Capital Accumulation, Imperialism and War: Rosa Luxemburg and Otto Bauer

I Rosa Luxemburg and the Accumulation of Capital

After 1907 the divisions within the SPD became more and more apparent. The right wing of the party, although always in the minority, advanced the revisionist case with increasing confidence against the left, whose belief in the inevitability of economic breakdown contributed greatly to their revolutionary political perspective. The central ground was occupied (at the theoretical level) by Kautsky and Hilferding. As we saw in the previous chapter, Kautsky's centrism was increasingly slanted towards the right. Thus the left's attack on class collaboration and the illusion of peaceful social change was directed against Kautsky himself.

By far the most important intellectual leader of the party's left wing was Rosa Luxemburg. As early as 1898 she had anticipated Kautsky with a scathing attack on Bernstein in which she proclaimed the inevitable breakdown of capitalism as a pre-condition for the achievement of socialism (see Chapter 4 above). These early polemical articles were almost completely lacking in analytical depth. Over the next fifteen years Luxemburg read, argued, wrote for the SPD press and taught political economy at the party school in Berlin. Her treatise The Accumulation of Capital, published in 1913, was a major theoretical work comparable with Hilferding's Finance Capital in its serious purpose and scholarly tone. (The Antikritik, written in prison in 1915 as a reply to her critics and containing a useful summary of the earlier book, is much more polemical). But it was also a political intervention. Far from shaking Luxemburg's beliefs, events after 1900 had markedly strengthened them. Her book was written to demonstrate scientifically the futility of Kautsky's dreams of international
peace and harmony, and to reassert the urgent necessity of revolutionary action by the proletariat in the face of an otherwise unavoidable world war.

Luxemburg’s central theme reasserts the position taken by Kautsky in 1884 and 1901: capitalist growth is possible only if customers are available outside the system to realise the increasing quantity of surplus value produced within it. The compulsive quest for non-capitalist markets transforms the economies of the backward areas, overwhelming traditional pre-capitalist modes of subsistence and thereby destroying the very outlets which the advanced nations so desperately need. Thus capitalism is both fundamentally contradictory and increasingly aggressive, because of the growing intensity of the struggle for economic territory. Cobdenism is dead and buried. Socialism or the barbarism of modern warfare: this is the choice which capitalism offers to humanity.¹

If The Accumulation of Capital was directed against the dominant ‘Marxist centre’ in the SPD, however, its message was transmitted in code. Hilferding’s name is missing from the index, and of the three references to Kautsky only one - a broadly favourable discussion of his review of Tugan-Baranovsky² - has any substance (for Tugan-Baranovsky’s own analysis see Chapters 9 and 10 below). Instead Luxemburg criticises Marx, and does so as openly and energetically as any revisionist. The reproduction models in volume II of Capital, she maintains, have fostered the dangerous illusion that stable equilibrium growth is possible in a closed capitalist economy. Marx distinguished simple reproduction, in which all surplus value is consumed by the capitalists, from expanded reproduction, where part of the surplus value is accumulated. In simple reproduction the entire surplus product finds a market without difficulty, and there is no problem with the ‘realisation’ of surplus value. Using Marx’s own numerical example, Luxemburg presents a two-sector model of an economy in which department I produces means of production and department II produces means of consumption for workers and capitalists, in the following proportions:

\[
\begin{align*}
\text{I:} & \quad 4000c_i + \frac{1000v_i + 1000s_i}{2000c_i} = 6000 \text{ means of production} \\
\text{II:} & \quad \frac{500v_i + 500s_2}{2000c_i} = 3000 \text{ means of consumption}
\end{align*}
\]

Of the output of department I, the 4000c, represent means of production which are used up within the department itself and are not exchanged with department II. Similarly 1000 (500v plus 500s) of the output of department II are consumed by workers and capitalists inside that department. Only the items inside the boxes are traded. Department I buys 2000 units from II in order to satisfy the requirements of its workers and capitalists for consumer goods (1000v, plus 1000s), and II buys 2000 units from I to replace the means of production which it has used up (2000c). Thus \( v_i + s_i = c_i \), or, in Marx’s notation, \( I_i + I = II_i \). There is no deficiency in the demand for
either department's output, and no reason why production should not continue at this level in later periods. Now consider a second example, in which simple reproduction is impossible:

I: \(4000c_1 + 1000v_1 + 1000s_1 = 6000\) means of production

II: \(1500c_2 + 750v_2 + 750s_2 = 3000\) means of consumption

Here department I's demand for consumer goods \((1000v_1 + 1000s_1)\) exceeds II's requirements for means of production \((1500c_2)\). Equilibrium between the two sectors requires output to grow, which means that capital must be accumulated. Marx assumes capitalists in department I to devote half their surplus value (500 units) to increase the quantity of constant and variable capital used in the following period, while capitalists in department II set aside one fifth of their surplus value (150 units) in this way. He further supposes accumulation to be divided between extra constant capital and extra variable capital in such a way as to maintain the organic composition of capital in each department at its original level. Thus the additional constant capital employed in department I \((\Delta c_1)\) is 400 and the additional variable capital \((\Delta v_1)\) equals 100; likewise, \(\Delta c_2 = 100\) and \(\Delta v_2 = 50\). Where \(s_{01}\) and \(s_{02}\) represent capitalist consumption, we can write:

