of surplus labour and attempt to realise this on the market with an increasing number of commodities.

The level of production, under capitalism, is therefore adapted to the scale of production instead of vice versa.

"When considering the production process we saw that the whole aim of capitalist production is appropriation of the greatest possible amount of surplus labour, in other words the realisation of the greatest possible amount of immediate labour-time with the given capital ...... It is thus in the nature of capitalist production, to produce without regard to the limits of the market."(*19)

Crisis of overproduction of individual commodities (means of production and means of consumption) can and must erupt from time to time.

Cliff's Theory

As far as one can tell, the I.S. Group (or the Socialist Review Group, as it was called) has held the permanent arms economy thesis since the early fifties. It is well known that I.S.'s early collaborators in the USA, the Schactmanites developed this theory prior to Cliff & Co.(*20)

In the absence of documentation to the contrary, it is not unreasonable to assume that I.S.'s theorising was not new, but borrowed from their collaborators, and others such as Sweezy who had developed the theory a decade before the SR Group. The initial bias of all these theories was strongly under consumptionist.

The early S.R. theory on permanent war economy can be found in an article by Cliff written in 1957.(*21) This located the basic cause of capitalist crisis of overproduction in the relatively low purchasing power of the masses.

"The basic cause of capitalist crises of overproduction is relatively low purchasing power of the masses compared with the production capacity of industry."(*22).

We are then treated to exactly the same quotation as we received from Sweezy to back up his claim.(*23) Cliff elaborates —

"Now the armament economy has very great influence on the level of popular purchasing power, the level of real capital accummulation, and the amount of goods seeking a market.

"Let us assume that there are a million people seeking employment in a certain country. Further, that ten per cent of them are employed by the Government in producing arms — some 100,000 people. Their purchasing power would bring about the employment of more people elsewhere. The numerical relation between the size of the first group and the second is called by the great bourgeois economist Keynes, the Multiplier. For brevity this term can usefully be borrowed. If the Multiplier is 2, the employment of 100,000 workers by the state will increase general employment by 200,000. If the multiplier is 3 the increase will be 300,000 and so on.

"Hence there is no doubt that the effect of an arms budget of 10 per cent of the national income can be quite out of proportion to its size is increasing the purchasing power of the masses."(*24)

Cliff then goes on to say that arms production does not necessarily lower profits (mass or rate), capital is working more fully than otherwise, there is much

less capital working at a loss, its turnover is greater. "Thus, for instance, in the years 1937-42 total wages in United States industry rose by 70 per cent, profits by 40%." (*25).

But, why arms as the "public works" which have the stabilising effect? There are, according to Cliff, six basic reasons.

1. They do not compete with private interests which produce in the same field, thus avoiding increasing the danger of overproduction in the particular field in question. In the field of, say, barrack building the state stands alone.

2. They employ industries most affected by slumps - capital goods industries, heavy industries.

3. "That they do not add much - in preference should subtract from- the productive capacity of capitalism and should, as far as possible, slow down the growth of social capital." (*26)

4. "That they do not add much, if at all, to the output of mass consumer goods and thus are not dependant on higher wages for an increasing market." (*27)

5. While not adding to national productive capital, ..ne capitalist class should consider them important for the defence of its wealth and even be a weapon for enlarg-ing its prospective markets.

6. So that relatively one major capitalist country shall not suffer from less resources for capital accummulation its competitors, all major countries, should engage in "Public Works" to an extent corresponding to their level of national output and wealth.

Cliff then finished by highlighting 3 basic contrad-ictions -

a. The burden of armaments may in certain circumstan-ces grow   faster than the net output. This would be likely to lead to great social upheavals and "even a socialist revolution."

b. They eat up a large portion of the national surplus value seeking investment and thus weaken the forces leading to overproduction. But, they may lead to a big advance in general technique and with it increasing pressure towards a slump. Therefore, in such circum-stances there would likely to be an increasing prop-ortion of national income on arms. This may lead to strong opposition from workers and lower middle class people and "perhaps mild opposition even among sectors of the capitalist class who would not benefit directly from the armament drive." (*28)

c. Competition on the world market may become so fierce, that in order to obtain the necessary capital for accummulation, there would be a competitive struggle to cut arms expenditure and hence, arms would become less and less a cure for overproduction and thus, less of a stabiliser. Cliff (1957) held out the prospects for such developments in the not too distant future.

Cliff's use of the multiplier thesis to attempt to illustrate the increase in the purchasing power of the masses (even if there was such an increase, how would this present the forces for crisis?) is somewhat strange. As we saw in the section on crises, the fall off in production in one sector quickly leads to a fall off in others as demand falls, giving rise to a multip-lier effect in reverse.

Similarly, at the beginning of a recovery, the taking up of capacity, the renewed use of capital and labour power lying idle, sets into operation the demand for more constant and variable capital, which in its turn stimulates demand for more means of production and means of consumption. Thus the multiplier operates. This operates with armaments, as it does with the effects of the renewed production of prams, transistor radios or anything you like. However, to what

extent does arms production "create" purchasing power beyond that of wages and revenue gained in such production?

Insofar as the state guarantees outlets for the realisation of surplus value which would not otherwise be realised by purchasing the products of heavy industry and guaranteeing super profits to certain sections of monopoly capital, (for example the years leading up to the first world war for the "great powers", German-rearmament post 1933, American rearmament 1940), this was the main stimulant to the recovery of industry as the existing productive power was put back into operation. So that, in a certain sense, this did in-crease the purchasing power of the masses and certain sections of the capitalist class, but only inso far as it helped to re-establish purchasing power lost in the slump and stagnation. Insofar as it took res-ources which, had there been profitable outlets, would have accumulated this "created" extra wages, revenue etc. Insofar as the recovery laid the basis for renewed accumulation on an extended scale, again extra wages, surplus value etc were generated.

But purchasing power has only been "created" to the extent that arms production has had an anti-cyclical effect, both in stimulating economic recovery, and in the post-war period. However arms production could only be a pre-condition for expansion of the economy, provided forces were at work (which indir-ectly arms may have aided) in the productive sectors of the economy, forces which off-set the effects of declining rate of profit. Armaments production does not enter into the reproduction process. It is a deduction from the total surplus value created in the productive sectors, ie. those sectors which reprod-uce and expand values. Thus, precisely because of this, arms production, in the absence of such off-setting forces to the declining rate of profit can be a barrier to economic recovery). (*29)

As soon as full employment of means of production and labour has been achieved, there can be no fresh expansion of arms production (and military expenditure generally) without transfer of resources from other sectors of the economy to the militarised sectors. Of course, as stated previously, expanded reprod-uction can still take place in the productive sectors, but this has to cover the increase in arms prod-uction as well as that for reproduction on an extended scale.

To come on to Cliff's six reasons why arms should be the "public works" which have stabilising effect and his three contradictions:-

Numbers 2. 4 and 5 are true as hitherto stated, insofar as arms are a replacement market. They can guarantee outlets for capital which would not other-wise be realised, and high profits for certain sectors of the capitalist class, provided that there is an indep-endent dynamic in the productive sectors to sustain the growth, offsetting the tendencies to crisis. In such circumstances arms act as a stabiliser. As will be elaborated in Part II, since World War II   there have been booms and slumps prior to the present stag-nation; arms production has had a role in preventing the slumps sliding into deep depressions.

No. 6 does not take place, as Cliff himself admits in his footnote on p40 of his article. The capitalists and their states do not have slide rules to apportion the arms burden equally between then. In fact this has been one of the problems of British capitalism. The main question is, given the way in which military alliances and burdens have come into being, what are the circumstances which allow these to be borne dis-proportionately at a particular period in world cap-italist development. And why does this start to turn into its opposite in another period.... for example the pressures from the U.S. at present to share the burden more evenly; the pressures to reduce arms spending overall.

Contradiction (a) is certainly possible. One consideration in the pull out from Vietnam, apart from the massive military defeat suffered by the U. S. is the prohibitive cost of the Vietnam war, which, in the initial period gave an impetus to a sliding economy, but which turned into its opposite as the war continued.

