Ernest Mandel's Contribution to Economic Dynamics

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Abstract

This paper was presented in Amsterdam at an international seminar on Ernest Mandel's legacy. It was not included in the published edited volume arising from that gathering because the editor sought the removal of references to Ernest's views on the processes at work in Russia and Eastern Europe, which I considered necessary for a balanced appreciation of Ernest's enormous contribution to political economy.

It appears to have resurfaced, somewhat shamefacedly, on the Mandel archive, and so after 19 years it has seen the light of day. However, the graphics associated with this version are inadequate, and a number of readers have requested the original. This is it.

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Introduction

I had the honour to attend the London meeting addressed by Black Panther Mohammed bin Wahad when released at the end of a nineteen-year jail sentence on framed FBI charges. Mohammed was asked for his views on Bobby Seale. 'To judge an individual's life', he said, 'you look at what they were in their time; not what they became when it was over. This is the only way to understand what they really were.'

Ernest Mandel's contribution to Marxist economic theory, made in the late sixties and early seventies, was in its time without equal. He rescued from oblivion the most central concept available to us today in explaining the dynamics of uneven development and crisis – Marx's concept of surplus profit. By analysing the dynamics of capitalism as a never-ending competitive struggle for surplus profits spanning the globe and the epoch, he re-asserted, against the stream of not only neoclassical but Marxist academic orthodoxy, the most fundamental characteristics of capitalist development, namely that it is inherently and by its nature unstable. Crisis, inequality, mass poverty, wars of annihilation, the barbarous oppression of the majority of people on the globe and the monstrous perversion which was and is fascism, are neither external disturbances, temporary interruptions nor accidents of history but the natural and logical expression of what the free market actually consists of.

In 1970 when the rest of economics was busy proclaiming the end of crisis, by applying this notion to the dynamics of world development he successfully predicted the end of the long postwar boom and the onset of a prolonged phase of world capitalist instability, a period still with us today. Combining meticulous empirical analysis with Kondratieff's controversial theory of 'Long Waves' of capitalist development, he demonstrated that the postwar boom was not, as almost universally supposed at the time, a new stage of history in which the state had mastered the market, but was on the contrary a repetition of a phenomenon observed at least twice in the past. This was a 'spring tide' of rapid accumulation in which technical advance combined with high rates of investment, high profitability and an expanding world market for an entire historical phase spanning several business cycles.

The peak of his contribution was not merely his understanding that this process had been observed before, but the empirical conclusion he drew from this, a conclusion whose accuracy outshone virtually all contemporary economic analyses; he understood that this phase of expansion was due to end. He carefully charted the relation between the postwar boom and the three previous 'Kondratieffs' – the industrial revolution itself, the post-1848 golden era, and the imperialist expansion of 1893-1913, and concluded that such long waves of expansion were not only a product of definite phases of capitalist development but by the same token limited, unleashing self-destructive processes which inevitably led to re-appearance of overproduction and realisation crises, a renewed decline in the profit rate, a slackening of investment and a following long wave of decline provoking a generalised crisis in all social relations.

In 1987 Ernest Mandel made a decisive mistake. This led him, and the leadership of the Fourth International, to which he dedicated his life, to support processes leading the international working class towards its greatest defeats since fascism. Writing in October 1989 he said:

> ‘A realistic estimate of the social forces present in the USSR and in the bureaucratised workers’ states, of the relationship of strength among them and of the dynamic of the principal socio-economic contradiction leads to a clear conclusion. The main question in the political struggles underway is not the restoration of capitalism. The main question is whether these struggles head in the direction of an anti-bureaucratic political revolution or of a partial or total elimination of the democratic freedom acquired by the masses under Glasnost. The main fight is not between pro-capitalist and anti-capitalist forces. It is between the bureaucracy and the toiling masses, that is, except in China and Vietnam, essentially the working class… but overall this convergence will be insufficient to impose any restoration of capitalism in the short or medium term’ (International Viewpoint 13/10/89)

And in 1990

> ‘What is happening in East Germany and Czechoslovakia is the beginning of a revolutionary movement which combines May 1968 and the Prague spring multiplied I would say by two or three times…So we have today the beginning of a political revolution in East Germany and Czechoslovakia, the two most proletarian countries of Easter Europe. I say the beginning because we are still at the beginning; there is no prospect of a rapid victory, but the revolution is developing under exceptionally favourable international conditions…So we have a set of exceptionally favourable circumstances: the two revolutions have the big asset of time to unfold…we should be clear on one thing: a short-term restoration of capitalism is completely impossible – even the capitalists do not want it.’(Socialist Outlook February 1990)

A revolutionary, like any other human, is allowed some mistakes by history. Decreeing a counter-revolution to be a revolution is not among them. The consequence of this judgement was that at the decisive moment in history, for which Trotsky founded the Fourth International, when the cumulative impact of the Stalinist policy of Socialism in One Country finally opened the door to the most concentrated imperialist onslaught of the century on the gains of 1917, with all its attendant consequences for humanity, the Fourth International was on the wrong side.

The consequences are not confined to Eastern Europe. Every major progressive step forward this century for freedom from imperialism has been inseparably connected to the fate of the Russian Revolution. Each is one by one called into question in Imperialism’s relentless search for a way out of its crisis: the welfare state, colonial liberation, civil rights, the defeat of fascism. The course of events confirms the historical accuracy of Trotsky’s pre-war judgment:

> the crimes of the Kremlin oligarchy do not strike off the agenda the question of the existence of the USSR. Its defeat…would signify not merely the overthrow of the totalitarian bureaucracy but the liquidation of the new forms of property, the collapse of the first experiment in planned economy, and the transformation of the entire country into a colony; that is, the handing over to imperialism of colossal natural resources which would give it a respite until the third world war.[1]

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[1] Trotsky, ‘Imperialist War and World Revolution’, in *Documents of the Fourth International*, Pathfinder Press New York 1972, p325.

As wars of intervention, mass starvation, scientific racism, Victorian social conditions and Elizabethan bigotry march back one by one from the dustbin of history to the corridors of the commonplace, the significance and necessity of the original purpose for which Trotsky formed the Fourth International – the defence, on behalf of the whole of humanity, of all the gains of 1917 – is becoming starkly clear.

History is a harsh judge. As the consequences of the present imperialist onslaught unfold, and the extent of the stakes in the battle for the gains of October become clear, it is more than possible that future generations will remember only that Ernest Mandel's organisation was on the wrong side when the chips were down. Kautsky's work is today known only to the archivist despite his outstanding contribution to theory; if on similar grounds Ernest Mandel's contribution to Marxist economic theory is lost to new generations, then these generations will be all the weaker, and all the less equipped for the battles to come.

An complete evaluation of Ernest Mandel's contribution to theory will have to reconcile these two aspects of his life and works; to explain and to judge how the man who almost singlehanded rescued Marx's dynamic value theory, arrived at an evaluation that led the Fourth International, to which he courageously and unstintingly dedicated his life, to betray the purpose for which it was founded. This is the only correct and honest road to understand what his existence has meant for humanity.

The purpose of this article is twofold. The first is to suggest how we might identify and perpetuate the genuinely scientific elements which Mandel gave Marxist economic theory and begin their critical incorporation into the body of value theory. My second purpose is to provide at least some insight, as Mohammed suggests, of the man in his time.

The relation of theory to practice

The opening chapter of *Late Capitalism*, with which most of this article is concerned, is dedicated to the relation between theory and practice. It confronts a different problem from us; as a scientist Mandel asks 'what practice is the best for the creation of correct theory?' Here, where we study a body of already existing theory, we appear to face a different question, namely 'to what practice does a given body of theory lead?'

However, this is not yet the right question. No body of theory leads automatically to any body of practice. It is a common tradition, originating with Stalinism but enthusiastically practiced by many who oppose it, to suppose the reason for every political error lies in the theory which inspired it. Conversely, anyone holding a wrong theory cannot but betray the working class. This is profoundly idealist, ignoring the basic materialist point that Being determines Consciousness. In its extreme form, it leads to the right-wing practice of denouncing all movements of liberation because they 'do not understand the class basis' of social struggles.

On such a basis no-one can stand knee-high before such giants as Malcolm X, let alone grasp how Castro or Ho Chi Minh led revolutions. In the first place regardless of the theory they subscribed to, their contribution to practical history is what determines their class position. But further their contribution to theory itself does not consist in the rounded totality of what they wrote but in those often isolated ideas which informed what they did at the decisive moments. When Malcolm X concluded that the destiny of Black Americans was inextricably bound to the liberation struggle of the rest of the world; when Fidel Castro concluded that the freedom of the Cuban people was impossible without the expropriation of US capital, or when Ho Chi Minh concluded from the thwarting of the Geneva Peace Accord that only the military defeat of US imperialism could guarantee the sovereignty of the Vietnamese people over their own country, they blazed in the book of 'theory' pages for which they are justly remembered, however voluminous or formally inadequate the written background to these decisions and whatever the path which led to them.

It would be fruitless and misleading to seek in Mandel's economic theory the *causes* of his political choices, though the weaknesses which made them *possible* can be discerned. But Mandel's actual choices were caused, like those of any other person on the planet, by the complex combination of material circumstances, theoretical understanding, and individual Will which lead anyone to a definite stand at a definite time in the face of definite circumstances. They were in the last analysis a product of history.

The correct mode of enquiry into a body of theory is that opposite line initiated by Marx himself, which is to seek to understand theory as the expression of, and response to, the material circumstances of the thinker and the world s/he lives in. What led Ernest Mandel to produce the theories that he did?

But here, too, there is no unilateral connection. Gramsci described the alliance between workers and intellectuals as a fusion between those who think because they suffer and those who suffer because they think. The hallmark of a revolutionary thinker, the true incarnation of Marx and Engels's concept of a free person, is that s/he transcends historical circumstances by understanding their origin and determinants, deducing what is subjectively necessary from what is objectively possible. If class situation was the only determinant of class position then every worker would be a socialist and every student a traitor.

A history of theory does not trace an unbroken line between birth, upbringing and employment on the one hand, and theoretical output on the other. It identifies the questions which history called on people to think about, and then studies how and whether their thoughts answered the questions. This is the approach we intend to take.

The theoretical heritage of political economy in the New World Order of 1945

When the war ended shortly after Mandel joined the Fourth International, its circumstances were these: following almost two decades of barbarism, the cadre to which the October revolution gave birth were scattered, decimated, isolated from each other and cut off, above all, from the country whose workers caused them to exist.

Had the years following this war produced economic and political instability of the scale and scope of the 1920s, even such a cadre could rapidly have expanded to form the nucleus or at least the catalyst for the formation of a new working class leadership. But, in contrast to the First, the outcome of the Second World War was an unparalleled restabilisation of the world capitalist market in *combination* with an extension of the territory wrenched from this same world market by the soviet state and by the autonomous revolutionary processes in South East Asia and Yugoslavia.