I: \(4000c_1 + 400\Delta c_1 + (1000v_1 + 100\Delta v_1 + 500s_{01}) = 6000\) means of production

II: \(1500c_2 + 100\Delta c_2 + 750v_2 + 50\Delta v_2 + 600s_{02} = 3000\) means of consumption

Again the items in the boxes stand for exchanges between the two departments. Since \(1000v_1 + 100\Delta v_1 + 500s_{01} = 1500c_1 + 100\Delta c_2 = 1600\), the demands from each sector for commodities from the other are equal, and capitalists in each department are able to realise all the surplus value which their workers have produced. Assuming the rate of exploitation (the ratio of surplus value to variable capital) to be unchanged, output in the next period is:

I: \(4400c_1 + 1100v_1 + 1100s_1 = 6600\) means of production

II: \(1600c_2 + 800v_2 + 800s_2 = 3200\) means of consumption

Growth occurs in a similar fashion in subsequent periods. There is no reason, Luxemburg concludes, why a planned socialist
economy could not develop like this. In capitalism, however, there is a basic difficulty. Continually expanding production requires continually expanding demand. Where does this demand come from? More specifically, what is the source of demand for that part of the social product (amounting in our example to $500 + 150 = 650$ units) which is destined for accumulation? Clearly it cannot be provided by the personal consumption of either capitalists or the existing workforce. Nor can population growth increase working-class purchasing power, since 'a capitalist economy is not interested in this increase for its own sake, as a starting-point of growing needs'.

The necessary demand cannot come from non-capitalist strata such as the landowners, clergymen and state functionaries invoked as 'third persons' by Malthus and other early underconsumptionists, for they derive their incomes either from capitalist consumption or (to the extent that taxes and tithes are paid by working people) from wages. Their expenditure simply amounts to a displacement of capitalist or proletarian consumption. As for the suggestion that that the capitalists, in their role as entrepreneurs rather than consumers, can act as 'mutual customers' for each other, this is absurd. It constructs 'a roundabout that revolves around itself in empty space'; it would be 'production for production's sake'. (As we will see below, this is her chief error.) Finally:

recourse to foreign trade really begs the question: the difficulties implicit in the analysis are simply shifted—quite unresolved—from one country to another. Yet if the analysis of the reproductive process actually intends not any single capitalist country but the capitalist world market, there can be no foreign trade: all countries are 'home'.

Even greater difficulties arise if allowance is made for the effects of rising productivity. Luxemburg adapts the figures in another of Marx's numerical examples to include an increase in both the organic composition of capital and the rate of exploitation, while keeping the rate of profit constant. For Luxemburg the real problem is not the falling rate of profit but lack of demand. She begins with another of Marx's models:

I: $5000c_1 + 1000v_1 + 1000s_1 = 7000$ means of production

II: $1430c_2 + 285v_2 + 285s_2 = 2000$ means of consumption

The organic composition of capital is 5 in each department (only approximately so in II); the rate of exploitation is 100 per cent; and the rate of profit is at a common level of 16.7 per cent. Capitalists in department I again accumulate half their surplus value, and those in department II nearly two-thirds (184 out of 285). Luxemburg parts company with Marx in
assuming that accumulation is divided between constant and variable capital in the ratio 6:1, as against Marx's ratio of 5:1. In the spirit of our early exposition we may write (though Luxemburg does not):

\[
\begin{align*}
I: & \quad 5000c_1 + 428.7\Delta c_1 + \underbrace{1000v_1 + 71.4\Delta v_1 + 500s_1}_{\text{means of production}} = 7000 \\
II: & \quad 1430c_2 + 157.7\Delta c_2 + 285v_2 + 26.3\Delta v_2 + 101s_2 = 2000 \text{ means of consumption}
\end{align*}
\]

Again the boxed items are the amounts traded between the two departments. I requires \(1000v_1 + 71.4\Delta v_1 + 500s_1 = 1571.4\) from II to provide consumer goods for its existing labour force, for the increase in the labour force planned for the following period, and for capitalist consumption. Department II demands \(1430c_2 + 157.7\Delta c_2 = 1587.7\) from I to replace the means of production used up in the current period and to allow for planned expansion of its constant capital. These two magnitudes are unequal. 'If this were a true picture of the accumulative process,' Luxemburg concludes, 'the means of production (constant capital) would show a deficit of 16 in the second year . . . similarly the means of subsistence would show a surplus of 16.' And the imbalance would grow in each subsequent period.\(^{11}\)

Neither workers, nor capitalists, nor Malthusian 'third parties' can provide the purchasing power necessary to realise surplus value, Luxemburg argues. Only one category of consumers can do this: those outside the capitalist mode of production altogether. Hence 'the realisation of the surplus value for the purposes of accumulation is an impossible task for a society which consists solely of workers and capitalists'. There is a 'deep and fundamental antagonism between the capacity to consume and the capacity to produce in a capitalist society, a conflict resulting from the very accumulation of capital which periodically bursts out in crises and spurs capital on to a continual extension of the market'.\(^ {12}\) Only through a recognition of this contradiction is a theory of imperialism possible. Marx's analysis fails to expose the problem of realisation. It gives the impression that the accumulation of capital can continue without limit, thereby removing 'the most important objective argument in support of socialist theory ... socialist political action and the ideological import of the proletarian class struggle cease to reflect economic events, and socialism no longer appears an historical necessity'.\(^ {13}\) The code is easily deciphered: in criticising Marx, Luxemburg is really attacking not just the revisionists but also Kautsky and the orthodox 'Marxist centre' of the SPD.