Contradiction (b) held out the prospect of over-production of commodities due to big improvement in technique, giving rise to much increased productivity of labour. It was said that the way to overcome this would be to increase the arms budget as a proportion of the "national income". But there are a number of difficulties with that. In so far as arms production is related to the growth of output, it is related to expectations in this growth. Therefore the overprod-of commodities (means of production and means of con-sumption) would take place before the arms production could adjust to this.

(ii) Once this had happened many of the commodities would be unuseable for the arms sector. Hence there would not be a mechanical transfer of surplus value from the productive to the non-productive sectors. There would be disruptions, cut back in production and re-cession before any re-adjustment could take place.

(iii) The high level of arms production (and in-creased production of arms if this were feasible) would prevent a slide into a deep depression, but, if arms production can be stepped up, unless this resulted in contracted reproduction, lowering of wages, living and working conditions, then why should there be the sort of resistance envisaged by Cliff on the part of workers and petty bourgeois elements?

(1V)What effect would increased production of arm-aments relative to the total social product, have on the falling rate of profit andmass of profit available to the capitalist class? This relates to the most important aspect of Cliff's theory, reasons No. l and 3.

Number I can only be partially true. If the capital tied up in armaments were to be invested in, say shoes, then there would be a greater danger of overproduction of shoes. However, as far as the organic composition of capital goes, and thus the rate of profit at a given level of exploitation, it matters not whether the capital is in private or state hands. It's a question of the overall organic composition of capital. In this case, crises of overproduction, resulting from shoes,falls in the rate of profit would not be averted merely by the state investing rather than private capitalists. It would here be a question, once more, of forces off-setting the tendency of the falling rate of profit. This links in with No. 3.If the rate of growth of the social capital is slowed down, then unless arms can possess some mystical quality of squandering value, yet at the same time preventing the rate of profit from falling, then arms production can only have a contingent not a necessary part in the productive mechanism which off-sets the tendency of the falling rate of profit. In other words, unless there is something in armaments prod-uction, which in some way places it outside the reprod-uction process and offsets the tendency of the falling rate of profit, (in which case we would have to throw overboard the labour theory of value), arms production can't have the overwhelming role in maintaining capit-alist stability and growth in the post war period that has been claimed for it by I. S. and its collaborators.

In his article, Cliff points to the increasing rate of profit with the arms-production-led recovery of 1937-42. However, his stress is on the superior util-isation of capital in the recovery period, a develop-ment that has followed every climb out of slump and speeded recovery on its way. From that point of view it is not arms as such which increases the profits, but the recovery which increased arms production stimulat-ed. However, it would be possible to move from this

to positing a necessary role for arms production as such in relation to the rate of profit.

Not surprisingly, the underconsumptionist basis of the permanent arms economy theory has been junked or pushed into the background. The supposed effects of armaments on the now acknowledged central motive force of capitalist crisis, the falling rate of profit, have been elaborated, ie. the supposed necessary effects of arms in offsetting the tendency of the rate of profit to fall, now forms the theoretical basis for the most recent and generally accepted, through I. S., version of the permanent arms economy thesis,that of Kidron.

KIDRON's THEORY

The first part of this analysis is given over to a brief elaboration of the central problem for capitalism as Kidron sees Marxists to have portrayed it. This turns round the question of the declining rate of profit. In this section I look merely at Kidron's central thesis on the role of arms production as offsetting, "perhaps permanently, " in Kidron's words, the tendency of the rate of profit to fall. Since arms are classed, by Kidron, as being in the same category as luxury goods, I look at Marx's analysis of luxury goods production and its algebraic representation as to how it relates to the average rate of profit. I then look at modif-ications of this by Von Bortkiewicz, on which Kidron relies for his analysis.

According to Kidron, "Marxists have in the past seen capitalism as having a permanent tendency to-wards a crisis of overproduction and consequent slump due to the effects of the tendency of the rate of profit to fall." On the other hand, since post-war capitalism has not had a slump for 25 years, there must be something wrong with the old theory of cap-italist crisis. This being the case, Kidron locates the fault in the upholding of the tendency for the rate of profit to fall.

Translating some of the terms in 'Western Cap-italism' (which are no doubt inserted to be meaning-ful to a public versedin bourgeois economics) into corresponding marxist categories, the following is a brief exposition of Kidron's main points in refuting the old crisis theory.

l. The economy was taken as a "closed" system. In this, all "output" flows back into the system as prod-uctive consumption. There are no leakages from this system. Total output is allocated between "investment" (constant capital reproduced in the final "output") and "necessary consumption" (means of subsistence of the laborers – haven't Marxists, certainly Marx, taken the consumption of the capitalists into account? And of course costs of production which do not enter into the creation of value, but are necessary deduction from surplus value.)

2. In this "closed" system, there is an increasing organic composition of capital(organic composition of capital = c/v ie. constant capital forming an in-creasing proportion of the whole. Thus without a corresponding increase in surplus value offsetting the effect of the increase in total capital and the increasing proportion of constant and variable cap-ital, the rate of profit $p = s/(c+v)$ must fall. Since this just does not happen on the whole, the rate of profit will fall.

For Kidron, condition No l is pivotal, "If dropped, and the ratio of the returns of capital and labour becomes indeterminate, the second falls and the 'law' with it. "(*30)

Before going on to Kidron's main assailing of the concept of the "closed system", it might be instructive from the point of view of economic method, to see some of the features that Kidron regards as departing from "closed system" ie. as constituting "leaks" from it,

in order to understand his conception of the "closed system" itself.

This is done in IS No 36 (*31) Briefly, the said leaks are export of capital, wars, slumps and luxury good production, especially armaments (*32) It is the latter that mainly concerns us. However, if we look briefly at the others listed we see a non-Marxist conception of the "economic system".

Export of capital and its effects are hardly dealt with in 'Western Capitalism'. This is perhaps not surprising in view of the denial of the existence of imperialism as conceived by Leninists as being the stage of monopoly capitalism operating today. However, in the article mentioned above, capital exports are said to have "leaked" from the closed system, "diverting" and "freezing" large quantities of capital from it.

The point is, that this can be explained by capital exports flowing to branches of production and areas of the world where a low organic composition of capital, and/or a higher rate of surplus value prevailed (and hence a higher rate of profit). They have not been a leak from the "closed system" – unless the "closed system" is regarded as a single country, which is nonsense since capitalism is an international system and the export of capital has been an essential part of its dynamic. That this is so is not only acknowledged since Lenin, but Marx never treated capitalism as a "closed system" in the sense mentioned above. eg. Footnote I p. 581 Capital Vol I :-

"In order to examine the object of our investigation in its integrity, free from all disturbing subsiduary circumstances, we must treat the whole world as one nation, and assume that capitalist production is everywhere established and has possessed itself of every branch of industry." Regardless of the truth of this statement in 1867, the underlying methodological assumptions are the direct opposite of those of the "closed system" analysis.

Wars, insofar as they destroyed fixed and consta stant capital (they don't always), lower the organic composition of capital thus preventing a fall in the rate of profit (even reversing the trend). But so what? Insofar as wars are an inevitable consequence of capitalism, they certainly can't be considered as being outside the "closed system", any more than can slumps.

Slumps likewise destroy capital as value through depreciation of stocks of goods (plant and buildings go to ruin) and of fixed capital. This leads to a decline in the organic composition of capital and thus to a temporary reversal of the tendency of the rate of profit to fall which sets off the cycle over again. This is no "leak" from a "closed system", but is built into the economic system of necessity.

So, the concept of the "closed system" is a faulty or (dare we say it) a "leaky" one. However, the main concern is with the effect of arms production on the organic composition of capital and the overall rate of profit.

If it were the case that arms production was somehow "outside" the "system" and draws capital off, it would still need to be demonstrated how the organic composition of capital in the "system" did not rise so as to bring about a falling rate of profit, overproduction etc etc ......

So what is this "leak"? What is its economic effect?