It ran counter to experience and common sense that a debilitating imperialist war, followed by an apparently devastating territorial loss for capitalism, could lead to its restabilisation. A further unexpected outcome was the perpetuation of the soviet state in economically strengthened form for an entire phase of history. Its final crisis, no less catastrophic than Trotsky envisioned, was delayed. Trotsky himself had envisaged this as possible though unlikely, and the 'restabilisation' of capitalism was hotly debated in Soviet circles throughout the twenties and thirties. But the prospect that both *together* could follow a devastating imperialist war was present in Marxist thinking as little more than a remote possibility. When capitalism not only re-established a world market within a matter of years but launched a prolonged period of expansion, it presented Marxist theory with the most outstanding challenge it had faced since Marx's death.

This combination created the most unpropitious circumstances imaginable for the growth of free socialist theory. In the past, fragmentation and isolation had marked the whole period of Marx's work on political economy; but there was at that time no theoretically coherent rival to the movement he and Engels so patiently forged during these difficult decades. True, as the economic and political crisis of the 1870s slowly matured, they had to contend both with the old petty-bourgeois utopian socialism in the shape of Proudhonism and Bakuninism, and with the rising 'state socialist' Bismarkian current represented by Lassalle in Germany and his counterparts such as Hyndman in England. But such disparate, eclectic and confused currents could not leave a mark on theory comparable with the impact of an entire state apparatus claiming the authority of the first successful socialist revolution on the planet.

Academic economics, both neoclassical and Marxist, fell back on a notion that has become the distinctive hallmark of orthodoxy; the idea that the essence of the capitalist market is a state of *equilibrium*. This concept which we will develop later, is a codeword for a fundamentally apologetic idea. Its core is the notion now known as Say's Law[2] – that in a private market economy with no conscious direction, the production of every good automatically and necessarily creates the demand for that good. A general crisis of overproduction is on this assumption not merely unlikely but theoretically impossible. Equilibrium theory presupposes that, even if a temporary disproportion can take place so that, for example, society produces too much butter and not enough bread, the price mechanism will rapidly act to restore the correct proportions, since the price of bread will fall, discouraging its production by driving capital out of the sphere of bread production, simultaneously encouraging butter production by despatching capital to increase the production of high-priced butter.

Certainly if as a general law, capitalists produced more of the goods they couldn't sell, and less of what they could sell, they would not survive long as capitalists and the market as an institution would be in serious trouble. But from this there is no more reason to conclude that supply successfully and exactly equates to demand than to deduce health from the risk of disease or peace from the horror of war. We can only conclude that there are social forces that act so as to decrease the disparity. But other forces acting to increase this disparity may at any given moment prove more powerful.

In particular this is the case for means of production – investment goods. Marx and Keynes alike both recognised that in a market economy, investment in capital goods in general (in the UK at least 45% of all effective demand)[3] is not directly determined by

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[2] It would more accurately be labelled Mill's Law, John Stuart Mill being (in the context of the second Kontradieff) the only economist stupid enough to proclaim it as a formal theory: 'What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the productions of other people consist of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as supply; everybody would be able to buy twice as much, because everyone would have twice as much to offer in exchange.' (Mill book III Chap XIV Section 2, cited in Keynes 1973:18)

[3] The input-output figres for 1993 in the UK, in the *1995 UK National Accounts*, give total output of the UK including VAT as £1,956 bn and intermediate inputs as £1,374 bn. These intermediate inputs (roughly, Marx's constant capital) constitute 70% of all effective demand. The Keynesian 'National Income' records only the difference between the two, about £580bn, this being roughly Marx's V+S. But these intermediate inputs include magnitudes like the cost of the banking system (£246bn) which is not part of constant capital but an unproductive expenditure out of profits. Our figure of 45% is the

the need for the outputs from these goods – which is not in any case known at the time they are bought – but by profit rates on new investments. It is characteristic of the market in general, and the boom-slump cycle in particular, that at definite points in time, past investment gives rise to current production which finds no matching demand[4], and when this coincides with a general decline in profitability, the resultant slackening of demand for both investment and consumer goods gives rise to a general overproduction of all goods simultaneously; a phenomenon which, according to Say's Law, simply cannot happen. But it does.

The idea that the price mechanism acts *as if* to restore production to a level matching social demand is not exceptionable. The question is whether it succeeds. The decisive error in the concept of equilibrium is that in the process of adjusting to the imbalance between supply and demand, the original conditions change. If the nature and extent of this change is large in comparison to the adjustment, equilibrium can never be reached. In technical terms, the process of adjustment is path-dependent.

Above all, it is decisive in understanding the actual movement of capital to grasp that it is the differences between profit rates, not their equalisation, that provides the clue to the actual motion of the system. The secret of the market is the pursuit of the highest possible profit rate, which is of necessity and obviously a rate distinct from the average. The incessant divergence of profit rates one from the other, not their incessant equalisation to each other, is the driving force of capital.

This is in fact, as Mandel understood, the effect of technical change under capitalism. As fast as a new technique spreads to become the norm, a still newer technique elsewhere is introduced and the ideal equilibrium is simply never reached. Mandel opens chapter 3 of *Late Capitalism* with the following point from Marx:

> The surplus-profit which some individual capital … realises in a particular sphere of production… is, aside from fortuitous deviations, due to a reduction in cost-price, in production costs. This reduction arises either from the fact that capital is used in greater than average quantities, so that the *faux frais* of production are reduced, while the general causes increasing the productiveness of labour (co-operation, division of labour) can become effective to a higher degree, with more intensity, because their field of activity has become larger; or it may arise from the fact that, aside from the amount of functioning capital, better methods of labour, new inventions, improved machinery, chemical manufacturing secrets, etc., in short, new and improved, better than average means of production and methods of production are used.' (CIII:644)

and goes on to argue

> But is it not true to say that this double process, involving the expansion of the *mass* of capital and the reduction of the cost-price of commodities through improved machinery and a higher organic composition of capita, contains the whole meaning and purpose of capital accumulation under the pressure of competition? Are we not justified, therefore, in describing this

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most pessimistic, taking constant capital as only the output of the production, construction and transport industries. Which was £842 bn

[4] As we write, the price of 16Mb RAM chips has fallen on the world market by 75% in six months due to the combination of large new South-East Asian factories coming on stream, and a lower than expected take-up of memory-hungry products like Windows 95. Since these new factories are still profitable, we have to conclude that the surplus profit on RAM production last year was in excess of 75% of their costs.

> process as dominated by the indefatigable search for surplus-profits? (1976:77)

In Marx's thinking permanent technological revolution itself begets a never-ending disparity between profit rates on different capitals in which the tendency for supply to equate with demand is visible only as a long-term average if at all. From his earliest days he held that it was *only* through the continuous divergence of price from the 'natural proportions' which might equate supply to demand that the capitalist system could even exist, as we show later in this section. It is not even appropriate to pin the label 'disequilibrium' on Marx's approach; this already presumes a notion of equilibrium from which the economy departs, just as the idea of 'imperfect competition' presumes that there is such a thing as perfect competition in the first place.

Orthodox economics, however, claims not only that there are tendencies which match supply to demand but that these tendencies actually succeed. To be precise, they claim that the assumption of a correspondence between actual prices and the theoretical equilibrium is an adequate starting point for theorising the underlying reality. Equilibrium – a perfectly harmonious market – becomes the *theoretical presupposition* of all economics, the fount of its concepts and procedures·[5] Even when the more practical economists recognise that this presupposition is empirically false, they still use the concepts deduced from it as the basis of their reasoning, arguing that it is merely a 'first approximation' or 'model'. In this way all those phenomena which only appear under disequilibrium conditions and may properly be theorised only using equilibrium-free concepts – unequal profit rates, the coexistence of many techniques in the same sector, cyclic crisis – become not merely unusual but literally unthinkable.

The postwar stabilisation appeared as the perfect proof of the adequacy of this concept of economics, a concept which Keynes himself had sought to challenge. At last, the profession felt with an almost audible sigh of relief, the absurd apologetic projections of the last twenty years seemed to find confirmation in observed reality.

As we have seen Mandel's response was to unlock, in Marx's writings, the vital theoretical instrument which was the notion of *surplus profit*. This concept was to become the cornerstone of *Late Capitalism* and most of his subsequent work in the sphere of economic theory. '[T]he problem of imperialism', he opens in chapter 3 of *Late Capitalism*,

> must be construed historically as a qualitative change in the structure of the world capitalist economy. We are thus dealing with the reproduction on a world-wide scale of one of the basic problems in Marx's analysis of capital, namely the relationship between uneven development and competition, which tends to suppress uneven development and yet is

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[5] A circumstance which has got worse. "The theoretical constructs introduced to economics over a century ago continue to pervade discussion of policy. They provide both a strong bias towards and an apparently strong rationale for policies which move towards the creation of a free, competitive market. For example, the political and social agendas of Ronald Reagan and Margaret Thatcher were powerfully motivated by the logic of free-market economics. Or to be more precise, free-market economics was used to underpint the iedological preconceptions of these politicians…all these themes flow from the logic of the theory of competitive equilibrium…[D]isagreeements among economists attract considerable publicity. But almost all such disputes concern the behaviour of the economy at the aggregate, macro-level…It is the micro-level which is described by the equilibrium model of marginal economics, and which is fundamental to the world view of orthodox economics, regardless of any differences which they might have about how macro-economic policy should be conducted." Ormerod (1994:47)

> obstructed by it. We will discuss therewith the problem of the equalisation of the rate of profit. Above all we will be concerned with the role which the quest for surplus-profits plays in the process of capital accumulation and capitalist growth.
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> We have already pointed out that the growth of the capitalist mode of production by its nature always leads to disequilibrium. We must also bear in mind that the problem of the extension of capital to new realms of production – whether technical or geographical – is ultimately determined by a difference in the level of profit, which means that there must be at the same time be a relative excess of capital, a relative immobility of capital and relative limits to equalisation of different rates of profit set by monopoly. It follows that the actual growth process of the capitalist mode of production is not accompanied by any *effective equalisation of the rates of profit*. (emphasis in original)

This radical analysis marked out Mandel's approach from almost the entire body of Marxist theory, particularly academic Marxist theory. Even now after a considerable and prolonged theoretical struggle, there is scant recognition or acceptance of even the possibility that Marxist value theory may conceive of a failure of the profit rate to equalise. Far less, then, was there any conception outside of the radically reduced circle of Mandel's immediate collaborators, that the actual motor force of capitalist development could be *ascribed* to this failure to equalise.

The terms of the Twentieth Century on the foundations of Value Theory were set by the early controversies between Marxism and its *fin-de-siècle* rivals, above all Marx's arch-opponent Eugen von Böhm-Bawerk. How could a theory which recognised labour-time as the measure of exchange-value explain that goods exchanged in proportions different from the labour-time embodied in them?