In reality, she continues, capitalism 'proceeds by assimilating the very conditions which alone can ensure its own existence'.\(^ {14}\) It first attacks and destroys the 'natural economy' of pre-capitalist areas, introducing commodity production in its place. Valuable natural resources are seized,
labour power is ‘liberated’ and coerced into service; agriculture begins to be wrenched loose from industry and trade. All this is achieved by force, since ‘if capital were here to rely on the process of internal disintegration, it might take centuries’. Luxemburg illustrates her argument with graphic accounts of the British conquest of India and (in chapter 27) the operation of French colonialism in Algeria and of the Opium Wars in China (chapter 28). The second stage is capitalism’s struggle against ‘peasant economy’ or simple commodity production, in which industry and agriculture are finally torn apart and capitalist production relations are introduced. Although often presented as a peaceful, gradual development caused by the economic superiority of mass production methods, in reality the process of separating agriculture and industry is determined by factors such as oppressive taxation, war, or squandering and monopolisation of the nation’s land, and thus belongs to the spheres of political power and criminal law no less than with economics. In chapter 29 the North American settlers and the Boer republics of South Africa provide Luxemburg with telling examples.

Nothing can prevent the triumph of capitalism over simple commodity production. But herein lies the key to its eventual downfall: ‘capital cannot accumulate without the aid of non-capitalist organisations, nor, on the other hand, can it tolerate their continued existence side by side with itself. Only the continuous and progressive disintegration of non-capitalist organisations makes accumulation of capital possible’. As soon as capitalism has won a complete victory everywhere, however, accumulation must stop, since no non-capitalist customers are available to realise surplus value. ‘This is the reason for the contradictory behaviour of capitalism in the final stage of its historical career: imperialism.’

Luxemburg’s conception of imperialism is a distinctive one. It does not depend upon formal colonisation, and has little in common with Hilferding’s emphasis on the growth of monopoly or the increasing dominance of the banks. ‘The imperialist phase of capitalist accumulation which implies universal competition comprises the industrialisation and capitalist emancipation of the hinterland where capital formerly realised its surplus value. Characteristic of this phase are: lending abroad, railroad constructions, revolutions, and wars.’ Luxemburg points to the massive export of capital after 1900 to Russia, Turkey, Persia, India, Japan, China and North Africa. Imperialist penetration leads first to the ruin of the local peasant economy and to increasing dependence of the nominally independent state upon European capital (in chapter 30 this process is described at length for the cases of Turkey and Egypt), then irresistible pressures arise for independent capitalist development in these hitherto backward areas. This, too, occurs amid a background of violence:

the achievement of capitalist autonomy in the hinterland and backward colonies is attained amidst wars and revolutions. Revolution is an
essential for the process of capitalist emancipation. The backward communities must shed their obsolete political organisations, relics of natural and simple commodity economy, and create a modern state machinery adapted to the purposes of capitalist production. The revolutions in Turkey, Russia, and China fall under this heading.

They represent above all a 'bid for economic independence'.

This leads Luxemburg to a second definition of imperialism, as 'the political expression of the accumulation of capital in its competitive struggle for what remains still open of the non-capitalist environment ... [which] grows in lawlessness and violence, both in aggression against the non-capitalist world and in ever more serious conflicts among the competing capitalist countries'. One manifestation of this is the almost universal abandonment of free trade, which proves to have been 'just a passing phase in the history of capitalist accumulation'. A second is militarism, the theme with which she concludes the book. Militarism is a feature of every stage of capitalism. Military power was used to subjugate pre-capitalist regions and remains 'a weapon in the competitive struggle between capitalist countries for areas of non-capitalist civilisation'. Most important, 'from the purely economic point of view, it is a pre-eminent means for the realisation of surplus value; it is in itself a province of accumulation'.

Luxemburg returns to the reproduction models to consider the impact of the state as a consumer. She concludes that 'taxes extorted from the workers afford capitalism a new opportunity for accumulation when they are used for armament manufacture', though it must be said that her reasoning here is not at all easy to follow.

II A Critique of Luxemburg

Even writers sympathetic to Rosa Luxemburg's revolutionary leftism have been highly critical of her economic analysis. Almost no one has been convinced by her attempt to demonstrate that accumulation is impossible in a closed capitalist system. Over and over again it has been urged against her that capitalists can, do and must constitute each other's customers, and that demand for that part of the social product which is destined for accumulation comes from capitalists intent upon increasing their employment of constant and variable capital. Her objection to this line of argument emerges most clearly from her critique of Tugan-Baranovsky, which she directs also against Bulgakov and Lenin. Accumulation on the basis of growing capitalist demand alone, without the exploitation of non-capitalist markets, would imply that 'human consumption becomes increasingly unimportant, and production more and more an end in itself'.

