

What is a 'law of motion' in economics? A critique of positivist crisis theory

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Introduction¹

This paper aims to study the concept of 'law of motion' in economics, and its relevance to the present crisis. My aim is to clarify the relation between laws of economic motion, if these exist, and the conscious action of classes, nations, and states. In particular, I ask what economic and social consequences would follow from the various courses of conscious state action now open to humanity, under the circumstances of the present crisis. In summary, I wish to restore the lost dimension of choice to the theory of economic law.

A summary in thirty theses

My argument can be summarised in the following thirty theses.

1. Theories of economic motion, or development, appear at first sight to span a spectrum between two types of law. *Evolutionary* laws purport to deal with irreversible change. *Cyclic* laws purport to deal with changes that periodically reverse direction.
2. On examination, the body of economic theory covering both types of law shares a single characteristic: it is *deterministic*. Economic movement appears as a path which society follows regardless of whether it desires to, as a planet pursues its orbit until it meets an obstacle. Consciousness, choice, and human freedom, are absent.
3. Though such concepts of a 'law of motion' do not exclude conscious action impeding, accelerating or overriding economics laws, conscious action is *external* to them. It is not assumed in the law. The contingent biological law 'if you do not eat, you will die' does not tell us whether we are doomed to perish. It merely establishes the connection between action and outcome. In contrast the mechanical law 'the sun rises every day' does not depend on forecasters' predictions or the prayers of sun worshippers. It merely happens.
4. In evolutionary theories, automatism appears as the idea that one or other aspect of capitalist development is irreversible and unstoppable. The most typical form of this appears as the notion of *progress* – the idea that capitalist development expresses or incarnates some longterm law of improvement overriding all others – development, globalisation, or the spread of civilization being the most common. A minor Marxist trend inverts this, speaking instead of '*Zusammenbruch*' or inevitable breakdown.
5. Theories of cycles, in contrast to evolutionary theory, deals with phenomena that are said to be *reversible*. But the mechanism they suppose, though not unidirectional, remains independent of our actions: if we do nothing, it will happen nevertheless. The difference between evolution and periodicity is thus, in economics, no more than the difference between the tick of the pendulum and the onward march of time.
6. Cycle theories are nevertheless attractive in times of economic crisis, first of all because crisis is empirically difficult to reconcile with the notion of unilateral

¹I would like to acknowledge Julian Wells' indefatigable, illuminating and thorough research on Marx and positivism, and on the role of free will in Marx's thought, Andrew Kliman's equally decisive research on the consistency of Marx's economic theory, and the pioneering contribution of Phyllis Atwater, John Ernst, Guglielmo Carchedi, Paolo Giussani, and others too numerous to mention, to the history of reclaiming Marx's value theory. All mistakes are of course my own.

progress and second, because the form of appearance of crisis is always a 'problem' of reversal. Damage has occurred – a financial crash, socially unacceptable inequality, unemployment, resource exhaustion, or whatever. Society asks 'how can this damage be undone?'² Cycle theory in this sense incarnates the exhaustion of the progressive potential of liberal theory; it asks only how to return to where it was and never to advance to a different state.

7. If economics were a science, it would first ask if this damage can in fact be repaired at all and if so, whether this will require a reversal and a struggle against the forces that produced the damage, or whether these forces will change direction of their own accord. It would also evolve a theory that could study whether reversal is a good idea and if anything new has come into existence, into whose nature it ought to enquire. By supposing that a phenomenon is cyclic, economic theory assumes that no new things can emerge and also, technically, it presupposes what has to be proven. Before investigating whether reversal can be achieved, it supposes that reversal is the natural course of events.
8. This produces the answer, beloved of politicians, that 'natural' market processes will correct the collateral damage inflicted by these same market processes. The best policy is then either to do nothing, or merely 'work with' the forces that produced the crisis in the first place. Economic theory resembles a man who jumps off a cliff supposing he can fly and, on finding that he cannot, concludes that it does not matter because he will bounce.
9. With Kondratieff's theories of 'Long Waves', popularised by Schumpeter, market failure was beatified as a manifestation of perfection. Schumpeter acknowledges that capitalism develops unevenly but subsumed its variation under the idea of a succession of cyclic variations of a greater or lesser periodicity. Such panic-ridden crises as 1893 or 1929, which Marxism constantly threatened to diagnose as evidence of terminal incapacity, could be securely re-confined within the Pandora's box of 'natural' law – a merely repetitive, and above all automatic process.
10. The 'automatic' aspect of Schumpeterian theory manifests itself in the concept (which, it must be said in fairness is not shared by the whole of Long Wave theory) of *endogenous* recovery. According to this notion, the functioning of the market itself – through 'creative destruction' or some such process – establishes the conditions, after a long period of decline, for a long period of growth – a long boom. Endogenous Long Wave theory is thus a variant of inevitabilist evolutionary theory: it views the motion of capitalist society as one in which the conscious action of classes, states, and nations plays no necessary role.
11. This automatism responds to a primordial ideological imperative: to conceive of capitalism as natural, self-correcting and above all, eternal. However, it possessed a certain scientific merit, attracting the attention of a wide range of theorists from Alan Greenspan to Ernest Mandel: it corresponds at a certain empirical level to the actual and observable course of events. It is *true* that capitalist history, to borrow a phrase from Dawkins, is 'punctuated' by a succession of tempestuous booms. It is *true* that these booms are interspersed with protracted phases of decline. It 'seems reasonable' to think of this succession of boom and decline as evidence of a cyclic process.
12. Yet this idea is profoundly misleading. Long declines – such as the present one, which began in the late 1960s, or that of the 'Great Depression' of 1893 – have a different cause from long booms. They are a product of 'blind' laws, notably the