With respect to arms production as a "leak", the said phenomenon is supposed to be operative in virtue of arms coming under the category of luxury goods. Being part of what has been called Department III (non-productive capital, personal consumption of capitalists, gold production etc., Dept. I being necessary means of production, Dept. II necessary means of subsistence for the workers). the organic composition of capital in producing such goods is supposed to play no part in determining the general rate of profit. Now it so happens that Marx included luxury goods as a

definite category, in his analysis. Therefore it seems appropriate that we should start with a look at Marx's analysis of luxuries.

Marx and Luxury Good Production

The richness of Marx's method, whether he is considering economic, philosophical, historical, or any other aspect of human existence, consists in his relating the parts to the whole. Marx always shows how the whole conditions the parts and the parts condition the whole; how the motion of the parts determines the whole and are determined by it. So it is in considering the dynamics of capitalist production as embodied in 'Capital'. Marx looks at capitalist production as a whole, and on the basis of establishing the scientific concept of commodity, value, surplus value, exploitation, the nature of capital (and its constituent parts) explains profit and rate of profit in these terms.

The rate of profit is given by $p = \frac{s}{C} \times 100 = \frac{s}{v+c} \times 100$

The contradictions embodied in this formula are developed by Marx in considering the production and reproduction of commodities. Capitalist production is broken down into its constituent parts namely – production of means of production and production of means of consumption. Here the two departments of production are called by Marx, respectively, Dept I and Dept II.

To show how exchange can take place within and between these Depts, Marx firstly makes a number of abstractions, later rounding out the picture.
(a) he takes reproduction on a simple scale ie. all that is produced in any one year is consumed; production in one year is identical with that of the preceding year.
(b) products are exchanged at their values. There is no change in the values of the component parts of productive capital.
(c) The organic composition of capital (c/v) and the rate of exploitation (s/v) is the same in both departments so that the rate of profit in each department is equal to the overall rate of profit.

These assumptions do not and cannot apply to any actually existent capitalism. However, as total price must equal total value "the fact that prices diverge from values cannot .... exert any influence on the movements of social capital. On the whole (my emphasis P. S.) there is the same exchange of the same quantities of products.

"Although the individual capitalists are involved in value relations no longer proportional to their respective advances and to the quantities of surplus value produced singly by everyone of them. As for revolutions in value, they do not alter anything in the relations between the value components of the total annual products, provided they are universally and evenly distributed. To the extent however, that they are partially and unevenly distributed, they represent disturbances which in the FIRST (Marx's emphasis) place, can be regarded as DIVERGENCIES from unchanged value relations, but in the SECOND place, once there is proof of the law according to which one portion of the value of the annual product replaces constant, and another portion variable capital, a revolution either in the value of the constant or that of the variable capital would not alter anything in this law. It would change merely the relative magnitudes of the portions of value which function in the one or the other capacity, because other values would have taken the place of the original ones." (*33)

As for the assumption of simple reproduction, Marx posits it only as part of the picture, which is nevertheless fruitful to look at because "as far as accumulation does take place, simple reproduction

is always a part of it, and can therefore be studied by itself, and is an actual factor of accumulation".(*34) But only a factor. This must be stressed, as it's the source of one of Kidron's gross errors. This we'll return to later.

Marx takes the total annual product consumed as constant capital (consumed raw material going into the finished product and wear and tear of the final capital) plus the portion of product devoted to variable capital, (v), plus the excess over this, the surplus value (s) So annual product = c + v + s.

To take Marx's example (Cap Vol II pp 401) Total annual commodity product = 9000
Of this, capital = 7500
Surplus value = 1500
"Rate of profit" on flow $p^1 = \frac{1500}{7500} = \frac{1}{5}$ or 20%

Dep I - Production of Means of Production

Capital 4000c + 1000v = 5000
Commodity product 4000c + 1000v + 1000s = 6000 existing in means of proudction

Dept. II - Production of Articles of Consumption:

Capital 2000c + 500v = 2500
Commodity-
Product 2000c + 500s + 500v = 3000

existing in articles of consumption

Thus $p^1 = \frac{1500}{7500} = \frac{s_i + s_{II}}{c_i + c_{II} + v_i + v_{II}} = 20\%$

and $p^1 = \frac{s_i}{c_i + v_i} = \frac{1000}{5000} = 20\%$

and $p^1 = \frac{s_{II}}{c_{II} + v_{II}} = \frac{500}{2500} = 20\%$

(Subscript refers to the particular dept. under consideration.)

So far so good. There is no inconsistency between the whole and the parts. The return on consumed capital ($_p1$) is the same in each department and throughout. (*see Appendix 2)

Marx then analyses Dept II. articles of consumption are broken down into their 2 general components – necessities (IIa) and luxuries (IIb).

Those articles which the working class consume and which form part of the consumption of the capitalist class are necessities. Those which only the capitalists consume are luxuries. Clearly, both these categories of consumption are relative, depending very much on the relationship of class forces at any one time, the state of the economic cycle and historically developed patterns of consumption. All of these affect variously the rate of exploitation, the proportion of consumption articles to be only consumed by the capitalists and even, to an extent, whether certain articles at different periods, become necessities from being luxuries, or luxuries from being necessities. This being the case, Marx's only purpose in analysing Dept II was in order to clarify the mechanism of commodity enchange to show how (a) the proletariat can consume neither goods in Dept I nor those in Dept IIb; (b) all Dept IIb must be exchanged for part of the surplus value. As such, luxury goods production (in the sense Marx meant it, can only be a fraction of the total surplus value.

These points are illustrated in the exchange relationships within and between Depts. The scheme Marx adopts is such that luxury good form 2/5 of total capitalist class consumption. Thus we obtain the

following breakdown, using Marx's initial figures.
I   4000c + 1000v + 1000s = 6000
IIa 1600c + 400v + 400s = 2400
IIb 400c + 100v + 100s = 600   (see appendix)

The point about this whole scheme is that there is no disparity between the whole and the parts. Nor can there be. Since the totals of the individual departments and the proportions within them are the same as those of the whole, it is obvious that the rate of profit is the same throughout and, since Marx posited the whole economic system and showed how luxury goods are a part of this whole, luxury goods, for Marx, can be neither "outside" the system, nor a "leak" from it, nor a "drain" from it.

So (I) luxury goods (and the rate of profit on these) are part of the total social product, their distinguishing feature being only that the capitalist class alone consumes such goods. Furthermore, the boundary line between luxuries and necessities is relative and shifting.

(II) In producing items for its own consumption the laws of capitalist production are as applicable as ever. Value and surplus value are screwed from the working class so that the capitalists can even make a profit when they're producing solely for their own use!

And (III) Since luxury production must be exchanged against surplus value produced in Depts I and IIa, the total value of luxury good dept IIb must always be less than this surplus value.

So far we have been considering an idealized version of simple reproduction in which the organic composition of capital and the rate of exploitation is the same in all departments.

To make our scheme of simple reproduction that much more realistic it is necessary to postulate different organic compositions of capital within the different departments, the overall organic composition of capital and "rate of profit" being determined by the totals for the constituent departments.

This can be done in the following manner using 3 departments. I make this departure because the Kidron theorising on Permanent Arms Economy utilises this approach, adopted from Von Bortkiewicz (*35) Dept I is all raw materials, machinery, buildings etc. consumed in production. This is equivalent to the value of the constant capital consumed and re-appearing in the finished product. Dept II is all workers' consumption goods, and therefore equivalent to the total value of the variable capital (wages). Dept III is all capitalists' consumption, and therefore equivalent, in simple reproduction, where all values produced are consumed, to the total surplus value produced. Also, Dept III is here called "luxury goods" by Von Bortkiewicz, Sweezy and Kidron. Note the slightly changed use of the term "luxury", as compared with Marx's usage. The workers don't consume these particular goods in either case, yet part of Dept III would, being common types of good for worker and capitalist alike be placed by Marx in Dept IIa (necessities). So much for that. Let us accept Von Bortkiewicz's categories in order to tackle Kidron's analysis.