Ironically, Böhm-Bawerk himself never accepted the idea of general equilibrium, and the 'Austrian school' to which he belonged is today experiencing a revival in the face of a general crisis of equilibrium theory, as the theoretical standpoint of the libertarian right. But his objections to equilibrium did not prevent him from making its most decisive assumption –a single profit rate –the centre of his assault on Marx.

In the terms which Böhm-Bawerk and his successors posed it, Marxism stands or falls on whether it can explain the formation of an equal profit rate. Marx himself adduces the tendency towards an equal profit rate as evidence that exchange at value could not happen. This was seized on by Marx's critics, aided perhaps by Engels rather pugnacious presentation,[6] to remove from Marx's mouth the general point that goods do *not* exchange at their values, and place in its stead the vulgar and false assertion that they actually *do* exchange at their prices of production:

> And here Marx arrives at the famous rock of offense in his theory, so hard to steer past that it has formed the most important point of dispute in the Marxian literature of the last ten years. His theory demands that capitals of equal amount, but dissimilar organic composition, should exhibit different profits. The real world, however, most plainly shows that it is governed by the law that capitals of equal amount, without regard to possible differences of organic composition, yield equal profits…To speak plainly his solution is obtained at the cost of the assumption from which

[6] Two articles which indicate the less than fortunate role of Engels in setting the terms of the debate are Howard and King (1987) and Arthur, C.J (1996)

> Marx has hitherto started, *that commodities exchange according to their values* (Böhm-Bawerk 1984:20)

This passage aptly demonstrates the subtle transition inflicted on Marx by his critics. In the first place Marx *nowhere* argues that goods actually exchange at their values, even in Volume I of *Capital*. Marx's famed abstraction from price-value divergences (not at all an assumption that these differences do not exist) does not enter in Volume I until the end of Chapter 5, well after he establishes the categories of value, price and money, none of which depend on this abstraction. In this decisive chapter Marx sets out to show that surplus value cannot arise anywhere in circulation, and in general can result only from the sale and purchase of the commodity labour-power. This being the case, for the rest of the volume he investigates not *value* but *surplus-value* on the assumption of sale at values – demonstrating that even on the assumptions of the classical economics of the day, namely sale at values, capital necessarily produces exploitation.

In the second place he never argued what Böhm-Bawerk then says: 'The real world, however, most plainly shows that it is governed by the law that capitals of equal amount, without regard to possible differences of organic composition, yield equal profits.' The first position – that price cannot equal value – is Marx's. The second – that price must yield equal profits on all capitals – is Böhm-Bawerk's, the first scientific and the second purely vulgar.

If all profit rates are equal, Marx's analysis of the movement of capital and the effect of technical change is theorised out of existence before the study even begins. Yet vulgar economics is driven towards this conclusion by the idea that *capital is a commodity* and that, therefore, like all commodities it must have a 'single price' – this single price being an actually equalised profit rate. The fact that even formal critics of equilibrium such as the Austrian school nevertheless made this equilibrium rule the centre of their economics, indicates on the one hand how pervasive are the theoretical concepts of equilibrium and on the other shows that they are in the last analysis vulgar – a reflection of the fetishized view of capital as it 'appears' to the businessman.

In the history of economic thought Marx's theory may usefully be viewed as the most radically opposed of all economic theory to the notion of equilibrium. It is a general theory in which the systematic divergence of prices from all 'natural proportions' including both values and prices of production, and thereby excluding any actual equalisation of supply to demand, is so fundamental[7] that I ask the reader to forgive me for noting in one place just how consistently he stuck to this view. My thanks are due to Julian Wells for my first citation dating from Marx's earliest years.

> Both on the question of relations of money to the value of metal and in his demonstration that the cost of production is the sole factor in the determination of value Mill succumbs to the error, made by the whole Ricardo school, of defining an *abstract law* without mentioning the fluctuations or the continual suspension through which it comes into being. If e.g. it is an *invariable* law that in the last analysis – or rather in the sporadic (accidental) coincidence of supply and demand – the cost of production determines price (value), then it is no less an *invariable law* that these relations do not obtain, i.e. that value and the cost of production do not stand in any necessary relation. Indeed, supply and demand only ever coincide momentarily thanks to a previous fluctuation in supply and demand, to the disparity between the cost of production and the exchange value. This is the *real* movement, then, and the above-mentioned law is no more than an abstract, contingent as one-sided

[7] and so widely misrepresented

> movement in it. Yet recent economists dismiss it as accident, as inessential. Why? Because if the economists were to attempt to fix this movement in the sharp and precise terms to which they reduce the whole of economics this would produce the following basic formula: laws in economics are determined by their opposite, lawlessness. The true law of economics is chance, and we learned people arbitrarily seize on a few moments and establish them as laws (Marx 1844:260).

These notions are repeated at critical points throughout Marx's later development:

> It is not the sale of a given product at the price of its cost of production that constitutes the "proportional relation" of supply to demand, or the proportional quota of this product relatively to the sum total of production, it is the variations in supply and demand that show the producer what amount of a given commodity he must produce in order to receive in exchange at least the cost of production. And as these variations are continually occurring, there is also a continual movement of withdrawal and application of capital in the different branches of industry...if M. Proudhon admits that the value of products is determined by labour time, he should equally admit that it is the fluctuating movement alone that makes labour the measure of value. *Poverty of Philosophy* (1932:52)

> The coincidence of price and value presupposes the equality of demand and supply, exchange solely of equivalents (hence not of capital for labour) etc.; in short, formulated economically, it reveals at once that this demand is the negation of the entire foundation of the relations of production based on exchange value. G*rundrisse* p795

and were finally incorporated in *Capital* itself.

> In actual fact, demand and supply never coincide, or, if they do so, it is only by chance and not to be taken into account for scientific purposes; it should be considered as not having happened. Why then does political economy assume that they do coincide? In order to treat the phenomena it deals with in their law-like form, the form that corresponds to their concept. *Capital* Volume III:291

As regards the equalisation of the profit rate Marx baldly states that

> Between the spheres more or less approximating the average there is again a tendency towards equalisation, seeking the *ideal* average, i.e. an average that *does not really exist*. (CIII:173: my emphasis)

or as Mandel notes (1976:75n)

> The industrial rates of profit in various spheres of production are themselves more or less uncertain; but in so far as they appear, it is not their uniformity but their differences which are perceptible. The general rate of profit, however, appears only as the lowest limit of profit, not as an empirical, directly visible form of the actual rate of profit (CIII:367)

> The rate of profit, on the other hand, may vary even within the same sphere for commodities with the same price, depending on different conditions under which different capitals produce the same commodity, because the rate of profit of an individual capital is not determined by the

> market-price of a commodity but rather by the difference between market-price and cost-price. These different rates of profit can strike a balance – first within the same sphere and then between different spheres – only through continual fluctuation (CIII:644)

This is as remote as could possibly be from the view ascribed to him either by his critics such as Böhm-Bawerk or his little helpers Tugan Baranowsky and Bortkiewicz (see Sweezy 1984), who subsequently derived the equation systems which Marxist orthodoxy turned into the officially correct presentation. In this presentation Marx's 'solution' does not even exist without profit rate equalisation. Price of production emerges as the solution to a set of simultaneous equations derived from the assumption of simple reproduction combined with perfect profit rate equalisation. Questions of the equilibrium-free behaviour of capitalism cannot even be posed, let alone solved, in this presentation since the equation of supply and demand is presumed before it is investigated.

Yet Bortkiewicz's manner of posing the question was by the time Mandel wrote not merely hegemonic but universal, for reasons we will shortly study. The view endorsed by Marx's defenders and critics alike was that the actuality of profit rate equalisation, save for the special cases of monopoly and rent, was the cardinal point of his value analysis.

It was therefore an extremely bold and decisive stroke on Mandel's part to identify the opposite tendency, for individual profit rates to *diverge*, as the principal, most influential and above all most empirically true outcome of competition. In short, Mandel understood that whereas in orthodox economics 'equilibrium' is the presupposition of disequilibrium which is merely an accidental departure from an allegedly essential regularity, in Marx disequilibrium is the essential actual condition of the world in which 'equilibrium' appears merely as a never-realised ideal condition.[8]

We now move to consider what aspects of the world of 1945 drove him towards this radical break from 'Marxism' towards Marx.

The factual roots of Mandel's theoretical contribution

A characteristic feature of any vulgar or apologetic theory is that it takes what it finds in the immediate present and portrays it as eternal. It is easy today to forget how the spellbinding expansion of the fifties and early sixties mesmerised the economists of the advanced world, left and right alike.

The centrepiece of the work of both Baran and Sweezy, for most of the English-speaking world the best-known representatives of the theory now known as state monopoly capitalism,[9] premise their enquiry on the concept of the 'law of rising surplus', and hold

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[8] Mandel's own formulations are partial and show the marks of the old theory. 'It is obvious, however, that the overall development of the capitalist mode of production *cannot* be subsumed under the notion of 'equilibrium'. It is rather a dialectical unity of periods of equilibrium and periods of disequilibrium, each of the two elements engendering its own negation. (1972:26) In Marx himself we find no 'periods of equilibrium' But Mandel's underlying point is clearly expressed thus: 'The theoretical efforts of Rudolf Hilferding, Rosa Luxemburg, Henryk Grossman, Nikolai Bukharin, Otto Bauer and many other were bound to fail because they attempted to *investigate the problems of the laws of development of capitalism, i.e. of ruptured equilibrium, with tools designed for the analysis of equilibrium* (1972:28, emphasis in original).

[9] 'In *State and Revolution* (1917) Lenin spoke of 'the epoch of the development of monopoly capitalism into State monopoly capitalism', and it is now the accepted view in the Communist world that the advanced capitalist countries have long since passed

forth against Schumpeter's theory of the 'perennial gale of creative destruction' which, they say,

> has subsided into occasional mild breeze which is no more a threat to the big corporations than is their own corespective behaviour toward each other (Baran and Sweezy 1970:82)

They even hold out against such upstarts as Galbraith and Kaldor who dared suggest that the observed fall in profits of the late 1950s might be a necessary mechanism to maintain domestic demand and thus avoid a realisation crisis.

The first consequence of this, reduced to its essentials, is that the most dramatic criticism Baran (1955) can make of this surplus is that it could be bigger. At the heart of the dominant Marxist view of the fifties and sixties lay the notion that in some sense the full productive potential of capital was not being realised. This was formalised as a discrepancy between its technical potential and the actual realised benefits, limited by the restricted purchasing power of workers, wasteful consumption by the idle rich, unproductive activities, and the inefficiencies wrought by monopoly.[10] The notion, explicit in Marx, that the capacity of capitalism to support human existence would be periodically brought into question by its very mode of functioning, vanished from the pages of Marxist literature.

This was a theoretical reflection of the line of peaceful coexistence whose premise was that the world had divided into two distinct and autonomous 'camps'. The triumph of the socialist camp could thus only be assured by the more *efficient* use of resources to create Baran's larger 'possible' surplus. This condemned the workers of the Soviet Union and the third world to impossible levels of sacrifice – not least since, on the world market, the labour of each imperialist worker counted, as a result of the price mechanism, for the labour of ten or twenty Soviet workers.