²“Clément Juglar’s contribution on periodical crises is often credited with having marked the definite transition from the theories of crises to the theories of business cycles. The champion of this view is, as is well known, Schumpeter, who propagated it on several occasions.” Besomi (2010:1)

tendency for accumulation to reduce the profit rate. The principal long booms recognised by economic historians – the industrial revolution, the 'age of steam', the shortlived *Belle Epoque* of the early 1900s and the 'golden age' of 1947-1969 – were triggered by enormous and devastating political and social convulsions – the rise of absolutism, bourgeois revolutions, colonialism, imperialism, and finally fascism and the second world war – organised by means of conscious political interventions.

13. Insofar as economic theory is dimly aware of two aspects of capitalism's law of motion, the purely automatic and the purely conscious, it presents them as absolute opposites – the state *versus* the market, politics *versus* economics, or even resistance *versus* progress. Such presentations fail to grasp the necessary unity of the automatic and the conscious. The apparent blind nature of capitalism's economic laws arises solely from the fact that the commodity form disguises the social relations from which it actually arises and not from the fact that its causes originate elsewhere than in society. Relations between human labours are perceived as relation between inanimate things, and capitalism's laws take the alienated form of a pseudo-natural force outside of human will. But actually, these relations and these laws are social and human, and their apparent objectivity merely expresses the failure of the capitalist form of organisation to place society under the free and transparent control of the producers that it organises.
14. For this reason, a concept of law based exclusively on one aspect of these falsely separated causes – automatic and endogenous, or conscious and exogenous – is necessarily one-sided and incomplete. The real problem is to integrate, within a *single* concept of 'law', the blind workings imposed by the commodity form and the conscious actions brought forth by the commodity's failure to organise society.
15. The theoretical elements for such a study are were present in the thought and theories of Karl Marx.
16. The main obstacle to appropriating this legacy is a body of theory I term Marxism Without Marx – an academic trend presenting itself as Marxism, which has substituted its own, different theory, for Marx's. This tradition, alien to Marx's own thinking, is rooted in *positivism* – the search, beginning with the French school headed by Laplace(1749[1749]) and Comte (1856), for automatic laws of society, operating like the natural laws governing mechanical motion.
17. This, beginning at the point when Marxism acquired a mass audience during the formation of the Second International, became wrongly identified with Marx's own thinking on the nature of law and society, which originated in the Hegelian discourse on freedom and necessity and was from the outset profoundly anti-positivist.
18. Marxism Without Marx embraced this positivist deformation and went further. Beginning with the work of the Austrian economist von Bortkiewicz (1952) it re-interpreted Marx's theory of value as a variant of Walrasian general equilibrium theory. Following endorsement by Sweezy (1942), Meek(1956) and others, this became almost universally accepted as a correct statement of Marx's own theory. In fact it is, in the crucial respects that this paper analyses, the diametric opposite of Marx's.
19. The prime weakness of Marxism Without Marx is that it is theoretically incapable of understanding the endogenous causes of decline and crisis. In keeping with all theories based on general equilibrium, it effectively assumes in advance that the market reproduces itself perfectly. This excludes *a priori* the possibility of endogenous processes of decline, that is, processes arising from the internal dynamics of capitalist accumulation itself. Endogenous crisis is eliminated

theoretically; it cannot subsequently be reintroduced *post hoc* and all attempts to do so have failed.