Thus I $c_1 + v_1 + s_1 = c_1 + c_2 + c_3$ (total constant capital)
II $c_2 + v_2 + s_2 = v_1 + v_2 + v_3$ (total wages (variable cap))
III $c_3 + v_3 + s_3 = s_1 + s_2 + s_3$ (total surplus value)

eg. Value Scheme (*36)

Dept	C	V	S	
I	$250c_1$	$75v_1$	$75s_1$	= 400
II	$50c_2$	$75v_2$	$75s_2$	= 200
III	$100c_3$	$50v_3$	$50s_3$	= 200
	400 I	200 II	200 III	

This scheme, as before, is for the flow of goods not

the stock. Thus: $p^1 = (s_1 + s_2 + s_3)/(c_1 + c_2 + c_3 + v_1 + v_2 + v_3)$

Now, as can be seen above, there is a different return on the capital flow in each department, as each has a different organic composition of capital, yet the same rate of exploitation (This need not necessarily be so but a differential rate of exploitation would not alter the argument if $s/(c+v)$ is different in each dept.)

Hence, if there is to be an equal "rate of profit" (p) in all departments, equal to that of the general rate then inevitably one department must subsidise the others so that a distribution of profit takes place in proportion to the overall (constant and variable) capital consumed.

Marx's solution to this problem was merely to manipulate the prices so that those of constant and variable capital remained unaltered in relation to value, while the total price of each department was made up by adding or subtracting that extra amount in accordance with their capital consumed.

So the price scheme would look like this:-

	C	V	Profit	Price	Dev'n from val
Dept. 1	250	75	108 1/3	433 1/3	+33 1/3
Dept. 2	50	75	41 2/3	166 2/3	-33 1/3
Dept. 3	100	50	50	200	0
	400	200	200	800	0

As can be seen, total price = total value . However the exchange relationships do not balance, the equilibrium of simple reproduction is disrupted. The value of the constant capital produced is 400. It is priced at 433 1/3. The total price of the constant capital used up is in Depts 1, 2, 3 is only 400. Also, the value of wage goods (Dept 2) = 200, the price is only 166 2/3 yet the price of labour power in Depts 1, 2, 3 is 200.

Kidron after Sweezy, adopts von Bortkiewicz's solution to the price transformation. Assume that the price of a unit of constant capital is x times its value, the price of a unit of wage goods is y times its value, and the price of a unit of "luxury" goods is z times its value. If we call the new monetary rate of profit on the flow of capital r then we obtain the following:-

Value Relations

I $\quad c_1 + v_1 + s_1 = c_1 + c_2 + c_3$

II $\quad c_2 + v_2 + s_2 = v_1 + v_2 + v_3$

III $\quad c_3 + v_3 + s_3 = s_1 + s_2 + s_3$

Price Relations

I $\quad c_1 x + v_1 y + r(c_1 x + v_1 y) = (c_1 + c_2 + c_3)x$

II $\quad c_2 x + v_2 y + r(c_2 x + v_1 y) = (v_1 + v_2 + v_3)y$

III $\quad c_3 x + v_3 y + r(c_3 x + v_3 y) = (s_1 + s_2 + s_3)z$

These can be rewritten thus:-

I $\quad (1 + r)(c_1 x + v_1 y) = (c_1 + c_2 + c_3)x$

II $\quad (1 + r)(c_2 x + v_2 y) = (v_1 + v_2 + v_3)y$

III $\quad (1 + r)(c_3 x + v_3 y) = (s_1 + s_2 + s_3)z$

There are 3 equations and 4 unknowns. A fourth one could be constructed, given total value = total price viz.

$(c_1 + c_2 + c_3)x + (v_1 + v_2 + v_3)y + (s_1 + s_2 + s_3)z =$

$(c_1 + c_2 + c_3) + (v_1 + v_2 + v_3) + (s_1 + s_2 + s_3)$

What Bortkiewicz did instead though, was to link the labour time necessary to produce one unit of the money (say 1/35th ounce) commodity to the necessary labour time to produce the other commodities. Hence, the value scheme can be put in money terms. Then one unit of gold becomes the unit of value. Also, Bortkiewicz made the simplification that the units of "luxury" goods were so chosen that they all exchange against the unit of gold on a one-to-one basis. So that, in going from the value to price scheme, the unit of gold would be equal to one in both schemes, and therefore so would that of luxury goods. This way, z = 1 and we have three unknowns; the equations are soluble. This is obviously a dodge. However if z is known, then again we only have three unknowns. But anyway z does not have to be known to derive this new monetary rate of profit (r).

If we let $1 + r = m$, then the three price equations look like this:

I. $\quad m(c_1 x + v_1 y) = (c_1 + c_2 + c_3)x$

II. $\quad m(c_2 x + v_2 y) = (v_1 + v_2 + v_3)y$

III. $\quad m(c_3 x + v_3 y) = (s_1 + s_2 + s_3)$

Divide Equation I by c_1, Equation II by c_2, Equation III by c_3. Thus –

I. $\quad m(x + v_1/c_1 \cdot y) = \dfrac{c_1 + c_2 + c_3}{c_1} \cdot x = \dfrac{c_1 + v_1 + s_1}{c_1} \cdot x$

II. $\quad m(x + v_2/c_2 \cdot y) = \dfrac{v_1 + v_2 + v_3}{c_2} \cdot y = \dfrac{c_2 + v_2 + s_2}{c_2} \cdot y$

III. $\quad m(x + v_3/c_3 \cdot y) = \dfrac{s_1 + s_2 + s_3}{c_3} = \dfrac{c_2 + v_3 + s_3}{c_3}$

putting $f_1 = v_1/c_1$ and $g_1 = \dfrac{v_1 + c_1 + s_1}{c_1}$ etc.

Our equations can be rewritten

I. $\quad m(x + f_1 y) = g_1 x \quad\quad \dots(1)$

II. $\quad m(x + f_2 y) = g_2 y \quad\quad \dots(2)$

III. $\quad m(x + f_3 y) = g_3 \quad\quad \dots(3)$

Subtract (2) from (1) – $m(f_1 y - f_2 y) = g_2 x - g_2 y$

∴ $x = y/g_1 \cdot (mf_1 - mf_2 + g_2) \quad\quad \dots(4)$

Substitute (4) in (2) –

$my/g_1 \cdot (mf_1 - mf_2 + g_2) + mf_2 y = g_2 y \quad .. (5)$

Divide (5) throughout by y and we get an equation for m on the basis of our price equations for Depts. I & II, viz. –

$$m^2(f_2 - f_1) + m(g_2 + f_2 g_1) - g_1 g_2 = 0$$

This gives two values for m:

$$m = \frac{g_2 + f_2 g_1 \pm \sqrt{(g_2 - f_2 g_1)^2 + 4g_1 g_2 f_1}}{2(f_2 - f_1)}$$

Since the value

$$m = \frac{g_2 + f_2 g_1 - \sqrt{(g_2 - f_2 g_1)^2 + 4g_1 g_2 f_1}}{2(f_2 - f_1)}$$

is the only one to make sense in the context, this must be the solution.

Since $m = r + 1$;
then $r = m - 1$;

$$r = \frac{f_2 g_1 + g_2 - \sqrt{(g_2 - f_2 g_1)^2 + 4f_1 g_1 g_2}}{2(f_2 - f_1)} - 1$$

- -

Also from (2) & (3); $y = \dfrac{g_3}{g_2 + (f_3 - f_2)m}$

$$x = \frac{f_1 y m}{g_1 - m}$$

In the example quoted, $x = 9/8$, $y = \frac{3}{4}$, $m = 4/3$;

$\therefore r = 1/3$

Thus the price calculation is as follows:

Dept.	Constant Capital	Variable Capital	PROFIT	PRICE
I	$281\frac{1}{4}$	$56\frac{1}{4}$	450	$112\frac{1}{2}$
II	$56\frac{1}{4}$	$56\frac{1}{4}$	150	$37\frac{1}{2}$
III	$112\frac{1}{2}$	$37\frac{1}{2}$	200	50
	450	150		200

As will be seen, if the price relations of constant capital, variable capital and profit in Depts. I, II, and III respectively are:

$c_1 v_1 p_1$; $c_2 v_2 p_2$; $c_3 p_3 v_3$.

we see that:

$$c_1 + v_1 + p_1 = c_1 + c_2 + c_3$$

$$c_2 + v_2 + p_2 = v_1 + v_2 + v_3$$

$$c_3 + v_3 + p_3 = p_1 + p_2 + p_3$$

Thus simple reproduction is maintained. And, as can be seen from above, the formula for the rate of profit in monetary terms in this case, (it happens to be equal to that in value terms overall, but this is not necessarily the case) does not contain f_3, i.e. v_3/c_3, the organic composition of capital on the flow in dept III (not the real organic composition), or g_3 (the ratio of constant capital to total output in department III).