But there were two further problem from the standpoint of economic theory. Firstly the approach of Baran and Sweezy, shifting attention from the profit rate to the magnitude of profit and reformulating this magnitude as an ill-defined 'physical surplus' instead of surplus *labour*, quietly set aside the prospect of an endogenous process through which a decline in the profit rate provoked by a rise in the organic composition of capital, could provoke an internal crisis. A crisis of the classical type described by Marx, in which the profit rate itself played a decisive role in determining the course of capitalist accumulation seemed at the time so remote that it began to be theorised away, even by the Marxists. Only the problems of realisation and the rational use of resources remained to be addressed.

Second, placing monopoly at the centre of the stage, even pronouncing a new capitalist stage – state monopoly capitalism – ducked the question of whether the market itself was capable of sustaining indefinite growth. Paradoxically, it even lent support to the idea that a return to classical free competition would be an advance, though its

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through this transitional stage and entered that of State monopoly capitalism'. (Baran and Sweezy 1979:75)

[10] "*Potential* economic surplus, i.e. the difference between the output that *could* be produced in a given natural and technological environment with the help of employable productive resources, and what might be regarded as essential consumption. Its realization presupposes a more or less drastic reorganization of the production and distrbution of social output, and implies far-reaching changes in the structure of society." Baran (1973:133)

proponents were careful to argue that centralisation and concentration of was unavoidable under capitalism.

This highlights the difficulty faced by Mandel's generation of Marxists. They had to explain the historical validity of Marxist economic theory faced with the evident empirical contradiction between Marx's theory of the tendency of the rate of profit to fall, not to mention his analysis of the crisis-ridden and catastrophe-prone character of capitalism, and the observable facts of the postwar boom. What singles Mandel out from almost all other Marxists of the day is that he perceived this would end.

We may attribute this first of all to the fact that he derived his theory, consonantly with Marx's method, from a study of the whole of capitalist history and not just the epoch he lived in. More decisive still, and reflected in the practice of the Fourth International in distinction from all purely national currents of Trotskyism, was that he derived his theory from a practical and theoretical reflection on the state of capitalism across the whole of the globe.[11]

There was an omission; the territories of the Soviet Union, of China, and of Eastern Europe themselves are absent from *Late Capitalism*. The lack of a developed account of the reciprocal relation between the soviet and capitalist economies probably contributed to a misunderstanding for the basis of a number of decisive gains of the postwar period which, despite the soviet bureaucracy, were nevertheless possible only because the soviet union existed. Mandel's analysis of the Welfare State tended to present it, like many postwar advances, as an autonomous product of the class struggle in the West or even a necessary adaptation of Late Capitalism to the new requirements of realization.[12]

Nevertheless the insights provided by a thorough study of even two-thirds of the entire world economy as a unity of its processes of development and underdevelopment, provided an indispensable theoretical advantage.

Mandel's generation had to contend in economics with the theory of state monopoly capitalism and in politics the theory of peaceful coexistence, formally launched at the 20th conference of the CPSU but originating in the policy of formal co-operation with

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[11] In accordance with Lenin's own approach: 'Proof of what was the true social, or rather the true class character of the war is naturally to be found, not in the diplomatic history of the war, but in an analysis of the *objective* position of the ruling classes in all the belligerent countries, In order to depict this objective position one must not take examples or isolated data (in view of the extreme complexity of the phenomena of social life it is always possible to select any number of examples or separate data to prove any proposition) but *all* the data on the *basis* of economic life in *all* the belligerent countries in the *whole* world.' (V.I.Lenin *Imperialism, last Stage of Capitalism*, introduction)

[12] 'another characteristic of this [the imperialist] epoch was a general extension of social legislation, which gained particular impetus in the period of imperialism. In one sense this was a concession to increasing class struggle by the proletariat, designed to safeguard the domination of capital against more radical attacks on it by labour. At the same time, however, it also corresponded to the general interests of expanded reproduction under the capitalist mode of production, in assuring the physical reconstitution of its labour-force where it was endangered by super-exploitation…there is thus an inherent trend under late capitalism for the state to incorporate an ever greater number of productive and reproductive sectors into the 'general conditions of production' which it finances. Without such a socialisation of costs, these sectors would no longer be even remotely capable of answering the needs of the capitalist labour process' This elaborate theoretical construction should be set beside the simple and blunt formula offered by Newt Gingricht when he launched the Republican right's 'contract on America': 'The Welfare state is an artefact of the Cold War'.

imperialism sanctified by the conferences of Yalta and Teheran and the division of the world by Stalin, Roosevelt and Churchill. The organising principle of both were one and the same: that the destabilising tendencies of competitive capitalism had been overcome by regulated capitalism, supervised by the state in the interests of monopoly capitalists. This implied that the struggle between socialism and capitalism could be consigned to the terrain of economic efficiency since capitalism had been rid of its uncontrollable destructive tendencies.

From this standpoint, capitalism's unfortunate tendency towards violent and barbaric wars of intervention as in Greece, Korea, Algeria, Vietnam, Guatemala, Suez, Ireland, etc., not to mention the uncontrollable expansion of the nuclear armoury of the Cold War, could be dismissed as an atavistic throwback or an expression of capitalist irrationality.

One awkward 'problem' remained: neocolonialism. The political liberation of the former British and later French colonies did not lead to their economic emancipation. 'Marxist' orthodoxy could supply no plausible explanation of this increasingly obvious economic fact, and particularly with the rise of Maoism was driven more and more sharply to confront this inadequacy. Marxism time and again ran up against the obvious question: why was three-quarters of the world poor, and why was the gap between them and the rich countries growing?

The most conspicuous economic feature of the period was that though the phenomenon of crisis may have been temporarily suppressed, the phenomenon of unequal and uneven development was not. The desperate plight of the peoples of North Africa, of Central and Southern America, of South East Asia, led to assault after assault on the established 'peaceful' order both colonial and postcolonial which provided the backdrop to the formation of the Marxist generation of the 1960s. Our generation was formed as much by the Battle of Algiers and the Tet Offensive as by the 1968 student revolts. It owed as much if not more to Ho Chi Minh, Malcolm X and Fidel Castro as to Danny Cohn-Bendit and Herbert Marcuse. To this generation Ernest Mandel offered the first and only coherent Marxist explanation for the state of the world we had been born into. 'Does this new turn in the structure of the world economy', he wrote on page 65,

> signify a tendency towards a thorough industrialisation of the Third World, a universalisation of the capitalist mode of production and eventual homogenisation of the world economy? Not at all. It simply means a change in the forms of juxtaposition of development and underdevelopment, or more correctly: new differential levels of capital accumulation, productivity and surplus extraction are emerging, which although not of the same nature, are still more pronounced than those of the 'classical' imperialist epoch.

The radical character of this view consisted in the following. Mandel first insisted, in accordance with the known facts, that the divergence between poor and rich nations, between 'first' and 'third' world or, as it is known today, between North and South, did not diminish with colonial liberation but increased and intensified. Second, in this passage at least he attributed this to the capitalist market itself.

Half of Baran's *Political Economy of Growth* is devoted to the phenomenon he calls 'backwardness'. This underpinned a genuine and human concern but the word itself betrays the outlook. Though systematic attention to the phenomenon of 'underdevelopment' became the hallmark of the Marxist currents emerging from this stable, the explanations offered did not rise to the nature of the phenomenon.

Baran's theory amounts to this: the nations concerned have not yet achieved proper capitalism. They emerged from feudalism or other backward states and their encounter with advanced capital 'froze' vital aspects of their productive structure to render them incapable of profitably investing their 'surplus'. It is thus, at the end of the day, the *incompleteness* of their encounter with capital which explains their economic situation. From this flows the entire terminology.

For Mandel on the contrary, the problem is precisely that they *have* been incorporated into capitalism. It is not the deficiencies of the market, but its operation, that creates the problem. Despite the superficial similarity of the topic which preoccupied both Mandel and his contemporaries, the solution they arrived at could not be more different.

Mandel's approach corresponded closely to Marx's in analysing antediluvian features of capital such as rent, and when assessing how capitalism transforms economic categories that existed long before it, such as money and interest. Marx insisted, against the whole spirit of his age, in explaining both rent and interest on the assumption of a fully-developed capitalist market. This was necessary because otherwise, the analysis would have located the cause of rent or interest not in the market itself but in the failure of the market.

This is a characteristic difference between scientific Marxist political economy and vulgar economics, which in the context of economic development is important because the idea that economic backwardness is a product of social or political backwardness unwittingly (or sometimes wittingly) leads directly to scientific racism. If the market is not the cause of inequalities in productivity or consumption, then these must ultimately be either accidental or the expression of an inbuilt racial or social inferiority. The longer these inequalities exists, therefore – in short the longer capitalism exists – the greater the threat of a reversion to the far more backward and barbarous conceptions that formed the ideological basis of fascism.

In every case where a category such as rent, money or economic backwardness exists both before capitalism and under capitalism, there is a tendency to present the ancient form as the eternal which requires a profound and sustained theoretical effort to escape, above all when the ancient form is still empirically evident. It was characteristic, therefore, of this debate that inequality was generally considered the result of a failure to *become properly capitalist*, as indeed the very term 'underdevelopment' suggests.

Much development economics became mired in a byzantine discussion on class relations and stages of development, in bizarre arguments about whether this or that country had completed its bourgeois revolution or not, inspired not just by the Stalinist theory of stages but by the inability of theory as inherited from Marx, and above all as interpreted by orthodoxy, to comprehend the inequality of nations as a modern development. Whatever criticisms might be made of it, the arrival of dependency theory laid the basis for an escape from this cul-de-sac. The achievement of works such as Gunder-Frank's *The Development of Underdevelopment* lay in this insight. One of the high points of Ernest Mandel's accomplishment was to incorporate such insights into mainstream Marxist economics, break the Gordian knot and label the free market itself as the culprit, a lesson which in today's 'globalisation' euphoria remains entirely timely and must on no account be forgotten:

> It is not enough to quote historical data which show why industrialization was first achieved in Western Europe and not in China, India or Latin America. These data – analysed more thoroughly in our *Marxist Economic Theory* – only explain the initial difference. This difference could, however, have narrowed down in the long run, as indeed happened in the case of Japan…The *initial* productivity gap is thus inadequate to explain the

> *contemporary* gulf. To it must be added the way in which the world economy has functioned for 200 years to arrest or widen this difference…the central problem raised by Bettelheim's argument, the *productivity differential that does not precede capitalism but is produced by it*, takes us back to the problem of the accumulation of capital on a world scale. This problem cannot be solved without seeing that it was the specific structure of the capitalist economy, especially in the age of imperialism but also partly prior to it, which ensured that the accumulation of industrial capital in the metropolitan countries put a decisive brake on the accumulation of industrial capital in the so-called Third World. (Mandel 1976:365)

This made it possible to understand imperialism neither as some kind of deviation from the free market such as the substitution of monopoly for competition, nor as a survival of precapitalist empires of the old type which should therefore vanish with colonial liberation, but on the contrary the most modern form of capitalism and the highest form of competition, competition as Lenin put it to divide and redivide the world's territories and the world's markets.