Luxemburg finds such an idea to be absurd. But she herself is mistaken in
imputing to the capitalist system as a whole the goal of expanding human consumption. By its very nature the system is anarchic and hence devoid of purpose, so that any teleology is inappropriate. At the level of the individual capitalist she is equally wrong. The capitalist is motivated by profit, not by concern for the growth of consumption, and if endlessly increasing the production of machines which produce machines for the production of machines appears to be profitable, there is no reason why it should ever cease. It is of course important not to confuse the possibility of limitless equilibrium growth with the likelihood that it will occur. The crucial question here concerns the determinants of investment, which Luxemburg fails to specify. Hilferdinger's analysis of monopoly as a factor inhibiting expenditure might have supplied the necessary foundation for such a theory, but monopoly plays no part in her thought.

In short, Luxemburg confuses the requirements of an individual capital (external sources of demand) with the needs of the capitalist system as a whole. There are also three further serious inconsistencies. First, her vigorous attack on disproportionality theories of economic crises because (she maintains) they entail acceptance of Say's Law founders on the fact that her own explanation is similarly flawed. In her numerical example of accumulation with rising productivity, the overproduction of consumer goods corresponds (as Luxemburg herself admits) to an equal deficit in the supply of means of production. In aggregate, supply and demand are identical. Second, it is difficult to reconcile Luxemburg's treatment of military expenditure with her dismissal of Malthusian 'third persons'. If capitalism gains from imposing taxes on workers when the proceeds are used to finance armaments, why should not the same be true of expenditure on state sinecures or the Established Church? There may well be good ideological and political grounds for capitalists' preference for military spending over other forms of state activity, but Luxemburg does not explain what they are.

The third and most important of the inconsistencies in Luxemburg's discussion of imperialism concerns the effect of exports to pre-capitalist markets which, if they are offset by an equivalent amount of imports, have no direct impact on the level of demand. Only an export surplus provides a net increase in demand, and (in the absence of an increase in the quantity of international money) this necessarily involves the export of capital to the pre-capitalist world. Luxemburg appears not to recognise this difficulty. In her analysis the problem of inadequate demand is present throughout the history of capitalism, but capital export becomes significant only in the final, imperialist stage, and even then it plays a much less dominant role than in the models of Hilferdinger and Lenin. The Accumulation of Capital contains even less by way of an explanation of the export of capital than is found in Hilferdinger's Finance Capital. Luxemburg's case can be salvaged by the introduction of indirect effects of commodity exports, which may
induce additional domestic investment spending even if the trade balance is neutral. This, however, is not her argument and highlights once more the unsatisfied need for a theory of investment.

There are problems, too, with Luxemburg's treatment of the assimilation of the backward areas into the world capitalist economy. It was not invariably the case, as she maintains, that imperialist penetration sounded the immediate death-knell of pre-capitalist forms. These modes of production often proved capable of generating a surplus product and trading it with the capitalist nations. Thus in many backward areas slavery and various forms of feudalism were incorporated rather than destroyed. Objections can also be raised against Luxemburg's account of the industrialisation of the hinterland. She completely ignored the possibility that imperialism might block, retard and distort economic development in the Third World. Her vision of autonomous capitalist development on a wide scale was an illusion, and her aggressive and independent national bourgeoisies a chimera. Capitalist development has more often involved relations of dependence, the principal agents of assimilation being transnational companies with their roots in the advanced countries, which sustain their control through asset ownership, technological monopoly and debt. These issues will be considered in more detail in volume II of this book.

There are also a series of difficulties in Luxemburg's argument to which Bukharin pointed in *Imperialism and the Accumulation of Capital*, written in 1924 as a direct rebuttal of her theory, and possibly intended as an attack upon the Left Opposition in the Soviet Union (see Chapter 15 below). On her analysis, Bukharin maintains, the non-capitalist periphery is not actually exploited by capitalism; it functions only to realise surplus value produced elsewhere. Furthermore, he continues, Luxemburg fails to explain why capitalism strives for colonies overseas while its home territory still retains large pockets of pre-capitalist economic forms. In addition, Bukharin points out that Luxemburg's belief in the imminence of capitalist collapse is inconsistent with the logic of her position, for the overwhelming majority of the world's population still belongs to the category of 'third persons'.