Sweezy, and Kidron after him, them make the biggest mathematical, logical, value, howler of the lot. Because neither f_3, g_3 appear in the formula for the monetary rate of profit on the flow (r), Sweezy maintains that "the organic composition of capital in Dept. III (luxury goods) plays no direct role in determining the rate of profit." And, "To demonstrate that there is no necessary connection between variation in the average organic composition of the total social capital and variations in the average rate of profit, one need only assume that the organic composition of capital in Dept. III rises while everything else remains unchanged. The average organic composition of capital must rise, but the rate of profit remains unaffected." And Kidron: "Since arms are a 'luxury' in the sense that they are not used either as instruments of production or as means of subsistence, in the production of commodities, their production has no effect on profit rates ...."

What has happened here is that a correct mathematical conclusion has been wrongly abstracted from the context in which the mathematical relations obtained. As we saw, 'm'can be deduced from the variables in Dept I and Dept II. Mathematically Dept III could contain any relations without affecting Depts I & II; ie. Dept III could be completely independent from Depts I & II in relation to 'm'. But it would only follow that the organic composition of capital in Dept

III was of no consequence in determining the overall rate of profit if Dept III production was a completely independent entity, bearing no necessary (production, mathematical, value) relationship to the other Depts. The point is that production in Depts I, II and III is part of the total social production, all being interelated and determining each other.

It seems very strange that one starts with the proposition that there must be an equal rate of profit in all departments, which is equal to the average rate of profit (the rate of profit on the total social capital), and one cannot accept Marx's transformations from value to price because they destroy the equilibrium, yet arrive at conclusion which would entail just that. The conclusion that the organic composition of capital in Dept III is irrelevant would only apply if production in Dept III was truly independent ie. was not in any way dependent on Depts I & II and vice versa. Then Dept III production would be "outside" the economic system and the organic composition of capital and even the peculiar rate of profit in Dept III would be irrelevant; there would be no need to postulate equilibrium between Departments of production.

The value and exchange relationships and the realisation problem have been lost sight of; if the conclusion adopted by Bortkiewicz ,Sweezy, and Kidron were accepted, the labour theory of value would be thrown out of the window.

Let us look at the reproduction schemes again.

Value Relation

Dept.	Constant Capital	Variable Capital	Surplus Value
I	c_1	v_1	s_1
II	c_2	v_2	s_2
III	c_3	v_3	s_3

$c_1 + v_1 + s_1 = c_1 + c_2 + c_3$ .....(A)

$c_2 + v_2 + s_2 = v_1 + v_2 + v_3$ .....(B)

$c_3 + v_3 + s_3 = s_1 + s_2 + s_3$ .....(C)

From (A) $c_3 = v_1 + s_1 - c_2$

From (B) $v_3 = c_2 + s_2 - v_1$

It follows from this that if c_3 or v_3 or both is altered then if the value relations are to be correct v_1, s_1, c_2, s_2 at least must be altered. (Thus f_1, f_2, and g_1 & g_2 will be altered and therefore so will r)

But these alterations would be subject to definite laws. Since we are relating the mathematics to a simple reproduction process, the organic composition of capital will change in either or both departments I and II, and since labour is the source of all value, not only would the absolute amount of surplus value be altered but also (value-wise, on the flow) the rate of profit in each Dept. and therefore the whole. 'r', which is expressed in terms of c_1, v_1, c_2, v_2, would thus be altered as they are altered.

e.g. let us assume:

I	250 (c_1)	+	75 (v_1)	+	75 (s_1)
II	50 (c_2)	+	75 (v_2)	+	75 (s_2)
III	100 (c_3)	+	50 (v_3)	+	50 (s_3)

If the organic composition of capital in III is changed so that the total capital remains the same, i.e. $c_3 = 125$, $v_3 = 25$, unless the rate of exploitation

doubles the surplus value will go down.

(Even if the rate of exploitation were doubled and the rate of profit in Dept. III remained unaltered, the reproduction scheme would not balance.)

Thus Dept. III will now read:

$125c_3 + 25v_3 + 25s_3$ so that:

I $250(c_1)$ $+$ $75(v_1)$ $+$ $75(s_1)$

II $50(c_2)$ $+$ $75(v_2)$ $+$ $75(s_2)$

III $125(c_3)$ $+$ $25(v_3)$ $+$ $25(s_3)$

Not only would the total surplus value diminish, but the rate of profit (on the flow) would do so also, as the total capital remains the same. However, as will be noticed, the value scheme does not balance. The value of capital goods (Dept. I) is 400, the value of constant capital used ($c_1 + c_2 + c_3$) is 425; the wages goods produced are valued at 200, the value of the variable capital (total wages) is only 175. In Dept. I, either v_1 or s_1 or both will have to be changed to add another 25 to the value. Similarly this will, in its turn, alter s_2 and v_2.

It is feasible, mathematically, that the organic composition in Dept. III can be altered, the total capital in III being the same, the surplus value in III remaining unaltered. * Thus the total social production would still be divided into 200 surplus value, 600 capital and the "rate of profit" on the flow would still be 1/3rd. However, the reproduction scheme would not balance yet again. Thus the value would not be realised and therefore the rate of profit in fact could not be 1/3rd. To illustrate this the scheme would look like this:-

I $250(c_1)$ $75(v_1)$ $75(s_1)$ 400

II $50(c_2)$ $75(v_2)$ $75(s_2)$ 200

III $125(c_3)$ $25(v_3)$ $50(s_3)$ 200

      425   175   200

The total value of capital goods produced $= 400$
The total value of capital goods used ($c_1 + c_2 + c_3$) $= 425$
Similarly $c_2 + v_2 + s_2$ (wages goods) $= 200$
Total value of wages ($v_1 + v_2 + v_3$) $= 175$

(* Of course assuming that more constant capital is forthcoming (from where in simple reproduction?) for Dept. III, it is feasible to increase this, variable capital remaining unchanged, the organic composition of capital in Depts. I & II remain unchanged. Here a correspondingly equal amount of surplus value would have to be forthcoming in Dept. I to maintain the reproduction scheme. In this case the organic composition of capital would rise, but so would the rate of profit, due to an increase in the rate of exploitation offsetting that. But how would that arise?

If the organic composition in Dept. III were somehow to be increased, c_3 and v_3 increasing, it is impossible to balance the scheme, keeping the organic composition of capital the same in the other two Depts.)

It would be mathematically possible to restore this equilibrium maintaining the organic compositions of capital of I & II and the total social capital. Thus:

I   200   75   100   425*
II   50   75   50   175**
III   125   25   50   200***
    425*   175**   200***

How could these mathematical possibilities become actualities? At the same time as the rate of exploitation in Dept. III doubles (how?), the rate of exploitation

would magically have to increase from 100% to $133\frac{1}{3}$rd% in Dept. I, while it would have to decrease from 100% to $66\frac{2}{3}$rds. % in Dept. II. All this with a redistribution of the total social capital! Truly absurd!