20. Marxism Without Marx is equally unable to understand the causes of long boom precisely because its formulation of Marx's theory is explicitly and avowedly deterministic. It expresses, formally and logically, a theory of inevitable and automatic progress which I term Capital Worship. Booms, from within this theory are not launched: they launch themselves.
21. In summary Marxism Without Marx formally inverts the true relation between conscious action and capitalist development. In reality, decline is endogenous and automatic, and booms are launched by conscious political and social action. In the formal theory of Marxism Without Marx, booms are automatic and declines are the result of some malign external disturbance – the action of the rentier class, the system of regulation, a profit squeeze, the exhaustion of technical innovation, the system of competition, financialisation, and so on.
22. Marx's own concept of law, deriving from the Hegelian dialectic of freedom, contingency and necessity, is a very different one. Within it, decline is the consequence of endogenous processes, and there is an entire range of class, political and historical factors required for successful, self-reproducing, boom.
23. Marx's theory *integrates* into a single corpus the blind laws of the commodity form and the effect of conscious action, most notably state action but also class action, within them. At the centre of Marx's explanation lies the understanding that money, price, value, and all 'economic' quantities are social relations. Crucial to this is the quantitative identity of value – of which price, profit, and so on are merely surface expressions – and the time of labour employed by capital for the production of commodities for sale.
24. This quantitative relation – which Marxism Without Marx cannot reproduce, and in fact repudiates – it required to formulate, correctly, the distinction which economic theory seeks, but never establishes rigorously, which it calls a distinction between *real* and *superficial*. Try as they might, economists constantly strive for this distinction yet never pin down what it actually is. Insofar as they even glimpse what is going on, they fall back on *physicalism* – the idea that the economy consists in relations between *objects* rather than people. This gives rise to the confused idea that the 'real' is that which is tangible and material and the 'superficial' is that which is ideal. In a world in which 70% of labour and upwards produces intangible services, such an attempt ceases to be of theoretical use.
25. Marx viewed the issue in a far more sophisticated way than is generally recognised, distinguishing not between that which is 'real' and that which is not (money is just as 'real' as any other commodity) but between *value production* – labour employed to produce commodities – and *value circulation* – commerce, banking. The very possibility of 'financialisation' arises only because there is a produced labour surplus which can be diverted into financial speculation; and it only happens because the returns on productive investment themselves trend systematically downwards as long as accumulation continues.
26. Those great crises which manifest themselves as crises of finance, or commerce, or government debt, thus have behind them a prime cause: the endogenous crisis of accumulation which is located in the production of value as such.
27. But Marx also provides the means to theorise political and social intervention, and above all the impact of the state. The labour of the state is not productive of value – not because it fails to create social good but because it does not produce

commodities. Many forms of labour produce social good and contribute to the reproduction of society which do not produce value, for example domestic value. The state therefore offers the means to maintain, reproduce, and even develop society outwith the sphere of the crisis – the production of value. In all major 'cataclysmic' crises such as 1929 or 1873, and in the history of the development of all successful nations, the state has played a decisive role as producer and organiser of production.

28. Marx's theory *equally* permits us to formulate the effect of those interventions of the state which are not directly productive but which *alter the circumstances in which society reproduces itself*. For example, when society limits the hours of work – as discussed by Marx at great length – or when it establishes the right to welfare, or other human rights – it modifies the distribution and production of labour. Only a theory that directly expresses the essential connection between labour, money, and social organisation permits this to be understood.
29. Finally, Marx's theory, for all the above reasons, allows us under take the programme of research which is needed to understand the role that states and classes play in launching booms. At least hitherto, those countries that have launched booms or played a central role in their launching have done so by mobilising, internationally, *surplus profit* – a profit over and above the world average, whilst simultaneously creating all those preconditions for it to be deployed productively which, during a decline, capital cannot do; for example raising the general social capacity of the workforce through education, housing and health, investing in large-scale infrastructure, and not least, providing guarantees of social peace and the maintenance of property rights, even if – as during war – the latter are deferred or put on ice in the 'interest of the nation'.
30. We also know that it is possible to take an radically different course, overriding entirely the rights of property owner and mobilising social forces to reproduce and develop society, by revolutionary means, outside the circuit of capital. This emphasises, and demonstrates, the principal conclusion we can so far draw, that whatever way out of the crisis is chosen, it genuinely is a choice. Recovery from large crises so far has always been historically specific. We do not yet know the way recovery from this crisis will be achieved, or if it will be achieved at all. What we do know is that there is no *single* route out, and the routes so far employed in history have led to great destruction and barbarism. Consequently, we need to restore, to economic theory, the one essential contribution that Marx brought to economics which has since been lost to view: the idea that *choice* is as indispensable and element of economic law as *destiny*.