Third and not least, Mandel did not shrink from presenting the clear empirical evidence for a change in the mode of appropriation of colonial surplus profit from the heyday of imperialism as analysed by Lenin:

> Accordingly, the structure of the world economy in the first phase of late capitalism is distinguished by several important characteristics from its structure in the age of classical imperialism. But it reproduces and even reinforces the differences in levels of productivity, income and prosperity between the imperialist and the underdeveloped countries. The share of the underdeveloped countries in world trade declines – instead of growing or remaining constant – and the decline is rapid. *All private and public transfers of capital from the metropolitan countries cannot keep pace with the flow of values in the opposite direction*, and the countries of the so-called Third World consequently suffer relative impoverishment in their transactions with the imperialist countries. (1976:68, my emphasis)

In this analysis the decisive factor was no longer the export of capital as such. It was the inherent unevenness of capitalist development on a world scale:

The entire capitalist system thus appears as a hierarchical structure of different levels of productivity, and as the outcome of the uneven and combined development of states, regions, branches of industry and firms, unleashed by the quest for surplus-profit. It forms an integrated unity, but it is an integrated unity of non-homogeneous parts, and it is precisely the *unity that here determines the lack of homogeneity*. In this whole system development and underdevelopment reciprocally determine each other, for while the quest for surplus-profits constitutes the prime motive power behind the mechanisms of growth, surplus-profits can only be achieved at the expense of less productive countries, regions and branches of production. Hence development takes place only in juxtaposition with underdevelopment; it perpetuates the latter and itself develops thanks to this perpetuation.

Without underdeveloped regions, there can be no transfer of surplus to the industrialised regions and hence no acceleration of capital accumulation there. Over the span of a whole historical epoch no transfer of surplus to the imperialist countries could have occurred without the existence of under-developed countries, and there could have been no acceleration of capital accumulation in the former. Without the existence of underdeveloped branches of industry there would have been no transfer of surplus to the so-called growth sectors and no corresponding acceleration of the accumulation of capital in the past 25 years. (Mandel 1976:103, my emphasis)

This contains the theoretical potential to liberate Marxist economic theory entirely from the narrow confines in which it had moved since Marx's time.

Mandel's theoretical approach, following in the footsteps of Lenin and Trotsky, opened the door to a rigorous study of the *world* economy as the foundation of *national* economic development, in contrast to existing theory which presented the world economy as the sum of its national parts; it moreover presented the world market in its pure form, independent of all particularity of historical development, and demonstrated that even abstracting from all historical specificity, the growth, reproduction and extension of inequality between nations was an integral part of capitalist development. It showed that the rich nations were rich *because* the poor nations were poor, that the poor nations were poor *because* the rich nations were rich. It showed for the first time that the ultimate theoretical outcome of Adam Smith's dream of a fully global market was not the wealth of nations but the destitution of nations.

This conclusion contained the key to postwar capitalist stabilisation, though Mandel himself did not draw all the logical conclusions from this fact. The impetuous growth of the fourth Kondratieff was not internal to metropolitan capitalism but was indissociable from its successful reorganisation of the territories remaining in the world market which permitted, despite the change of form implied by colonial liberation, an acceleration and accentuation of the main tendency of imperialism, the maintenance of a tiny band of robber nations on the basis of the appropriated labour of the majority of humanity. Without the surplus profit arising from the specifically neocolonial form of world domination initiated by the USA in the years of its unchallenged hegemony, the fourth Kondratieff simply would not have happened.

This conclusion also is more than borne out, as we shall see, by the subsequent march of events.

Mandel's dynamics in the history of economic thought

In order to grasp the full significance of this contribution a further factor must be taken into account.

By the time the postwar boom was under way, two apparently opposed conceptions offered a 'global' theoretical explanation of the state of world history. The most prominent was what Arestis(1992) dubs the 'neoclassical synthesis' or what everyone today takes to be 'Keynesianism'. The second and less prominent, but in the context of Mandel's contribution by no means the least important, was state monopoly capitalism.

Hindsight shows these apparently disparate bodies of theory, at the time perceived as diametrically opposed world views, to possess several common features:

a. both presuppose a 'normal' or equilibrium state of a competitive economy from which the actual world was a deviation.
b. both held that the state could guarantee stability and that its regulation was the basis for the unparalleled prosperity of the postwar years.

c. perhaps most decisive of all, a growing body of almost impenetrable high theory established that the apparently radically different accounts which these two theories had to offer were expressed in the *same* sets of equations.[13]

This latter body of theory is variously known as comparative statics,[14] competitive general equilibrium theory or Walrasian theory. Its underlying conception is a mathematically pure synthesis of all pre-existing apologetics, reposing on the following ideas:

(a) price is explained by a hypothetical economy in which supply exactly balances demand,

(b) in this hypothetical economy all profit rates are everywhere equal

(c) this hypothetical economy deploys only one technology, the most advanced (in 'Marxist' terminology the 'socially necessary' technology)

Mandel penetrated beneath the surface of this fallacious structure. His central point remains totally valid today: the entire illusion of a harmonious underlying 'ideal' economy vanishes once we enquire into the process of technical change itself.

At the centre of Marx's analysis of capitalist progress we find the following question: Why do the capitalists invest in technology? The end result of a labour-saving invention, according to the labour theory of value itself, is to spend less to make the same thing. Consequently, technological improvement eventually produces a fall in the profit to be obtained on each article sold. If I make computers more efficiently, I must eventually sell them for less. So why bother? As Marx and Mehring document, there are countless cases when new inventions were consciously destroyed by an alliance of artisans and governing classes, for fear of the distress they would cause.

Marx attributes the compulsion to innovate not to some mystical essence of capital but to the formation of a uniform price for each product in society.

Capitalist innovate because if this results, for the same outlay of money, in more of the same product than her/his rival, or – which is the same thing – the same amount of this product for less money – then this same capitalist can sell it for the same price as the rival but spend less money. Consequently s/he secures a surplus-profit, higher than the average, for as long as s/he exists on the market side by side with the more backward remaining producers. Characteristically, this is perceived by both the neoclassical synthesis and state-monopoly capitalism as a 'market imperfection', as a form of monopoly: a deviation from an apostatized free market. Marx's argument, and Mandel's point, is that this surplus profit is not a deviation from the free market, but it is what the free market consists of. Within the vulgar conception that capital itself is a commodity, with a single price – the 'equal rate of profit' – this idea is almost inconceivable.

This solves at a stroke all the problems which Mandel's contemporaries simply could not grasp and which most economics still fails to grasp. Why, for example, can capital move from a sphere where the profit rate is apparently higher to a sphere where it is

[13] 'the Marxian system is easily transformable into a balanced Walrasian general-equilibrium one. In an algebraic restatement, the number of its equations equals the number of its unknowns; this is the *prima facie* evidence that both circularity and inconsistency have been avoided.' (Bronfenbrenner 1968).
[14] a term due to Hicks, whose famous 1937 article 'Mr Keynes and the classics' is generally regarded as responsible for the neoclassical synthesis.

apparently lower? Why does capital not flood the peripheral, backward countries and develop them to the same level as the advanced countries? For two decisive reasons:

(a) the total amount of new capital available each year for investment is limited to the quantity of labour which created it, that is, the volume of total surplus value after deducting private capitalist spending.

(b) this total amount is distributed to those spheres of production where the greatest *surplus* profits are to be obtained.

This process concentrates, to the highest degree, the flow of capital into sections of the world which represent a tiny minority of its population. Even when it does flow in search of colonial superprofits this does not extend to the general industrialisation of the country concerned but to specific and limited investments where, for conjunctural reasons, an exceptional return on capital is available: the production of cheap minerals, the green revolution, the creation of maquiladora sweatshops on the borders of the metropolis. Having realised these windfall gains, capital moves on, leaving only chaos.

The implications of this critique of orthodoxy, however, run far deeper. It seems that at each great crisis of economic theory the critics rediscover the errors of equilibrium and apply this as a critique to the prevailing orthodoxy just long enough to overthrow it.[15] This Sisyphean process is the result of the ideological nature of academic economics. But why did official Marxist economics adopt the same principles?

The immense and incessant material pressure of capitalism and imperialism was bound to take its toll on any body of people paid by capital to produce ideas on its behalf. Capitalism simply will not, and cannot, tolerate scientific endeavour in a profession who, if they behaved scientifically, would predict its downfall. A remorseless process grinds heterodoxy into orthodoxy in the millstones of academia. But Marxist economic theory was not a product of the universities.

In parallel with the material processes of the Western world, a directly related process was taking place in the Soviet Union itself. From 1924 until 1936 the world of Soviet economic theory engaged in a passionate debate around the question of ‘capitalist stabilisation’. The debate has been made available for the English-speaking world by Richard B. Day (1981).

At the centre of this debate stood the two figures of Rosa Luxemburg and Nikolai Bukharin. Much has been written about the debate but one uncommented fact is striking: Bukharin’s response (see Luxemburg/Bukharin 1972) was written when she had been dead for five years. Why did he open a polemic with a dead woman at this juncture? Not because of the theoretical issues posed but because of the internal party debate.

As Day’s fascinating book shows, the theoretical problem facing Marxists after the First World War was a kind of mirror image of the problem facing Mandel’s generation. Capitalism did not stabilise following the war; but neither did it collapse. The difficulty was to explain why despite an extremely deep economic crisis following a global war and the first socialist revolution, capitalism survived at least sufficiently to contain this revolution.

Lenin was at pains to resist the tendency, most pronounced on the Luxemburgist left, to extend Marx’s concept of periodic economic crisis to that of a ‘crash’ or, using a term

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[15] I attempted to document this at greater length in Freeman (1996)

coined by Engels to describe the Great Depression of the 1870s, a 'general crisis' of all capitalist relations – an economic situation which would in and of itself provoke the triumph of socialism. 'There is no such thing', he argued at the Second Comintern Congress, 'as an absolutely hopeless situation.'

> The bourgeoisie are behaving like barefaced plunderers who have lost their heads; they are committing folly after folly and hastening their doom. All that is true. But nobody can 'prove' that it is absolutely impossible for them to pacify a minority of the exploited with some petty concessions…to try to 'prove' in advance that there is 'absolutely' no way out of the situation would be sheer pedantry, or playing with concepts and catchwords. Practice alone can serve as real 'proof' in this and similar questions (*CW* XXXI: 227, cited in Day 1976:46)

As it became clear that the immediate postwar economic crisis was not going to provoke a rapid extension of socialist revolution, and that this crisis was neither intractable nor without end, an intense theoretical debate broke out. This accompanied the factional struggle that gave rise both to Stalinism and to the Fourth International.