But, since the value relations have tended to be lost sight of and the rate of profit expressed in monetary terms, since

$$r = \frac{g_2 + f_2 g_1 - \sqrt{(g_2 - f_2 g_1)^2 + 4 g_1 g_2 f_1}}{2(f_2 - f_1)} - 1$$

even in the fairy tale world of rates of exploitation rising and falling with mathematical imperatives, the monetary rate of profit on the flow would be altered, as g_1 and g_2 are altered (from 400/250 to 425/250 and from 200/250 to 175/250 respectively, since the expression for 'r' contains g_1 and g_2. In this particular case 'r' is not very much altered, but as a generality it would be.)

The point is that mathematical precision cannot be guaranteed given the available techniques of production and the rate of exploitation. The proportions of the factors of production are not governed by the imperatives of mathematical relationships!

Similarly, with the price transformations. If the price of the constant capital in Dept. I is C_1, of the variable capital in I is V_1, and of the profit in I is P_1, etc., then the price scheme would be expressed as:

I. $C_1 + V_1 + P_1$

II. $C_2 + V_2 + P_2$

III. $C_3 + V_3 + P_3$

and $C_1 + V_1 + P_1 = C_1 + C_2 + C_3$

       $C_2 + V_2 + P_2 = V_1 + V_2 + V_3$

       $C_3 + V_3 + P_3 = P_1 + P_2 + P_3$

Again, alterations in C_3 and V_3 would require alterations in C_2, P_2, V_1 and P_1. In any case the price relations are directly determined by the value relations;

   $C_1 = c_1 x$, $C_2 = c_2 x$, $C_3 = c_3 x$

   $V_1 = v_1 y$, $V_2 = v_2 y$, $V_3 = v_3 y$

   $P_1 = r(c_1 x + v_1 y)$, $P_2 = r(c_2 x + v_2 y)$,

   $P_3 = r(c_3 x + v_3 y)$.

i) It is quite clear that the organic composition of capital in Dept. III cannot be increased, everything else remaining unchanged.

ii) The surplus value, profit, rate of profit will alter with alterations in Dept. III, as with alterations in either (or both) of the other Depts.

iii) The overall organic composition of capital will change with a change in one or more Departments unless there is a corresponding change in the other Depts., so that the total capital in the three Depts, and the organic composition of capital, is obtained by adding the capital in the constituent Depts and thus the total surplus value and the rate of profit is that on the total production.

As a corollary to this, 'r' can be deduced from the variables in Depts. I & II, using the total production scheme and the inter-relation between Depts. I, II & III

because Dept. III is directly expressable (and must be) in terms of Dept. I and II variables and 'r'. This showed in the Quadratic equation for 'm', but that calculation was not necessary to prove this point.

PRICE SCHEME

I $\qquad C_1 + V_1 + P_1$

II $\qquad C_2 + V_2 + P_2$

III $\qquad C_3 + V_3 + P_3$

$$C_3 + V_3 + P_3 = P_1 + P_2 + P_3$$
$$\therefore \ C_3 + V_3 = P_1 + P_2, \text{ since } P_3 = r(C_3 + V_3)$$

Then the price scheme can be rewritten:

I $\qquad C_1 + V_1 + P_1$

II $\qquad C_2 + V_2 + P_2$

III $\qquad P_1 + P_2 + r(P_1 + P_2)$

Taking the total social production, rate of profit 'r' = Total Profit / Total capital consumed

$$r = \frac{P_1 + P_2 + r(P_1 + P_2)}{C_1 + V_1 + P_1 + C_2 + V_2 + P_2}$$

Rearranging –

$$r(C_1 + V_1 + P_1 + C_2 + V_2 + P_2)$$
$$= P_1 + P_2 + r(P_1 + P_2)$$
$$\therefore \ r = \frac{P_1 + P_2}{C_1 + V_1 + C_2 + V_2}$$

This is obvious $r = P_1/(C_1 + V_1) = P_2/(C_2 + V_2)$

$= P_3/(C_3 + V_3) = (P_1 + P_3)/(C_1 + V_1 + C_3 + V_3)$

$= (P_2 + P_3)/(C_2 + V_2 + C_3 + V_3)$

$= \dfrac{P_1 + P_2 + P_3}{C_1 + V_1 + C_2 + V_2 + C_3 + V_3}$ because the monetary rate of profit is the same for each Dept. and the overall production.

Kidron's theory allows for a change in the organic composition of capital in Dept. III without this affecting the general rate of profit. This is wrong. What about production in Depts. I and II? As well as being guilty of abstracting the mathematics from their context as that of representing value relations in simple reproduction, Kidron's theory (not Bortkiewicz's or Sweezy's) implies that the organic composition of capital in Depts. I & II remain unaltered; i.e. do not increase. Apart from the fact that it cannot work mathematically, this is indeed a very strange capitalism, in fact a non-existent capitalism.

In addition to the basic error of Sweezy and Kidron, as outlined above, there are a number of further problems which tend to invalidate the conclusions drawn from the Bortkiewicz transformations.

(i) The transformations relate to the flow of capital. The real rate of profit relates to the total capital employed in production, regardless of whether it is used up or not. (See section on luxury goods.) As such, the Bortkiewicz transformations will be wrong.*(*I shall call the rate of profit calculated on the flow the "rate of profit" – p¹.)

(ii) The rate of profit 'r' is expressed in price terms not in value terms. Although all Depts. may have

the same "rate of profit" = r, the real rate of profit (p) will differ in each Department.
Thus:

	Value			Price		
	c	v	s	c	v	Profit
I	250	75	75	$281\frac{1}{4}$	$56\frac{1}{4}$	$112\frac{1}{2}$
II	50	75	75	$56\frac{1}{4}$	$56\frac{1}{4}$	$37\frac{1}{2}$
III	100	50	50	$112\frac{1}{2}$	$37\frac{1}{2}$	50

Now, since z = 1, the value of the profit will equal that of the price. However, the value of capital consumed will not. In Dept. I, price of capital consumed = $281\frac{1}{4} + 56\frac{1}{4} = 337\frac{1}{2}$. "Rate of profit" (price terms) = $112\frac{1}{2}/337\frac{1}{2} = 1/3$rd.

However, the $281\frac{1}{4}$ is only worth 250, in value terms, and the $56\frac{1}{4}$ is worth 75 in value terms. Thus, the value of the capital employed = 325 (as in the value scheme).

Therefore, $112\frac{1}{2}$ profit (price) is worth $112\frac{1}{2}$ (value), the "rate of profit" in value terms p_1^1 = $112\frac{1}{2}/325$, i.e. more than 1/3rd.

Similarly, "rate of profit" in Dept. II = r = 1/3rd, p_2^1 (value) = $37\frac{1}{2}/125$, ie less than 1/3rd,

and "rate of profit" (price) in Dept. III = r = 1/3rd, p_3^1 (value) = 50/150 = 1/3rd.

So, only in Dept. III do the "rates of profit" tally.

It so happens that r = the overall "rate of profit" (value) in the case in question. However, if the organic composition of capital in the gold industry differs from that of the average social capital, then gold will be either under or over priced.
Thus;

(a) if all other commodities are expressed in terms of the labour time necessary to produce a unit (1/35th. oz.) of gold then the total price will differ from the total value, although whatever the price it will only be able to buy the given number of values. Really the total price cannot differ from the total value expressed in socially necessary labour time, for the production process not to be disrupted.

(b) In this case 'r' will not be equal the "rate of profit" (value), as well as the "rate of profit" (value) being different in each Dept. and not tallying with 'r'.

e.g. Value calculation

Dept.	Constant Capital	Variable Capital	Surplus Value	Value
I	225	90	60	375
II	100	120	80	300
III	50	90	60	200
Total:	375	300	200	875

Price Calculation

	c	v	Profit	Price
I	288	96	96	480
II	128	128	64	320
III	64	96	40	200
Total:	480	320	200	1000

$p^1 = 200/675$, $r = 200/800$

Marxists have always been concerned with value relations. It is these that in the long run determine the

fundamental dynamics of production. However, as the rate of profit falls in value terms it must also do so in price terms, though not in direct proportion.