Part I: decline

A first approach to the problem

The concept of a 'capitalist law of motion' is widely associated with Karl Marx's explicit assertion that his aim was to lay bare the 'law of motion of capitalist society'.³ However, although the idea figures in many strands of economic theory, analysis of what it might mean is either lacking, or surprisingly superficial.

In economic thought, the idea of a 'law of motion' arises primarily from attempts to explain

³This famous phrase appears in the 1867 preface to the first German edition. The full sentence in which this appears reads as follows: "...when a society has got upon the right track for the discovery of the natural laws of its movement — and it is the ultimate aim of this work, to lay bare the economic law of motion of modern society — it can neither clear by bold leaps, nor remove by legal enactments, the obstacles offered by the successive phases of its normal development. But it can shorten and lessen the birth-pangs" (Marx 1992:92)

empirically observable phenomena. It has arrived in twentieth-century economics via two quite distinct routes. The first is Marx's own concern, in Chapter 25 of Volume I of *Capital*, with the the longterm and evolutionary tendencies summed up in the 'general law of capitalism accumulation', including (but not limited to) accumulation itself, the development of the forces of production, the rise in the organic composition of capital and the associated tendency of the rate of profit to fall, the growth in the reserve army of labour, the impoverishment of the working class, the expropriation of the peasantry, and so on.

The second route for such ideas was the study of cyclic or repetitive phenomena – most notably the 7-10 year cycle in growth and employment that is variously known as the credit cycle, the trade cycle, or the business cycle, originating with the work of Clement Juglar (1862, 1915, see also Besomi 2005) in the mid-Nineteenth Century and culminating in the work of Wesley Mitchell (1927), who went on to found the National Bureau of Economic Research (NBER).

Both lines of thought gave rise to ideologically-inspired theories with a strong tendency to dominate orthodox and even critical thinking. The 'evolutionary' strand culminated in the world-historical outlook fostered by Walt Whitman Rostow (1960), whose *Stages of Economic Growth*, explicitly subtitled a 'non-communist manifesto', first introduced the concept of 'modernisation' into political economy. This presented the highly influential idea that history, conceived as 'development', should be treated as a rise, undertaken by different nations at different times, from backward and inferior beginnings to a modern and superior state – to which all nations should aspire – being developed capitalism.

The problems encountered by the poor nations arise, in such theories, not from their treatment by the rich nations or the workings of the world economy, but from a combination of their historical late start and their internal failure to achieve full capitalism. The modern inheritors of this developmentalist outlook, whose echoes are everywhere around us, are not hard to find – for example, most of the formal programmes of the 'hyperglobalisers', Fukuyama's 'end of history' and so on.⁴

There is a relatively wide body of criticism of this inevitabilist view, not least the substantial output of the Dependency School,⁵ who argue⁶ that the 'backwardness' which developmentalism ascribes to the internal course of development of the poor nations is an inflicted condition, arising from a relation to the world market imposed by the rich nations and which maintains both the poverty and subjection of the former, and the wealth and domination, of the latter. Although I will touch on this issue particularly later, when dealing with the causes of boom, my point of departure is not this relatively well-known controversy but a more obscure one, arising from the enquiry – which Marx himself was equally interested in – into the causes of cyclic variation in the capitalist economy.

Nikolai Kondratieff's pathbreaking work established beyond reasonable statistical doubt that capitalist development, up until his day, had been marked by long periods of rising prices associated with accelerated growth, alternating with long periods of falling prices associated with economic stagnation or decline. Popularised by Joseph Schumpeter and in recent times revived by a number of leading economists spanning the spectrum from left to right, this gave rise to the widely-accepted notion of 'Long Waves'. This in turn gave rise to a widespread perception that those tendencies, such as the falling rate of profit, which the classical economists had believed to be evolutionary and irreversible, were in fact cyclic and reversible.