Bukharin moved between 1919 and 1924 from the left to the right wing of the communists, becoming the progenitor of what was to become the classical policies of Gorbachev. In essence, these were to accommodate to small capital at home and to make concessions to imperialism abroad.

This conclusion was drawn from the judgement that capitalism had successfully stabilised despite the war, the crisis and the revolution, and that a further immediate extension of the Russian revolution was not on the order of the day. This judgment itself was incontestable; it was empirically evident and was one to which most soviet theorists were being driven. Differences centred on the policy conclusions to be drawn from this fact, and the theoretical explanations for it.

Bukharin sought to establish that the stabilisation was neither conjunctural nor determined by contingent political factors. His theory evolved towards the idea that stabilisation was a product of long-term, inherent characteristics of capitalism and the functioning of the market. He reformulated the theory of value in a manner which has since become absolute orthodoxy:[16] he transformed the reproduction schemes of Marx, which were a theoretical *outcome* of Marx's concept of value, into the *basis* of this theory. To borrow a phrase from Diane Elson, for Marx's value theory of reproduction he substituted a reproduction theory of value. Following Sweezy's 1942 rehabilitation of Bortkiewicz, this became the academic standard throughout the world.[17]

Bukharin's theorisation corresponded to two goals: it provided a basis for his political project of apostatizing capitalist stability; of converting the conjunctural and contingent stabilisation achieved after World War I into a structural feature of capitalism as a system. But it also rested on, and buttressed, the struggle against the neo-

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[16] Bukharin, it should be recalled, was not only the party's senior theoretician in economic matters but had close contact with the Austrian school and also with Austro-Marxism, having spent several years in Vienna and indeed attended Böhm-Bawerk's lectures in 1913 (see e.g. Howard and King I:244, Tarbuck 1989()

[17] In 1942 Sweezy writes as follows: "Alone among critics of Marx's theoretical structure, Bortkiewicz grasped the full significance of the law of value and use. Moreover, as we shall see, it was Bortkiewicz who laid the basis for a logically unobjectionable proof of the correctness of Marx's method, a fact which entitles him to be considered not only as a critic but also as an important contributor to Marxian theory" (1970:71)

Luxemburgists in the soviet state who used these reproduction schemes to demonstrate that capitalism could not reproduce itself without limit.

Luxemburg's conclusions rested on a specific form of proportionality failure in which *consumer* demand failed to match the production brought forth by accumulation; a usage which had to assert that the correct proportions of production could not be reconciled with accumulation.

Bukharin, an accomplished student of Marx's economics, began to realise that whatever the actual course of capitalist development, breakdown could not be deduced from the reproduction schemes. To oversimplify a complex argument, Luxemburg's use of the schemes suggested that accumulation could not create sufficient demand for the goods it produced. She neglected the possibility, inherent in the schemes, that a deficiency in demand for consumer goods could be made up by a growth in the demand for investment goods provided the economy maintained the correct proportions. Bukharin's critique of Luxemburg centred on this fact, which he ably algebraised.[18]

He then made a fatal and inverse leap; from the fact that the reproduction schemes did not demonstrate the necessity of crisis, he concluded that they illustrated its impossibility. From the fact that certain proportions could in theory maintain match demand to supply despite inadequate demand from consumers, he deduced that capitalism contained within it, as a kind of mystical law, the necessary inherent characteristics to ensure that these proportions were achieved. This became the foundation of his entire method.

> In his theoretical grasp of the capitalist system of relations of production, Marx proceeds *from the fact of its existence*. Since this system exists, it means that – whether well or badly – social needs are satisfied … [therefore] there must be a definite equilibrium of the whole system … There may well be all sorts of deviations and fluctuations here; the whole system expands and becomes complicated, develops and is continuously in motion and oscillating but, taken as a whole, it is in a state of equilibrium.
>
> To find the law of this equilibrium is the basic problem of theoretical economics and theoretical economics as a scientific system is the result of an examination of the entire capitalist system *in its state of equilibrium*.(Bukharin 1979:149)

This entire statement is scientifically absurd. First of all, to say that one begins studying anything by starting from the 'fact of its existence' is completely vacuous. If it didn't exist, we wouldn't be studying it. Secondly it is a complete non-sequitur to argue that because something exists, it must be in equilibrium. Tornados exist. Explosions exist. Where is their equilibrium to be found? The revolution of 1917 existed. Where did it sit down while it found its balance?

More generally, the problem of existence boils down, not to explaining how any object exists in a similar or identical form but how it persists even though its form is changing. Ernest Mandel remained Ernest Mandel throughout his life but was never observed in equilibrium, any more than Nikolai Bukharin. They were babies, children, then men; they slept, eat, played, worked and struggled. They never stopped changing. Yet Mandel remained Mandel and Bukharin remained Bukharin.

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[18]There are many readable and competent summaries of this discussion, not least Mandel's in *Late Capitalism*. Much of the debate is reproduced in Luxemburg/Bukharin (1972) See also Luxemburg's original article (1951) and Tarbuck (1989)

If the basic problem of economics is equilibrium then how can we hope to study change? Bukharin sought to understand the motion of capitalism by destroying it, like a seasick passenger demanding the oceans cease to move until his balance is restored. The real difficulty however is this; how is it that despite the constant change, capitalism nevertheless persists? Each week we are like Promethean Gods. We destroy everything we touch and recreate it. Every morsel of food, every scrap of paper or steel or glass that passes into the factories, is destroyed utterly and reincarnated as a totally different thing. Yet at the end of this mighty week, we are still workers. And our employers are still capitalists. The food has reappeared on the table, the steel in the factory. How did we recreate what we apparently destroyed? Persistence through change, not the suspension of change, is the fundamental problem of existence. As Hegel wonderfully puts it, Becoming is the Truth of Being.

Despite the anarchy of capitalist development it is nevertheless lawlike. Capital ceaselessly reproduces the basis for its own existence. It reproduces the working class, the machines they use, and the laws, the ideas and the states which bring them to the machines and cause them to make value with them. It reproduces likewise the raw materials they use and provides for them to arrive at the machines at the same time as the labourers, so that this value may be produced. Marx constructed the reproduction schemes in Volume II of *Capital* to show how this reproduction of the social relations of capitalism was *possible* on the basis of capitalist market relations. That is, the chain of logical deduction is to show how value and price can give rise to reproduction, not the other way around.

The simultaneous equations of general equilibrium simply reverse this. In order for reproduction to succeed, certain prices are necessary; therefore assume success and *define* prices to be the (unique) ratios of exchange which ensure that this happens.

In short, assume that supply matches demand; assume the entire basis on which neoclassical economics was patiently constructed. This reduces Marx, as Samuelson puts it, to 'a minor post-Ricardian'. The insult should be addressed not to Marx but to academic Marxism, the pathetic shadow cast by the setting sun of Walrasian general equilibrium.

The work of twentieth-century Marxism is bedevilled by the fact that Marx himself never completed his work on reproduction. Key sections of Volume II are chronologically the last work he undertook, and he never completed it. Above all he never succeeded in progressing beyond what is generally termed proportionate expanded reproduction. This is in effect a form of simple reproduction in which there is no technical progress, but there is however accumulation. The equations which determine the prices that can sustain this form of reproduction are the same as those giving the prices which can sustain simple reproduction. In Volume II the impact of *technical change is absent*.

Thus the most decisive aspect of Marx's dynamic analysis of capitalist development is absent from his theory of reproduction, a fact of which he was only too evidently aware. In a certain sense, the two are in contradiction with each other and it remained to be demonstrated how capitalism can actually reproduce itself under continuously changing technical conditions. Marxist theory in this century faced a fundamental choice: should it take Marx's theory of value as the foundation of his theory of reproduction, or should it take Marx's theory of reproduction as the foundation of his theory of value? Bukharin's revision took it down the second road and reduced it to a postscript to neoclassical theory.

Had a theoretically superior development of Marx's economics existed in the 1920s, it is by no means certain that this theoretical revision would have triumphed so totally. But a further factor ensured it. Bukharin's chief theoretical opponents, who started with the same raw material as he – the reproduction schemas – likewise failed to transcending them. Bukharin's transformation of Marx was therefore, unfortunately, a more rounded and theoretically more competent development of Marx than anything else around.

Luxemburg, the absent participant in this shadow debate, produced the first of many fruitless attempts to extend Marx's reproduction schemas to predict the actual course of capitalism without incorporating the most important and necessary modification, with which Marx himself struggled throughout his life, namely technical change. The century witnessed a tragi-comedy of errors in which, at every stage where its internal contradictions gave birth to a crisis in neoclassical economics, the Marxists were paralysed. Prisoners of 'reproduction Marxism', they could not make the vital next step to integrate Marx's account of technical change into his account of reproduction.

Above all, attempts to ground Marx's theory of crisis in his reproduction schemes withdrew from his central insight into the source of cyclical behaviour, that accumulation by raising the quantity of advanced capital brought about a fall in the rate of profit, removing the impetus for investment. Crisis in Marx served the necessary function of a periodical devaluation of this advanced capital to raise the average profit rate up to the point where the volume of new investment could serve as a self-sustaining source of demand. This cannot be deduced from the schemes alone.

In drawing a sharp line between his own theory and all such attempts Mandel adopted the following attitude:

> It is obvious that schemes designed to prove the possibility of periodical equilibrium in the economy, despite the anarchical organization of production and the segmentation of capital into competing individual firms, will be inadequate for use as analytical tools to prove that the capitalist mode of production *must*, by its very essence, lead to periodic ruptures of equilibrium and that under capitalism economic growth must *always* lead to equilibrium just as it is itself always the result of it. Therefore, what is needed are other schemes which incorporate from the very start this tendency for the two Departments and all that corresponds to them to develop unevenly. These more general schemes ought to be constructed in such a way that Marx's reproduction schemes will only constitute a special case – just as economic equilibrium is only a special case of the tendency, characteristic of the capitalist mode of production, for the various sectors, departments and elements of the system to develop unevenly.
>
> An uneven rate of growth in the two Departments ought to correspond to an uneven rate of profit in the two Departments. Uneven growth in the two Departments ought to find expression in an uneven rate of accumulation and an uneven tempo of growth for the organic composition of capital, which is in turn periodically and partially suspended by the uneven impact of crisis on the two Departments. These could be the factors that would enable us, as it were, to 'dynamicise' Marx's schemes. (1976:28)

The scientific character of this judgement consists in the fact that Mandel, having failed and indeed refused to produce such a dynamic reformulation of the reproduction schemes, nevertheless openly states that it is necessary. Instead of following the course of every other Marxist of the century and producing his own 'reproduction model' he stated, in my view extremely correctly, the absolute limitations of the reproduction schemas for the deduction of economic categories and left the matter there.

The unfinished chapter in the reconstruction of economics is to rescue Marxist economics from the academic Marxists; the starting point for this analysis is Mandel's line of enquiry.