(iii) A far more fundamental criticism of the Bortkiewicz transformations is that they are static. They are based on simple reproduction. But this does not conform to any existing capitalism, and it cannot (except as a constituent part of the expansion process) since it lacks the necessary dynamic inherent in capitalist production, ie. the dynamic leading to capital accumulation – production on an extended scale, in which the organic composition of capital tends to increase. This being the case, even if the Bortkiewicz Sweezy-Kidron theorising on the rate of profit being unaffected by the organic composition of capital in Dept. III were correct - what about that in Depts. I & II? Is the "marxist" Kidron going to maintain that this has not altered (ie has not increased) in the post-war boom period? Surely not! All evidence points to the contrary.

Thus the theory would be in tatters, the offsetting of the tendency to the falling rate of profit would have to found in other factors (if it is to be found) apart from the false postulate about Dept. III production.

(iv) The tendency to the equalised rate of profit was always, at best an approximation. Certain capitalists have always been able to enjoy a rate of profit above the average (see section on capitalist crisis), certain are forced to accept a rate of profit below the average. Thus, apart from the fact that each capitalist does not carry a slide rule to make sure that he doesn't exceed or fall below the general rate of profit, the overall price of his product being determined by circumstances beyond his control, there is also no single rate of profit on account of the fact that under monopoly capitalism the monopoly sectors enjoy considerably higher rates of profit than the non-monopoly sectors. Thus the general rate of profit will not be able to be expressed in terms of Dept I & II variably. The Bortkiewicz conclusion, rightly or wrongly interpreted, will not apply either to simple or extended reproduction.

ARMS AS LUXURIES

It has been maintained by Kidron that since arms do not enter into the production and reproduction of means of production, or means of consumption for the masses, then they must be classed as "luxuries" – Dept. III. However, even if we accept Kidron's conception of arms as "luxuries" there are differences in terms of effects on the total social product, surplus value and rate of profit of items within Dept. III. There are certain goods that are consumed by the capitalists and, as such, are part of their profit ie. function as revenue. On the other hand there are other goods which also do not form means of production, nor means of consumption for the masses, but which also do not form means of consumption for the capitalists. In other words, they are really deductions from the social product. Deduction incurred from the surplus value, necessary for the realisation of the product in its existing form.

"Whatever may be the social form of the product supply, its preservation requires outlays for buildings, vessels etc, which are facilities for storing the product; also for means of production and labour, more or less of which must be expended according to the nature of the product, in order to combat injurous influences... These outlays always constitute a part of the social labour, in either materialised or living form – hence in the capitalist form outlays of capital – which do not enter into the formation of the product itself and thus are deductions from the product.... They are the costs of preserving the social product ... (*39)

Among such costs, in terms of their economic

effect are eg. buildings for storage, advertising etc. The fact that a capitalist has to build a storage hut to preserve his product, adds not one bit to the value of the product. Similarly, advertising is merely one of the costs incurred in order to sell the particular product. It adds nothing to the value and so, must be deducted from the surplus product or surplus value of the capitalist class. In monopoly production employers are very often able to pass on these costs. However, if monopoly goods are over priced, those from the non-monopoly sectors must be under priced. Total values and total prices must be equivalent if the value is to be realised. Hence such costs are deductions from the total surplus product, regardless of whether or not the individual capitalist pays for them. ie. the employers, managers, workers engaged in such activities must be paid for out of the surplus product of the other, productive sectors (which, for the capitalists concerned would include consumer goods in Dept. III)

"The capital spent to meet these costs (including the labour done under its control) belongs among the "faux frais" of capitalist production. They must be replaced from the surplus-product and constitute, as far as the entire capitalist class is concerned, a deduction from the surplus-value or surplus-product." (*40).

The same criteria would apply if a certain percentage of the total social product were destroyed or not realised. This is in fact, the situation with arms production. While representing a portion of the social product, it does not contribute to its production and reproduction. From that point of view, arms are indeed a "drain" or a "leak". But they are a drain that must be paid for. Value cannot be squandered without any effect. As such, arms production, without contingent forces accompanying it to counteract its effect will depresss the rate of profit. This can be seen if we consider the year's production.

If we were to represent the value relations (after the price operations have been carried out) in the following way, subdividing Dept. III into III a (capitalists consumption) and III b (non-productive costs and production not realised, the "faux frais", as Marx called them eg. advertising much state expenditure arms etc). which must be a deduction from the total production in Depts. I. II, IIIa, we would get the following scheme:-

VALUE RELATIONS

DEPT

I. $c_1 + v_1 + p_1$)
)
II. $c_2 + v_2 + p_2$)
)   Productive sectors
IIIa. $c_{3a} + v_{3a} + p_{3a}$)

IIIb. $c_{3b} + v_{3b} + p_{3b}$)   Non-productive sector

Total surplus value = $p_1 + p_2 + p_{3a}$

Non-productive costs = $c_{3b} + v_{3b} + p_{3b}$

∴ Realised surplus value = $p_1 + p_2 + p_{3a} - (c_{3b} + v_{3b})$

Thus, rate of profit = $\dfrac{\text{Realised surplus value}}{\text{Total capital outlay}}$

$$= \frac{p_1 + p_2 + p_{3a} - (c_{3b} + v_{3b})}{c_1 + v_1 + c_2 + v_2 + c_{3a} + v_{3a}}$$

$$= \frac{p_1 + p_2 + p_{3a}}{c_1 + v_1 + c_2 + v_2 + c_{3a} + v_{3a}}$$

$$- \frac{c_{3b} + v_{3b}}{c_1 + v_1 + c_2 + v_2 + c_{3a} + v_{3a}}$$

Hence, the effective rate of profit = $\dfrac{\text{total surplus value}}{\text{total capital outlay}}$

$-\dfrac{\text{"capital" outlay in non-productive sector}}{\text{total capital outlay}}$

$c_{3b} + v_{3b}$ do not function as capital in that they do not produce realisable value i.e. are merely necessary outlays, deductions from the total surplus product.

So, if s is the total surplus value, c is total capital, n is the outlay in non-productive "capital" (machinery raw materials, buildings, wages, goods etc) p is the rate of profit,

$$p = \frac{s}{c} - \frac{n}{c}$$

It is only when this relationship is grasped, that one can possibly make sense of the recent "anti-Keynsian" measures aimed at reducing state expenditure and arms production as a proportion of the national budgets.

APPENDIX 1

Note: c in this case is the constant capital consumed in production. This is not the same as the value of constant capital employed in production. A portion of the fixed capital eg machines, buildings etc., continues to exist and function the same as before, though depreciated to the extent of annual wear and tear. The rate of profit is calculated on the total capital employed.

Thus, the rate of profit, $\dfrac{s}{c^1 + c + v}$ where

c^1 is the fixed capital not consumed (assuming no stockpiling – which wouldn't take place in simple reproduction).

Now, since a general rate of profit is assumed, and since prices are taken to be equal to values (for simplicity) one unit of capital produces the same amount of surplus value, on average, as well as one unit of variable capital doing so, in both departments of production. Furthermore, the proportion of capital employed but unused in each department is proportional to the amount of constant capital consumed.

Hence, if the Departments of production are represented in the following manner –

Dept. I – $c_1 + v_1 + s_1$

Dept. II – $c_{II} + v_{II} + s_{II}$

Then, $C = c_1 + c_{II}$, $V = v_1 + v_{II}$, $S = s_1 + s_{II}$.

And if c^1 is fixed capital not consumed in toto, c_1^1 is capital not consumed in Dept. I, c_{II}^1 is fixed capital not consumed in Dept. II, where $c^1 = c_1^1 + c_{II}^1$, c_1^1 is proportional to c_1, c_{II}^1 is proportional to c_{II}.