⁴See for example Freeman, A.(2009) *The Modernity of Backwardness*

⁵See for example Frank (1966), Amin (1973a, 1973b)

⁶They also, in my view, prove their thesis, not in the sense that they establish it rigorously, but in that their interlocutors have never provided an empirically grounded refutation.

There are two directions from which we need to examine this idea critically. The first was raised almost immediately, during the course of the Russian debates, by Leon Trotsky

One can reject in advance the attempts by Professor Konrad'ev 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 generalisation 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 these long (fifty-year) intervals that Professor Konrad'ev 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 'superstructural' order, such as wars and revolutions, determine the character and alteration of expansive, stagnating, or declining epochs in capitalist development. (Trotsky 1923: 9, cited in Day 1981: 8).

Trotsky does not dispute that boom and declines alternate. He asks 'in what circumstances are they reversed?' His argument is that the alternation of long boom and long decline cannot be identified with that of the short boom and the short decline which we call the business cycle. In what does the difference reside? That the reversal of a long decline is accompanied and prepared by non-automatic, non-mechanical circumstances: conquest, discovery, war, or revolution. The central idea of this article is that this deceptively simple idea is not simple. We have to theorise it. We must ask 'precisely *what* types of conscious or 'superstructural' intervention do, in fact, create the conditions for a long boom'.

The relevance of this question to the present crisis should be obvious, but let us spell it out: if there is in fact no 'automatic' or blind recovery from a crisis as deep as that manifested in the 2008 financial crash, then what will capitalism need to do to get out of it? What *else* might get out of it? What are the social and for that matter ecological consequences of the different possible conscious responses to the crisis that we might undertake?

In short, if Trotsky is right, then the issue confronting society is not one of an automatic or blind law, but a law connecting our actions to their outcomes. This concept of an economic law, or to be more precise, a law of political economy, is almost entirely absent from modern economic thinking, whether orthodox or Marxist. Almost the only place we find such a conceptualisation is within Keynesianism. Yet, we will show, it is completely explicit in, and integral to, Marx's own thinking.

The original concept of 'law' to which Marx gives substance, and which I wish to examine, is expressed most notably in chapter 25 of Volume 1 on *The General Law of Capitalist Accumulation*. The tendency of capitalism is here described in two ways that differ from conventional modern thinking about economic laws. First, it is decisively not posed as a cyclic process but as one of *organic evolution or development*. It is more analogous to a biological process in which one state of nature (an acorn or an oak) results in a transition to a new state of nature (a oak or an inert mass of dead wood).

Second, it is conceived as a law of motion of society as a whole, and extends to and includes the evolution of social phenomena. Marx is concerned with the historical process. The first conclusion drawn, for example, from the tendency of the rate of profit to fall – Marx's most important 'purely economic' law – is that of the reserve army of labour. The analysis contained in this chapter extends to the rise of social inequality through the systematic impoverishment of the working class, the steady move of production to the cities and the dispossession of the peasantry, the subsuming of ever more social relations within the commodity relation, and so on.

Third, however, this historical process is explained as the working out of 'economic' laws – the falling rate of profit and its counter-tendencies, the concentration and centralisation of

capital, the rise of a specifically capitalist class, the social consequences of the institution of wage-labour, and so on.

On the one hand this process is not a mere working out of the consequences of conscious acts, a mere direct expression of human will. Marx's human beings 'make their own history' but first, not under circumstances of their own choosing, and second, without full knowledge of those circumstances. On the other hand it is not mechanical. Classes act to reap benefit from, or react against, and modify, the circumstances imposed upon them by blind laws.

To make this clear, we need to focus on the meaning of the word 'blind', along with the turn of phrase that Marx deploys when he speaks of events that take place 'behind the backs' of the agents. At the centre of his emancipatory project is the notion that our *knowledge* of the circumstances that determine our choices is incomplete. The problem is not merely that history confronts us as a dead, objectified force, but that its workings – how we got where we are, and how we now move to where we want to be, are hidden from our view.

What is the reason for this concealment, and for the fact that our knowledge is incomplete? Why are humans, having developed the productive forces to a far higher level than any prior stage of history, *less* conscious of the true forces governing their destinies, than even under feudalism or other forms of monarchic or directly political rule? It is here that the remarkable importance of Marx's notion of alienation must be integrated into his underlying conception of 'law of motion'. Humans, under capitalism, confront a society that is of their own making. Previously the victim of natural forces outwith their control – weather, flood, pestilence, and volcanic ash – humans are now laid low by forces that they themselves created – agriculture, machinery, health care and airlines.