Whatever the merits of her logic, Luxemburg (quite unlike Hilferding) was extremely forthright in her conclusions. She stressed the role of force and state power throughout the lifespan of capitalism; asserted the economic necessity both of militarism and of increasing tension between the advanced countries; and repudiated the possibility of stable equilibrium growth in a closed capitalist system. Politically *The Accumulation of Capital* was an intense and deliberate provocation of the majority in the SPD, both the revisionist right and the 'Marxist centre,' which held out some hope for crisis-free economic progress and the avoidance of war. As Luxemburg recounts in the Antikkritik, the book had a lively and overwhelmingly hostile reception in the party press. Surprisingly it drew no response from
Bauer begins by considering the consequences of population growth, and studying the changes which must occur if full employment is to be maintained. This allows him to contrast the process of economic growth in a socialist economy, where a central planning authority can make the necessary adjustments, with that under capitalism, where there is no such conscious social regulation of production. He assumes that the population grows at a rate of 5 per cent each year while the employment of constant capital rises at an annual rate of 10 per cent. This both incorporates Marx’s fundamental thesis of an increasing organic composition and allows Bauer to respond to Luxemburg’s challenge that the analysis of reproduction must take account of technical change. ‘For the time being’ Bauer holds the rate of exploitation constant, so that real wages increase in line with the
productivity growth associated with the increased organic composition of capital. Despite the implicit promise, this assumption is not relaxed later in the article.37

If the economy begins with 200,000 units of constant capital and 100,000 units of variable capital, and the rate of exploitation is 100 per cent, the course of economic growth in the aggregate is as follows:38

<table>
<thead>
<tr>
<th>Year</th>
<th>Constant capital</th>
<th>Variable capital</th>
<th>Surplus value</th>
<th>Total value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>200,000</td>
<td>100,000</td>
<td>100,000</td>
<td>400,000</td>
</tr>
<tr>
<td>2</td>
<td>220,000</td>
<td>105,000</td>
<td>105,000</td>
<td>430,000</td>
</tr>
<tr>
<td>3</td>
<td>242,000</td>
<td>110,250</td>
<td>110,250</td>
<td>462,500</td>
</tr>
<tr>
<td>4</td>
<td>266,200</td>
<td>115,762</td>
<td>115,762</td>
<td>497,524</td>
</tr>
</tbody>
</table>

Here the organic composition of capital increases from 2.00 in the first year to 2.30 in the fourth, and the rate of profit declines (as it must, given a constant rate of exploitation) from 0.333 to 0.303. The rate of growth of net output (that is, total living labour, or \( v + s \)) is constant at 5 per cent each year. This is entailed by Bauer's assumption that variable capital grows at 5 per cent per year, and that the rate of exploitation does not change, so that surplus value has the same growth rate as variable capital. Gross output \((c + v + s)\) increases at an increasing rate: 7.50 per cent between the first and second years, 7.57 per cent between the third and fourth. Most significantly, the capitalists' saving propensity, which Bauer terms (rather misleadingly) the 'rate of accumulation', also increases steadily. In year 1, for example, 25,000 out of a total surplus value of 100,000 is set aside for accumulation, which permits the employment in year 2 of 20,000 extra units of constant capital and 5000 in additional variable capital. Hence the capitalists save and accumulate 25 per cent of their incomes. By the third year this has risen to approximately 27 per cent, and will continue to increase so long as constant capital grows faster than variable capital and surplus value.

Next Bauer turns to the relations between the sectors. This can be expressed, in the first year, as:39

\[
\begin{align*}
\text{I: } & \quad 120,000c_1 + 50,000v_1 + 50,000s_1 = 220,000 \text{ means of production} \\
\text{II: } & \quad 80,000c_1 + 50,000v_2 + 50,000s_2 = 180,000 \text{ means of consumption}
\end{align*}
\]

If capitalists accumulated one quarter of their surplus value and invested it entirely within their own department, we could write:
I: \( 120000c_1 + 10000\Delta c_1 + \frac{50000v_1 + 2500\Delta v_1 + 37500s_1}{50000v_2 + 2500\Delta v_2 + 37500s_2} = 220000 \)

II: \( 80000c_2 + 10000\Delta c_2 + 50000v_2 + 2500\Delta v_2 + 37500s_2 = 180000 \)

A comparison of the boxed items reveals that department I's demand for consumer goods from II is exactly equal to II's demand for means of production from I (= 90000). But this would not establish equilibrium between the two departments, as the following situation would emerge in the second year:

I: \( 130000c_1 + 52500v_1 + 52500s_1 = 235000 \) means of production
II: \( 90000c_2 + 52500v_2 + 52500s_2 = 195000 \) means of consumption

The output of means of production would be 7000 less than that required by Bauer's assumption of a 10 per cent increase in constant capital (235000 instead of 242000), while the production of consumer goods would be greater than necessary by the same amount (195000 as against 188000). Too much capital would have been accumulated in department II, and insufficient in department I.

The solution, Bauer shows, is for capitalists in department II to invest some of their accumulated surplus value in department I, increasing output there and reducing the output of consumer goods accordingly. Of the 10000 \( \Delta c_2 \), 5334 are to be invested in department II and the remaining 4666 in department I; similarly, 1333 of the 2500 \( \Delta v_2 \) should be employed in department II, the other 1167 being moved to department I. The capitalists in department II do this either by themselves establishing factories for the production of means of production, or by transferring part of their accumulated surplus value, through the mediation of the banks, for use of capitalists in the means-of-production industries; or through buying shares in companies which produce means of production. All the surplus value of the capitalists of department I is of course employed within their own department.