The upshot of all this is the following:-

$$p = \frac{s}{c^1 + c + v} = \frac{s_1}{c_1^1 + c_1 + v_1} = \frac{s_{II}}{c_{II}^1 + c_{II} + v_{II}}$$

For example following Marx's numerical analysis (Capital Vol. II p401)

Dept. I

Capital used	4000c + 1000v	= 5000
Commodity product	4000c + 1000v + 1000s	= 6000

Dept. II

Capital used	2000c + 500v	= 2500
Commodity product	2000c + 500v + 500s	= 3000

Let us assume a constant capital unused of 12000 (in the form of fixed capital). We would then obtain the following for the total capital employed, with the fixed capital in use, but not consumed, in brackets: –

Dept. I

Capital (8000) + 4000c + 1000v

Dept. II

Capital (4000) + 2000c + 500v

Thus $p = \dfrac{1500}{18000 + 1500} = 1/13$

and $p = \dfrac{1000}{12000 + 1000} = 1/13$

and $p = \dfrac{500}{6000 + 500} = 1/13$

Of course, it is possible that one department may have more or less capital than that stated. But, if Marx's assumptions of value and price identity are followed and if the amounts of constant capital consumed are proportional to the variable capital, the rate of exploitation being the same in both departments, the unconsumed amounts of fixed capital must also be proportional to the amounts of used-up constant (and variable) capital.

Hence, for simple reproduction, if p^1 is the proportion of surplus value to consumed total capital, the "rate of profit" on the flow $p = kp^1$, where k is a constant. In other words, the actual rate of profit for each department of production is the same as the overall rate of profit and can be found by multiplying

$\dfrac{s_1}{c_1 + v_1}$ or $\dfrac{s_{II}}{c_{II} + v_{II}}$ or $\dfrac{s_1 + s_{II}}{c_1 + c_{II} + v_1 + v_{II}} = p^1$ by a constant amount (k).

What this means in Marx's example, is that any generalisation about the return on consumed capital (p^1) will apply with equal validity to the actual rate of profit.

APPENDIX 2

Under simple reproduction, everything produced is

consumed in exactly replacing the amounts of constant capital used up and in articles of consumption for the workers or the capitalists. In the scheme in question,

Dept. I $\quad$ 4000c + 1000v + 1000s = 6000
Dept. II $\quad$ 2000c + 500v + 500s = 3000.

In Dept. II, 500v (workers' wages), and 500s (surplus value of capitalists) must be spent on articles of consumption, ie must come out of the product of 3000 in Dept. II. Thus the wages and surplus-value of Dept. II are exchanged within this department for products of it.

Similarly the 1000v + 1000s in Dept. I must be exchanged for articles of consumption ie for products of Dept. II. Hence they must be exchanged for the remainder of this product, which is equivalent to c_2 = 2000c.

$$1000v + 1000s \overset{*}{=} 2000c \quad (\overset{*}{=} \text{ means exchanged for})$$

The remaining 4000c in I consists of means of production which are only used in Dept. I and so is disposed of by mutual exchange between the capitalists of Dept. I.

The further breaking down of Dept. II into iia and iib, assuming that 2/5 of the surplus value is spent on luxuries, 3/5 on necessities, would make the reproduction scheme look like this: –

Dept. I $\quad$ 4000c + 1000v + 1000s = 6000
Dept. IIa $\quad$ 1600c + 400v + 400s = 2400
Dept. IIb $\quad$ 400c + 100v + 100s = 600

This gives the following exchange relations: –

Dept. I $\quad$ 1000s $\overset{-}{=}$ 600c (iia) + 400c (iib)

$\qquad\quad$ 1000v $\overset{-}{=}$ 1000c (iia)

$\qquad\quad$ 4000c $\overset{-}{=}$ 4000c (i)

Exchange within and between iia and iib :–

iia $\quad$ 1600c $\overset{-}{=}$ 600 (i) + 1000v (i)

$\qquad$ 400v $\overset{-}{=}$ 400v (iia)

$\qquad$ 400s $\overset{-}{=}$ 100v (iib) + 240s (iia) + 60s (iib)

iib $\quad$ 400c $\overset{-}{=}$ 400s (i)

$\qquad$ 100v $\overset{-}{=}$ 100s (iia)

$\qquad$ 100s $\overset{-}{=}$ 60s (iia) + 40s (iib).

NOTES

1. $\quad$ It is also possible that the developments in question (massive arms production) are contingent on the real motivating forces of capitalist boom. It may be that they have the same status as the mythical jar of water in the following joke – *A man seen walking down the street with a jar of water balanced on his head was asked why he did this. He replied that it was to prevent the plague. When told that plague didn't exist in England his reply was "Well, there you are".

2. $\quad$ see Mandel: "Inconsistencies of State Capitalism" pp. 18 – 21.

3. $\quad$ see Cliff: A Socialist Review (1965), pp. 34-40.

4. $\quad$ M. Kidron: Western Capitalism since the War Penguin 1970 p. 174.
5. $\quad$ Sweezy: Theory of Capitalist Development, 1942.
6. $\quad$ Capital Vol I p. 620 (1961 Moscow Edition)
7. $\quad$ Capital Vol. II p. 414 (1967 Moscow Edition).
8. $\quad$ Theories of Surplus Value part 2 p. 504 (1969 Lawrence & Wishart)
9. $\quad$ Ibid p. 505
10. $\quad$ Ibid p. 512
11. $\quad$ See Marx: Precapitalist Economic Formations (Ed. Hobsbawm) especially section on feudalism, and Dobb: Studies in the Development of Capitalism.
12. $\quad$ Capital Vol. I p. 624
13. $\quad$ Capital Vol. III pp. 218-219
14. $\quad$ Marx called part 3 of Capital Vol. III "The Law of the Tendency of the Rate of Profit to Fall".

Such laws express the fundamental direction of development of the capitalist production process but $\quad$ they can be totally or partially offset by other forces at certain junctures. However, whatever these countertendencies, in the long run the central tendencies – "laws" – will re-assert themselves.

The fact that a piece of paper may be carried upwards and not fall, does not invalidate the law of gravity, but has to be explained by offsetting forces to that of gravity, i.e. winds and their effects. $\quad$ In the long run, however, the paper will fall. In the same way, although the rate of profit may rise for a whole period, or not fall to any great extent, this has to be explained by the countertendencies at work. Marx laid out in general terms such counteracting influences to the tendency of the rate of profit to fall. I shall deal with these, their modern applications, and other factors in a later article, showing how arms production has fitted into the post-war scene and the implications of this at the present juncture. Meanwhile I shall lay out the central tendencies of capitalist production, in particular the development and effects of the falling rate of profit as the harbinger of economic crisis. Here "overproduction" and "underconsumption" are inseparable aspects of the same inherent process of production, neither of which can be solved on a capitalist foundation.

15. $\quad$ Capital Vol. III pp. 250-251.
16. $\quad$ Theories of Surplus Value part 2, p. 496
17. $\quad$ Ibid p. 492
18. $\quad$ cf. the present cut-back in machine tools affecting even the biggest manufacturers such as Alfred Herbert.
19 $\quad$ Theories of Surplus Value part 2 pp 521-522
20. $\quad$ In particular T.W. Vance.
21. $\quad$ Cliff: Perspectives of the Permanent War Economy, (A Socialist Review 1965 pp. 34-40)
22. $\quad$ Ibid p. 37
23. $\quad$ See earlier comments in Sweezy's Theory
24. $\quad$ Cliff Ibid pp 37-38
25. $\quad$ Ibid p. 38
26. $\quad$ Ibid p. 39
27. $\quad$ Ibid p. 39
28. $\quad$ Ibid p. 40
29. $\quad$ See last part of the section on Kidron's theory. This point will also be taken up in a later article.
30. $\quad$ Kidron Ibid.
31. $\quad$ Kidron: Maginot Marxism, I.S. journal no. 36
32. $\quad$ Ibid p. 33
33. $\quad$ Capital Vol. II pp. 397-398
34. $\quad$ Ibid p. 399
35. $\quad$ Bortkiewicz's paper 'Zur Berichtigung der grundlegenden theoretischen Konstruction von Marx im dritten Band des Kapital' discussed in Sweezy Ibid pp 109-128.
36. $\quad$ Taken from Sweezy Ibid p. 111
37. $\quad$ Ibid p. 124-125.
38. $\quad$ Kidron: Western Capitalism op. cit. p. 30
39. $\quad$ Capital Vol. II p. 148
40. $\quad$ Ibid p. 152.