Since they created these things, why cannot they control them? Marx's answer is that first, we are governed not by the machines or the cities but by the social relations that created them, and second, these social relations are *disguised* in the commodity form. Capitalist history is blind, therefore, *to the extent that* it permits social relations to be taken over, and organised through, the commodity. The commodity is, in this sense, the antithesis of freedom. Marx's message is the diametric opposite of Hayek's, and the subtlety of the point has often escaped the critics of market liberalism. The commodity enslaves us. Why, since the commodity owner is formally free? Because the commodity form deprives us of *knowledge*. It disguises, conceals, and hides from view the one possession essential to true freedom, namely, an understanding of the consequences of our actions. In Smithian terms, the very fact that our lives are governed by an invisible hand is the origin of our enslavement – because we cannot see the forces that shape our destinies, whether private or public. A great Achilles heel of the neoliberal project is the fact that it simultaneously celebrates freedom and ignorance, which in the enlightenment tradition are incompatible. A great weakness of its critics is that they have failed to exploit or indeed, even draw attention to, this contradiction.

May this veil of ignorance be penetrated? This is often presented as a kind of philosophical question, as a research agenda: 'find out what is going on'. The 11th thesis on Feuerbach is a constant reminder of how misplaced this idea – characteristic of academic Marxism – really is. First of all, the problem is not in any case for individuals to become conscious of the destiny of humanity, but for humanity to become conscious of the destiny of the individual. Knowledge is a material thing, and unless incorporated in a social mass capable of acting, it has no practical effect on emancipation and moreover, does not really exist. But second, it is only in the process of acting to change things, that society acquires consciousness. Consciousness is an active, not a contemplative principle.

The real question of consciousness is therefore: under what circumstances does history call on people – in capitalist society – to act consciously? Precisely at those points when the

commodity fails to organise their actions for them blindly. Are there circumstances under which humans can become truly conscious of what shapes their destinies, and act to change them? Yes – during economic crisis. It is when the hidden hand ceases to act, when the market falters and the commodity fails in the task of organising society, that we become conscious of its nature, and the true social relations underlying that form come out into the open, where they can be seen. In the immortal words of Kurt Tucholsky 'Political Economy is when people ask themselves why they have no money'.

Are crises lawlike?

Study of any previous crisis on the scale of the present, whether that of 1929, 1873, or even earlier, shows that a long declining phase always follows a period of expansive boom such as the 'golden ages' of 1893-1914 and 1942-1965. Decline therefore has a lawlike 'endogenous' character, which Marx analysed in his discussion of the Law of the Tendency to a Fall in the Profit Rate. The issue is then very simple and resolves into two parts: first, is the decline irreversible and insurmountable, or are there circumstances which can halt it? Second, if there is 'recovery' – to be precise, a 'boom' phase – can this be attributed to the *same* blind economic forces which brought on the decline?

History answers a resounding 'no' to both questions. There has never been an inevitable and unstoppable crisis in capitalism's history, and there are no historical or rational grounds for supposing that, in the future, there will be one. But second, the reversal of decline was in every case halted *not* by the blind economic workings of capitalism but by perfectly conscious and, indeed, brutal conscious political intervention. The recovery of 1893 was the product of imperialism. It would have been inconceivable without it. The recovery of 1942 was the outcome of fascism, world war, and the twin world victories of the US and the Communist Powers.

This suggests that the enterprise of formulating the notion of 'economic' law as a mechanical process is not merely theoretically misguided, but leads to profoundly wrong empirical conclusions. Therein lies the central theoretical weakness of the theories we are considering.

We cannot deny, and indeed have already stressed, that the course of capitalism's economic evolution produces observable empirical regularities: the business cycle itself, together with longterm trends such as the declining rate of profit and growing national inequality. On the other hand, when these blind laws produce socially unsustainable circumstances, the 'veil' of the commodity begins to fall away. The invisible hand of the commodity is increasingly subordinated to, and in moments of extremity, entirely supplanted by, the very visible hands of states, classes, and armies. At moments of great crisis, when the contradictions of the commodity form threaten the reproduction of capitalism, social and class forces are galvanised and political action comes into play, overcoming the effect of the commodity's 'blind laws'. The outcome of this action depends on which class interest it is allowed to serve. Capital, historically, has recovered from crisis at great human and environmental cost – wars, fascism, resource rapine, and so on. Working class action has sought to avoid this by proposing and acting on principles of universalism as the way out of crisis.