Thus in year 2:

I: \( 134666c_1 + 53667v_1 + 53667s_1 = 242000 \) means of production

II: \( 85334c_2 + 51333v_2 + 51333s_2 = 188000 \) means of consumption

and department II's capitalists own (in addition to the entire output of their own department)

\( 4666c_1 + 1167v_1 + 1167s_1 = 7000 \) units of means of production

The same line of reasoning gives the position in year 3:
I: 151 048c₁ + 57 576v₁ + 57 576s₁ = 266 200 means of production

II: 90 952c₂ + 52 674v₂ + 52 674s₂ = 196 300 means of consumption

and year 4:

I: 169 124c₁ + 61 738v₁ + 61 738s₁ = 292 600 means of production

II: 96 876c₂ + 54 024v₂ + 54 024s₂ = 204 924 means of consumption

Compared with the first year, the organic composition of capital has grown by 14.2 per cent in department I (from 2.40 to 2.74) and the rate of profit has fallen by 9.18 per cent (from 0.294 to 0.267). In department II the organic composition is 11.9 per cent higher (having increased from 1.60 to 1.79), and the rate of profit is 7.01 per cent lower (falling from 0.385 to 0.358).

Bauer concludes that 'not only in the first year but also in every subsequent year the entire value of the product of both departments is sold without any disturbance, and the total surplus value is realised. Comrade Luxemburg's hypothesis that the accumulated part of surplus value could not be realised is thus false. It may be true, he continues, that not all surplus value produced (for example) in the first year is realised in that year. If capitalists buy the new machines which they need to expand production in year 2 only at the beginning of the second year, then that part of year 1's surplus value represented by Δc₁ + Δc₂ will only be realised in year 2; but it will eventually be realised. If the commodities in which Δc₁ + Δc₂ is embodied are sold outside the capitalist world, which Luxemburg thinks to be necessary, accumulation will be impaired, since the required means of production will no longer be available. 'The withdrawal of this part of the surplus product from the capitalist market would not, as Rosa Luxemburg believes; make accumulation possible; on the contrary, it would make any accumulation impossible.'

Having disposed of Luxemburg, Bauer turns to consider the cyclical nature of growth under capitalism. For this it is necessary for him to relax his original assumption of equality between the supply and demand for labour power. If the accumulation of variable capital goes on more slowly than the growth rate of the labour force, unemployment will result. In these conditions of underaccumulation, real wages fall and the rate of exploitation increases. With a given capitalist savings propensity, this increases the rate of accumulation. Eventually a point is reached at which variable capital grows faster than the working population. The ensuing overaccumulation, however, is also a transient phenomenon. As the reserve army of the unemployed diminishes, real wages rise again and the rate of exploitation falls, until not only the rate of profit but also the absolute amount of
surplus value that is produced begins to decline. What Marx described as 'absolute overproduction' precipitates a major economic crisis in which accumulation is severely curtailed, unemployment rises, real wages decline and profitability is once more restored. 'The periodic alternation of prosperity, crisis, and depression is the empirical expression of the fact that the mechanism of the capitalist mode of production automatically generates overaccumulation and underaccumulation, with the accumulation of capital adjusting again and again to the growth of population.\(^{45}\)

Once the international implications are considered, domestic population growth ceases to be the key factor. Overaccumulation can occur continuously in some areas because of underaccumulation elsewhere.

Each year countries with continuous overaccumulation invest a large and growing part of their accumulated surplus value overseas. Examples: France and England. Countries with continuous underaccumulation attract capital from abroad and send labour overseas. Examples: the agrarian countries of Eastern Europe. The expansion of productive capital within a country itself is always restricted by the available workforce.\(^{46}\)

This highlights the kernel of truth in Luxemburg's false theory of imperialism. Although accumulation in a closed capitalist system is possible, it is also limited. Imperialism serves to widen these limits, not merely by expanding the catchment area from which labour power may be recruited but also by making available raw materials, stimulating the development of industries with above-average organic compositions and, during economic crises, providing markets for the 'huge masses of commodities' which would otherwise be unsaleable.\(^{47}\)

Bauer denies that his analysis constitutes an apology for capitalism:

for while the apologists for capital want to demonstrate the unbounded nature of accumulation – capacity to consume rises automatically with production! – we uncover the limit to accumulation. While the apologists wish to prove the impossibility of general crises, we show that the laws of accumulation can only operate through general crises and the consequent unemployment, wage reductions, increasing mass suffering, and growing bitterness and indignation among the mass of the workers.