The facts of the new world order in the light of the theory

How does Mandel's theory, particularly that presented in *Late Capitalism* stand up to the evidence of the present day?

Chart 1 presents the movement of inequality since this work. Taken from the World Bank's *World Tables* 1995, it gives purchasing power in current US dollars at current exchange rates. This indicates the amount of US goods which an average non-US citizen can purchase from annual income. Dividing these figures by the US GDP deflator, we arrive at an indicator of the quantity of US goods (that is, advanced technical goods) which this income is capable of purchasing. This measure indicates the progress of relative purchasing power, not just of goods for immediate consumption but of those goods, particularly advanced means of production, which would allow the countries concerned to improve their productivity relative to the US or indeed any advanced countries.

This movement entirely confirms Mandel's analysis. To explain it in the light of Mandel's theoretical contributions, we require two simple ideas which follow from Marx's analysis.

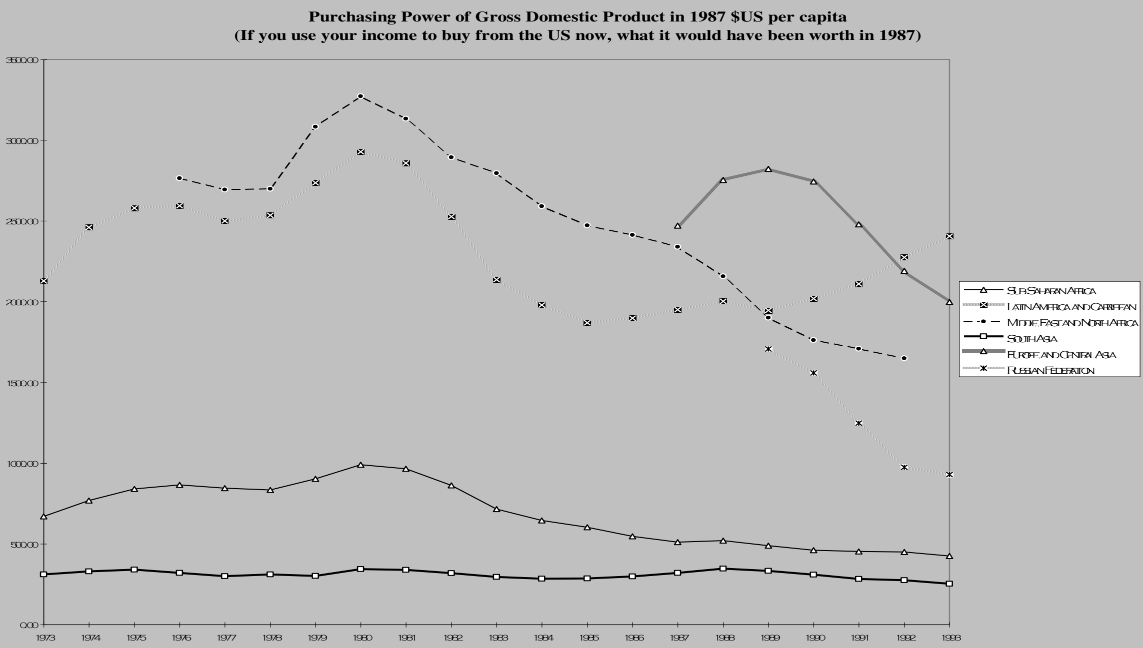

Chart 1: per capita income of major areas of the world measured in constant 1987 $

First, *every sum of money in capitalism is the disguised representation of a magnitude of labour*. In 1987 the Gross Domestic Product of the USA was $4,496bn and its population 243 million. On average the income of each individual was thus $18,504. This is to be compared, for example, with India where the average income was $330, so that each US citizen is on average 56 times better off than her or his Indian counterpart. This is, incidentally, exactly twice the gap in income between the poorest and richest country in the heyday of classical imperialism.

Second each *worker allows the capitalist to appropriate a money sum representing a magnitude of labour.* But, Mandel's analysis indicates, this money sum will include both a normal profit and a surplus profit. What is their relative magnitude? There were in 1987 118 million economically active US workers. That year's GDP measures the new value they added (or appeared to add) to materials worked on in 1987. Each on average added $38,106. This same average worker consumed $18,504 so the surplus value appropriate per average US worker was $38,106–$18,504 =$19,602.

We can invert this and ask how much labour-time was represented by each dollar. Since one year represents $38,106 we conclude that $1 represented 1/38,106 of a year or about 3 working minutes. It was a title to the product of 3 working minutes in the life of a US labourer. We can hence translate every dollar magnitude into a number of hours, the amount of US labour this dollar represents.

But we can make the same calculation for, say, an Indian worker.[19] On average, the annual labour of one Indian toiler represents, on the world market, 54 working hours. To put it another way, an Indian worker must labour for a year to produce a magnitude of value equivalent to 54 US working hours. This offers an approximate measure of the relative productivity of Indian and US capitalism. Through the working of the price mechanism the labour of the Indian worker 'counts for' 1/56 of the labour of a US worker. If capitalism acted in fact to equalise productivities these magnitudes should be equal.

Does this mean that the Indian worker labourer is 56 times more lazy than a US worker? The category of surplus profit explains that this is not so. In terms of *world* values the Indian worker creates as much value as the US worker. But the differences in relative productivity transfer the value created by the Indian worker to the pockets of the US capitalists.

The same $1 that represents 3 minutes of US labour represents 3 × 56 = nearly 3 hours of Indian labour. Calculate the dollar output of the whole world economy, and divide it by the whole world population on the assumption of the same average ratio of productive working population to total population. We find that $1 represents somewhere between 2 and 3 hours of world labour.

[19] We must be cautious in calculating the value-added per worker in countries with a large peasant population, so we assume the proportion of the population that is working in some way, whether as a small entrepreneur, as a peasant, or as a wage-earner, is the same as the USA. Not only is this the most prudent procedure possible, the discrepancies that emerge are so vast that they pale into insignificance compared with this simplification. It is however both theoretically and practically possible to make this calculation correctly and to work out, starting from the published national data, the proper value magnitudes we here merely sketch. See in particular the work of Anwar Shaikh and Ertugrul Tonak(1994).

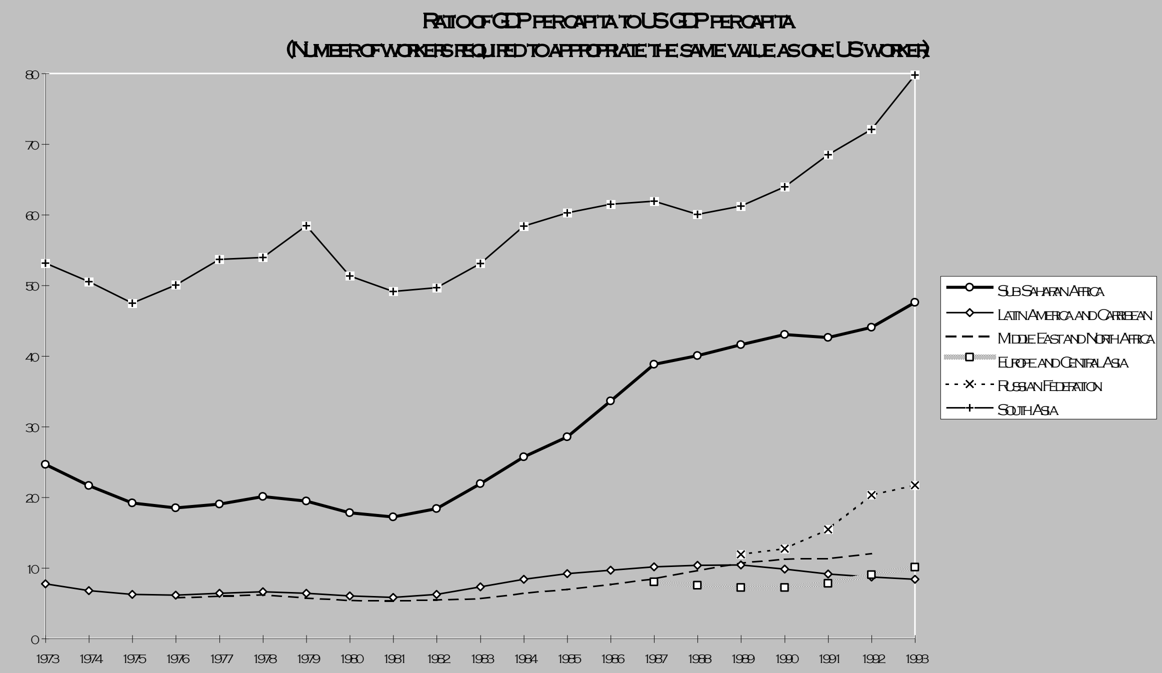

Chart 2: per capita productivities of major areas of the world relative to the US

To understand the US economy, or that of any other economy in today's world market, as if it were an isolated national state, is therefore to completely misunderstand the nature of the world market. Each dollar represents, on the world market, the labour of many times more non-US workers than it does US workers. The imperialist economies have *organised the world system of production to bring about the systematic subordination of world labour to their own capitalists.*

Chart 2 shows how, over the last 20 years, the ratio between the per capita GDP in current dollars of the US and of the major sectors of the poor countries has changed.[20] As we indicate above, this can be treated as a measure of relative productivity.

Relative productivity in the world since 1980

Not only is the absolute gap in productivity steadily widening, following a definite turn in the world economy in the early 1980s, but:

(a) measured as access to the produce of the advanced countries, there has been a steady and very sharp decline in the *absolute* income levels of the majority of people in the world.

(b) since the produce of the advanced countries is the principal means of raising productivity, the world market has acted systematically to deprive the third world of the means to correct this growing gap.

In short, and in complete contrast to the globalisation thesis, the market acts not to narrow but to widen the gap between the rich and the poor of the world. Moreover this has worsened by a factor between two and three since Mandel wrote. We have here the starkest possible evidence in support of Mandel's (and Trotsky's) primary thesis, that

[20] These figures are not corrected for the relative size of the working population but present a bald per capita income ratio.

uneven world development based on growing inequalities of productivity is the normal course of world development.

Moreover the 1980s marked a decisive turn in the relation of forces between imperialism and the rest of the world. Led by Reagan's US, imperialism launched an economically ferocious onslaught on the Third World. Table 1 gives the proportionate changes in the purchasing powers of the major geographical areas in the ten years 1982-1992

US	+25%
Sub-Saharan Africa	-48%
Latin America and Caribbean	-11%
Middle East and North Africa	-43%
South Asia	-14%

Table 1: proportionate changes in absolute purchasing power since 1982

The entry of Eastern Europe onto the world market also shows the real nature of the 'second world'. These countries are a component part of the oppressed nations which had succeeded in resisting the insatiable appetite of imperialism by temporarily and partially withdrawing from the world market. Their re-entry into the world market has provoked the most catastrophic collapse of living standards that this century has seen.