Existing economic theory, then, needs to be considerably enriched, not to say overhauled and indeed overcome, before we have to hand the necessary instruments to explain what is really going on in the world of today. Why has Marxism failed to do so? This article argues that one *does* find the theoretical instruments for this 'renewal' in the approach of Marx himself – but not in the current theoretical armoury of academic Marxism, which, with its divorce from mass political action in most countries of the world, has jettisoned the very theoretical foundations it requires to understand the present crisis, substituting a far poorer, and in fact inadequate, theory.

At the end of the day, this is the theoretical inheritor of an earlier and rival tradition to

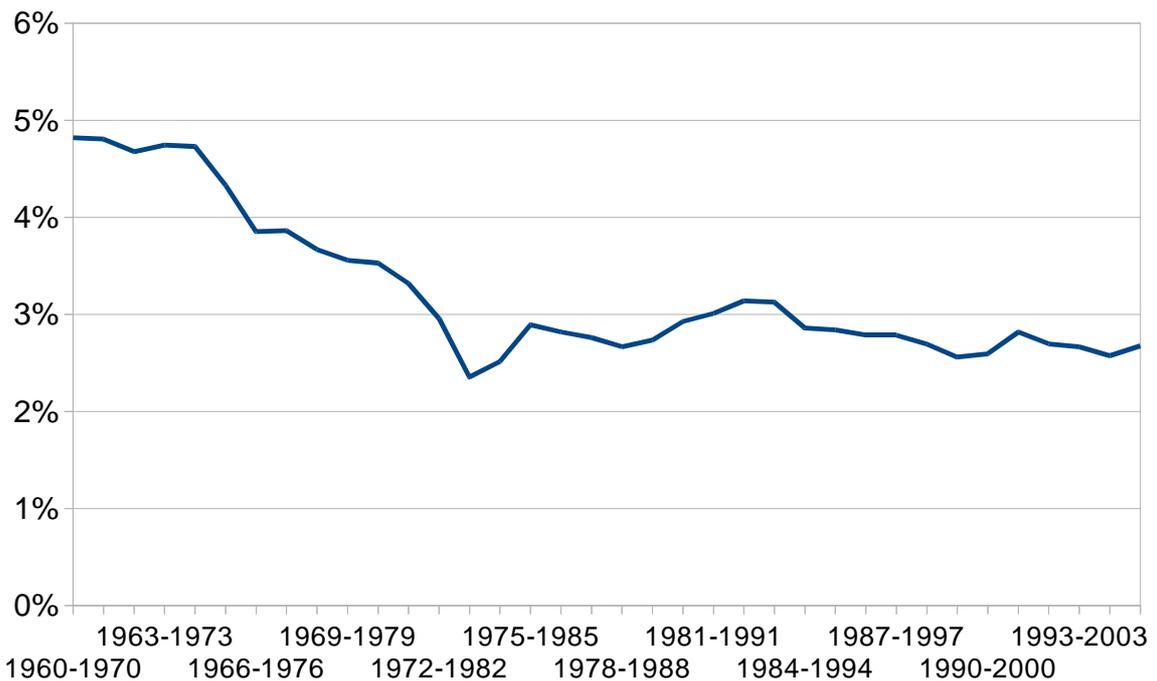
Marx, namely positivism, which we will study in more depth in part 3 of this article. This sought to formulate laws of social motion with equivalent strength to those of mechanics, applicable however to human life, not the heavens, eliminating any space for conscious human action. Such a mechanistic view is often attributed to Marx himself, but as we shall show, this attribution is as misconceived as it is – all too frequently – malicious. It does, however, apply with considerable accuracy to *Marxism* – notably, in the Marxism of the Second International.

The theoretical legacy of Marx has been in effect squandered by the Marxists, in the one-sided reduction of the notion of economic 'law' to the single notion of an inviolable mechanical movement.

This can only appear as one or other combination of two automatic forms of motion: an inviolable trend, such as progress or productivity, or an automatic and self-correcting fluctuation, in which every fall must be followed by a rise, and every rise by a fall. I will argue that within Marx's own writing and approach, there exists a superior and suppressed alternative which synthesises on the one hand the real role that 'blind economic laws' assume, in a society which permits the organisation of all social relations through the commodity form, and on the other hand the actual function of conscious political intervention, its possibilities and dangers. Thereby, my aim is to restore to the corpus of Marxist thinking the lost Hegelian-Marxist concepts, central to the original emancipatory tradition of classical Marxism, of *freedom* and *choice*.