Thus capitalism will indeed bring about its own downfall, if not in the way that Luxemburg supposes:

If its expansion is possible, it arouses indignation among the working masses through an arms race, through increasingly oppressive taxation, and through catastrophic wars. If its expansion is prevented, the limit to
accumulation is narrowed and crises become more frequent, longer, more devastating... Capitalism will not founder on the mechanical impos-

sibility of realising surplus value. It will succumb to the indignation to which it drives the masses. Capitalism will break down, not when the last peasant and the last petit bourgeois on the entire earth are converted into wage labourers, so that no extra market is open to capitalism. It will be brought down much sooner, by the growing ‘indignation of the working class, constantly increased, schooled, united, and organised by the mechanism of the capitalist production process itself’.48

IV Luxemburg’s Antikritik

Bauer’s growth model was easily the most sophisticated piece of macrody-
namic analysis attempted by any Marxian economist before 1914, and its close affinities with the modern Harrod–Domar theory are only now being fully appreciated. The purpose of this part of his article was to refute Luxemburg’s breakdown theory and to show that stable equilibrium growth was indeed possible in a closed capitalist economy. While his criticism of The Accumulation of Capital was an effective one, this was an easy target, and Bauer’s own model fails to withstand a more detailed scrutiny. As early as 1929 Henry Grossmann demonstrated that the growth path set out in Bauer’s numerical example could not be sustained indefinitely, and this has been confirmed by modern mathematical analysis. After a further thirty-one periods the economy simply runs out of surplus value to finance the specified rate of accumulation. This is an inevitable consequence of Bauer’s assumption that constant capital grows twice as fast as variable capital, and that the rate of exploitation is unchanged. Algebraically, $s_1$ and $s_2$ rise too slowly to provide the ever-increasing $\Delta c_1$ and $\Delta c_2$ which the model demands, and the process of accumulation cannot continue.49 Technically speaking, Bauer’s model is overdetermined. Stable growth is possible only if at least one of the constraints which he imposes is lifted. An obvious option is to allow the rate of exploitation to rise, thereby increasing the rate of growth of the surplus value available for accumulation. Even then, however, there may be insufficient flexibility to guarantee the possibility of stable growth, the surest route to which is a constant organic composition of capital.50 Despite his intentions, then, Bauer’s model is one of capitalist economic breakdown, bound up with (if not in any simple sense caused by) the tendency for the rate of profit to fall in the course of technical change.

This conclusion, however, does not totally discredit his theory of crisis, which can be assessed on its own merits. The notion of alternating periods of under- and overaccumulation is intuitively appealing and has proved attractive to many later Marxian economists, not least because it offers an
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explanation of cyclical fluctuations which avoids the many difficulties inherent in disproportionality, underconsumption and falling-rate-of-profit theories. But it does have one major weakness, in that it does not generate fluctuations in the rate of capacity utilisation. Depressions are always periods of heavy excess capacity, since aggregate demand is inadequate to realise all the surplus value that could be produced if the economy's full productive potential were to be achieved. For this reason Marx was right to insist that crises were bound up with realisation problems. At the very beginning of his article Bauer does refer to the contradiction between the continually increasing productive capacity of capitalist society and the narrow limits which constrain its capacity to consume, but this Kautskyian allusion is not followed up. Bauer's account of economic crises is thus seriously incomplete.

Very few of these criticisms were made by Rosa Luxemburg in her distinctly ill-tempered Antikritik, and most of her objections to Bauer are very wide of the mark. She complains that demographic change is not the real basis of capital accumulation; that accumulation can proceed (as in contemporary France) with a static population; and that accumulation determines the rate of population growth and not vice versa. Luxemburg dismisses Bauer's treatment of disproportions between the two departments as involving 'sheer swindles', and denies that the capitalists in department II could conceivably purchase the 4666 units of means of production which are needed to maintain equilibrium growth. This is quite simply wrong, and Luxemburg would have been better employed in asking how the possibility of balanced growth could be transformed into reality, or inquiring into the sources of the finance required by capitalists holding stocks of commodities produced in one year and not purchased until the next. She is on firmer ground in suggesting that the rate of exploitation in Bauer's model should be rising rather than constant, but even here she spoils her case by insisting that with an unchanged rate of exploitation 'all the technological progress is for the benefit of the workers alone'.

There is certainly nothing in Luxemburg's critique of Bauer to justify her assertion that 'this pedantically puzzled out system of hair-raising nonsense ... is not a common error, such as can occur in the quest for scientific knowledge ... [but] a disgrace to present official Marxism and a scandal for Social Democracy'. It must be remembered that the Antikritik was written in the prison cell to which Luxemburg's opposition to the world war had brought her. Its main purpose was political rather than academic, and its principal target was Karl Kautsky, not Otto Bauer. Thus she concluded that Bauer's article represented 'the theoretical formula of a quite distinct tactical tendency', that of the so-called 'Marxist centre', who argued that imperialism was not a historical necessity but 'the wicked invention of a small group of people who profit from it'. Although opposed to the war, the
Kautskyians refused to accept that the revolutionary overthrow of capitalism was the only road to peace, believing instead in the possibility of convincing the capitalists that the ending of imperialism was in their own interest. The final confrontation between proletariat and capital to settle their world-historical contradiction is converted into the Utopia of a historical compromise between proletariat and bourgeoisie to "moderate" the imperialist contradictions between capitalist states. It was because she thought Bauer took this position that Luxemburg was so hostile to his political economy.