A more subtle theoretically important point concerns the relative magnitude of the various factors impacting on inequality.

In the early chapters of *Late Capitalism* Mandel specifies a series of possible mechanisms by means of which surplus profits may be transferred between countries. It is important and relevant to assess the different relative weight of these different factors.

Our figures reveal discrepancies of ten, twenty or as much as eighty times essentially due to productivity differences. It is clear that an enormous *disguised* mechanism for the transfer of surplus profits is at work.. This confirms Mandel's hypothesis that in the postwar era, the principal source of worldwide inequality lies not in historical accident but in the way the market itself allocates access to technology.

There is a second point. By measuring the productivity in dollars of a labour-hour in different countries we reveal two sources of differences between countries. First is the actual difference in levels of productivity, hour for hour for the same product in use-value terms. Second, however, is the terms of trade which oblige these producers to accept that a given price in dollars represents a given price in their own currency.

This confers a quite distinct advantage on a country which is in a strong enough financial and commercial position to impose on all other countries, including its capitalist rivals, unfavourable structures of exchange and of capital movements. This is just what the US has succeeded in doing for the last twenty years. Faced with a decline in its productivity relative to its European and South-East Asian rivals, it has systematically financed its unfavourable balance of trade by attracting capital flows through a high interest rate, alternating this policy with relative devaluations of the dollar. In effect it has forced not only its rivals but the Third World into the direct finance of its trade imbalance.

The sharp rise in US interest rates in the early 1980s thus marked a totally new phase, not merely of relations between the advanced capitalist countries as a whole and the rest of the world market, but in interimperialist relations. It marked a simultaneous brutal offensive against the technologically deprived countries and the onset of a decisive change in the relation between the US and the rest of the world.

This was not a shift to the end of US hegemony, as many European commentators wrongly forecast; it was a change in the form of this hegemony. Since the US could no longer lead the imperialist world on the basis of its outright technical superiority, it became a net importer of capital. It moved to the exploitation of its financial, commercial and military advantages to assert its leadership over the imperialist world; to a position summed up in the phrase 'America first', and initiated a new rise of classical imperialism. It was this US-led *offensive of imperialism* which led to the dramatic changes of the last 20 years and it was this assault also to which the USSR fell – not, as Mandel tragically believed, the assault of the world working class.

The new world order and the theory of long waves

We now turn to the question with which Mandel began: what was the explanation for the prolonged phase of capitalist stability that followed WWII?

An essential point is evident from the failure not only of reproduction-scheme models, but of all underconsumptionist theory, including state-monopoly-capitalist theory, which located capitalist failure in a shortage of demand. This relates to the point which Bukharin converted into a non-existent law. There are two sources of demand for capitalist goods, namely private consumers and the capitalists themselves. It is always possible, but by no means always achieved, that capitalism can make up for deficient consumer demand with high investment.

As Marx's crisis theory recognised, the mechanism which creates this demand for capital goods is autonomous from the direct demand for their output. Capitalists invest, not on the basis of sales but on the basis of profits.

It follows that if, for an extended period of several cycles, investment demand is to make up for a periodic or even secular shortage of consumer demand, a series of conditions must be simultaneously met. Mandel set out systematically to investigate what these were. They included two apparently contradictory requirements: on the one hand, high profits called for a high and stable rate of exploitation, which in turn seemed to imply a historically low level of wages; on the other hand it called for a high level of sales and hence demand. How could a high level of demand combine with a low level of wages?

This can be achieved only if investment can in some sense feed on investment; if capitalists who commit capital to the production of new goods, can sell those goods to other *capitalists*. This in turn requires that not just profits but superprofits in Department I are high enough to attract capital in sufficient volume to create the required knock-on demand for the capital goods already being produced; to fuel a self-sustaining beneficent spiral for an extended period. But as we have seen, superprofits are the consequence of technical advance. In short, a fundamental economic requirement is a deep-going and sustained process of technical advance, above all in the production of capital goods.

With this insight Mandel thus reconnected Marx's theory of technical change, encapsulated in his writings on relative surplus value, to Marx's analysis of the cyclic behaviour of the capitalist economy and the connection between this, its crises, and its capacity to reproduce. This insight lays the basis not merely to overcome the deficiencies of Twentieth-Century academic or vulgar Marxism, but to restore Marx's economic theory on a qualitatively higher level.

Mandel dubbed the postwar expansion the 'Third Technological Revolution' signifying the most significant characteristic which it had in common with previous prolonged phases of expansion, namely the Industrial Revolution itself and the expansive phase of 1894-1913. But whilst a sustained bout of technical innovation is undoubtedly a *characteristic* of a long phase of expansion, this by no means makes it the *cause.*

Mandel had thus demonstrated how the possibility of a long wave of expansion could arise from the inner tendencies of capitalism. He did not, however, settle as successfully what factors transformed this possibility into an actuality.

It is outside our scope to detail this discussion, perhaps the most vital facing us. In closing is reconnect it with the political issues at stake. These were sounded out in the very earliest stages of the argument between Trotsky and Kondratieff around what has become known as the 'endogeneity' of Long Waves.

This arose in the context of the very same debate which provoked Bukharin's revision of Marx, and the debate which surrounded it is every bit as relevant today. Kondratieff's 1922 book *The World Economy and its Consequences* asserted, like Bukharin later, that in Day's (1981) words 'the objective consequence of every business cycle was to restore equilibrium'

> In its most general form the essence of an economic crisis lies in the fact *that the national economies of separate countries and the world economy as a whole, taken as a moving system of elements, loses its equilibrium and experiences an acute, painful process of transition to the condition of a new moving equilibrium*. From the economic point of view, a crisis is always only an acute and painful process of liquidating the disparities that have arisen in the structure of a national economy and are destroying the equilibrium of its elements [A crisis] is the process of establishing a new equilibrium among those elements in place of the one that has broken down.' (cited in Day 1981:52)

Had Kondratieff confined himself to this observation he would only have been an additional and academic voice added to the growing numbers (Trotsky included) who began to join with Lenin in cautioning against policies based on the hypothesis of imminent internal collapse of the capitalist market. But he did not stop here. He argued that the extent and course of each business cycle was not the same and that there were visible in history prolonged periods of exceptionally deep and disruptive slumps punctuated with fitful and partial recoveries, alternated with equally prolonged periods in which slumps were shallow and booms highly expansive. This suggestion had already been made by Trotsky in his address to the Third Comintern Congress. However Trotsky's conception was that these periods of capitalist development were *essentially characterised by political conjunctures*. Kondratieff's notion was very different. He saw in the 'long cycles', as he called them, evidence of an endogenous and purely economic mechanism of the same general character as the business cycle itself.

This led to a profoundly quietist conception not altogether removed from, though theoretically more sophisticated than, Bukharin's 'equilibrium'. It lent itself to the notion that capitalism possessed automatic, self-regulating mechanisms which, even over the very long-run, served to restore its imbalances. Kondratieff himself adopted the terminology of a dynamic or moving equilibrium to describe this, a term also used by Trotsky. This did not have the same epistemological consequences as Bukharin's adaptation, but it did lead to a profoundly optimistic view of capital's self-healing properties:

> Thanks to the crisis, thanks to the return of a relative correspondence between the level of prices and the purchasing power of the masses, between the supply of capital and the demand for it, between the productive capacity of the separate economic branches and the volume of the demands they make upon the commodities of other branches, the existing system, to a significant degree and for a certain period of time, will free itself of the disharmonies and lack of correspondence that are causing the crisis (Kondratieff cited in Day 1981:54)

When in 1922 the Dawes Plan signalled the political intention of the USA to stabilise German capitalism, the prospect of immediate internal collapse moved off the agenda and the longer-term prospects of capitalism assumed exceptional importance in the internal debates of the soviet Communists. In June 1923 Trotsky decided to elaborate on his earlier idea of 'two curves': cyclical and basic. The cyclical curve contained the short-term movements of boom and slump. The basic curve was the underlying long-term development and fluctuated from one historical period of several decades to another such period.

Of central importance was therefore the *causes* of differences in the basic curve from one historical period to another. Trotsky's June 1923 position linked the discontinuities in the basic curve to external and political events: wars, social reforms, revolutions, and so on.

> One can reject in advance the attempts by Professor Kondratieff to assign to the epochs that he calls long cycles the same 'strict rhythm' that is observed in short cycles. This attempt is a clearly mistaken generalization based on a formal analogy. The periodicity of short cycles is conditioned by the internal dynamic of capitalist forces, which manifests itself whenever and wherever there is a market. As for those long (fifty-year) intervals that Professor Kondratieff hastily proposes also to call cycles, their character and duration is determined not by the internal play of capitalist forces, but by the external conditions in which capitalist development occurs. The absorption by capitalism of new countries and continents, the discovery of new natural resources, and, in addition, significant factors of a 'super structural' order, such as wars and revolutions, determine the character and alteration of expansive, stagnating or declining epochs in capitalist development – Trotsky 'On the Curve of Capitalist Development' cited in Day(1981:89)

Kondratieff however then theorised a mechanism of the precise type of the business cycle:

> Just as Marx asserted that the material basis of crises, or of average cycles repeating themselves each decade, is the material wearing out, replacement and expansion of means of production in the form of machines lasting an average of ten years, it can be suggested that the material basis of long cycles is the wearing out, replacement, and expansion of fixed-capital goods that require a long period of time and enormous expenditures to produce. The replacement and expansion of these goods does not proceed smoothly, but in spurts, another expression of which are the long waves of the conjuncture (Kondratieff and Oparin 1928, 'Long Cycles [Bol'shie Tsikly] of the Conjuncture' cited in Day(1981:90)

Mandel endorsed Trotsky's criticisms in an ambiguous manner: 'If we have defined the "long waves",' he writes

> as long waves of accelerated and decelerated accumulation determined by long waves in the rise and decline of the rate of profit, then it is plain that this ascent and decline is not determined by one single factor but must be explained by a series of social changes, in which the factors listed by Trotsky play a major role.(1976:129)

The issue at debate was not entirely whether these factors played a 'major role' but whether they were qualitatively determinate. This is made clearer by considering the dates given in Mandel's own table for the onset of a long wave of expansion, namely 1793, 1848, 1894 and 1945. Each coincides with a major reorganisation of the structure of the world market wrought by a phenomenal *political* change: the French Revolution, the European revolutions of 1848, the transition to classical imperialism, and the end of the Second World War. Trotsky's point is hardly that such events are to be considered 'factors'; his argument is that these are the defining events of all aspects of the period, and the conclusion to be drawn from this is that the economic future of capitalism is ultimately fought out on the terrain of wars and revolutions.

The fourth long wave of capitalist decline has been with us for thirty years; the longest yet. Mandel's heritage was to provide us with the elements of *economic* theory that allow us to understand this process as an integral part of the functioning of the capitalist market. The *political* processes which this launched, as capitalism inflicts on humanity its fourth and most reactionary fight to the death for survival, tragically escaped his grasp.

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