V Kautsky's Second Thoughts on Imperialism

Whatever the merits of this criticism when applied to Bauer it is not an unfair summary of the line taken by Kautsky in his writings in 1914–15 which, together with Luxemburg's Antikritik, are among the last significant German texts on the theory of imperialism. In the first article, written some seven weeks before the outbreak of the First World War, Kautsky begins by objecting to the prevalent tendency for imperialism to be treated as coextensive with the whole of contemporary capitalism. This, he argues, reduces to a mere tautology the claim that capitalism is unable to survive without imperialism. In fact 'imperialism is a product of highly-developed capitalism. It arises from the pressure of every industrial capitalist nation to conquer and annex a bigger and bigger agricultural area.' The relations between agriculture and industry are fundamental to an understanding of imperialism, Kautsky maintains. There are two conditions for stable growth: the familiar Marxian requirement of balance between the manufacturing departments I and II, and balance between agriculture and industry. Disproportionality between these latter two sectors becomes increasingly probable as the capitalist economy develops, since the purchasing power of agricultural producers fails to keep pace with industrial production. The resulting crises take the dual form of overproduction of manufactures and underproduction of agricultural commodities, reflected in rising prices for food and raw materials. (This had been a pronounced feature of the world economy since 1900, after a quarter of a century of declining primary product prices.)

Thus for Kautsky imperialism emerges as a special form of the struggle for agrarian territory. The liberal dreams of world harmony had come to an end, and free trade had been abandoned, because industrial areas were always able to dominate agricultural regions. Since industrialisation is a condition for the attainment or preservation of national independence, the USA and the nations of Western Europe had imposed tariffs against British manufactures. Britain's essentially defensive reaction to their challenge ushered in the age of imperialism. Huge capital exports were used to build
railway networks in the agrarian territories; state power was invoked to defend these investments; and in the stronger capital-importing states (especially Russia and the USA) indigenous industrialisation began, strengthening the resolve of the older capitalist powers to preserve political control over their territory wherever possible.

Thus far there was little to choose between Kautsky's discussion of imperialism and Hillerding's; even Luxemburg's analysis could be accommodated, if 'pre-capitalist' were to be substituted for 'agricultural' areas. It is only in the final section of the article that Kautsky breaks with Luxemburg (and without mentioning her name). Here he denies that imperialism is necessarily the final stage of capitalism. Continued access to raw materials and outlets for capital are indispensable to the survival of the capitalist system. But militarism and war are not necessarily in the interest of the ruling class as a whole, which is separate from that of the arms producers. 'Every far-sighted capitalist must today call out to his comrades [Genossen]: capitalists of all countries, unite.' They are threatened by colonial liberation movements as well as by the resistance of the domestic working class to the fiscal burden which imperialism imposes upon them, while capital accumulation is endangered by the heavy taxation levied upon profits. Thus imperialism is

digging its own grave... from the purely economic standpoint it is thus not excluded that capitalism will experience yet another new phase, the overcoming of cartel politics [Kartelpolitik] in foreign policy, a phase of ultra-imperialism, which we must of course fight as energetically as imperialism, but which threatens us in other directions, not in those of armaments and the jeopardising of world peace.

Kautsky admits that a war is possible. So, too, is 'a holy alliance of the imperialists', if only at the end of a global conflict. The longer any world war lasts, the more likely is such an alliance to result from it. It is easy with hindsight to pour scorn on Kautsky's assertion that war might be avoided. At the time he wrote, however, there were grounds for believing international tensions to be easing. The existing pattern of alliances between the Great Powers appeared increasingly fragile, and some modern historians are inclined to deny the inevitability of an armed conflict between them. Several months into the war Kautsky returned to the subject to attack the revisionists Lensch and Cunow, who had stolen Luxemburg's clothes by maintaining that, precisely because imperialism was a necessary stage of capitalist development, it was futile and reactionary for social democracy to oppose it. Kautsky argued that this was a misunderstanding of Hillerding's Finance Capital, in which imperialism had been conceived as a type of policy rather than a separate stage. It followed that there might be alternative policies, and it was conceivable
that the present warlike policy would be replaced by a new one which would permit 'the common exploitation of the world by internationally united finance capital'. Such an ultra-imperialist policy would weaken the tendency towards the moral bankruptcy of the system, and herald 'an era of new hope and expectation within capitalism'. Everything depended on the outcome of the war.63

Notes

5. Accumulation, pp. 131–33.
11. Accumulation, p. 337.
15. Ibid, pp. 368–70.
34. Ibid, pp. 245ff.
38. Bauer, ‘Die Akkumulation’, p. 93, adapted from Table 1.
39. Ibid, p. 94, Table 4, is the source for all the numbers in this paragraph.
40. Ibid, pp. 98–100.
41. Ibid, p. 98.
42. Derived from ibid, p. 96, Table 7.
43. Ibid, p. 100.
44. Ibid, p. 103 (original stress deleted).
46. Ibid, p. 107 (original stress deleted).
48. Ibid, p. 110 (the unattributed quotation at the end of the final passage is almost certainly from Marx).
54. Ibid, pp. 91–4.
55. Ibid, pp. 98, 108.
56. Ibid, p. 135.
57. Ibid, p. 108.
59. 'Der Imperialismus', p. 909; original stress deleted.
61. 'Der Imperialismus', pp. 920–2.
63. 'Zwei Schriften', pp. 144–5.