Does capitalism have laws?

Chart 1: 10-year average real GDP growth of the world economy



Source: IMF (World Economic Outlook); Groeningen RuG project, German national accounts, author's calculations

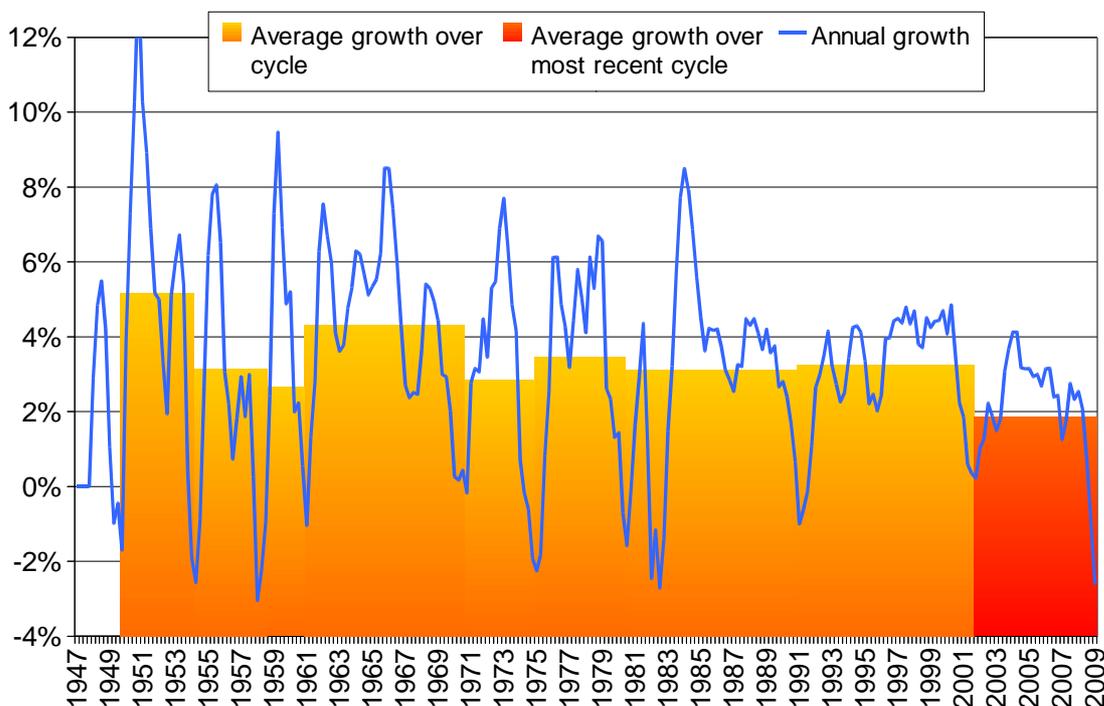
Chart 1 shows the total annual growth of world real GDP since 1960. It can be seen that the present crisis comes at the end of a 40-year decline in both world growth, beginning with the end of the 'long boom' that followed the war. World GDP growth is now half what it was in the early 1960. US growth over the most recent cycle was the lowest since the Great Depression.

These empirical data show that there are long-term, powerful, regularities in the course of

world development. Such long downturns, and such feverish booms, have occurred before. The evidence accumulated by the Schumpeterians and their successors has established, I think, that long periods of slowdown alternate with periods of rapid and feverish growth lasting at most three business cycles.

I stress that I emphatically deny such movements have any automatic or even regular cyclic character. Nevertheless, it is empirically ridiculous to deny that long periods of high growth and low unemployment *alternate* with periods of declining growth and high unemployment, accompanied by low profit rates which do not show a rising trend.

Chart 2: growth of real US GDP over the course of the business cycle since the war



Source: US BEA NIPA table (real GDP), Cycle definitions

A theorist who attempts to deny this empirical regularity – or rather, persistent irregularity – will find her or himself going far beyond a rejection of 'cycle' theory: she will find herself in territory rather close to that of neoliberal theories of 'market perfection' according to which all variation in the economy is either purely random, or the outcome of non-economic interventions. If we deny the unevenness of capitalist development in either time or space, this has the unintended theoretical consequence of asserting its evenness.

A valid economic theory must account for these regularities. If, then, we do not rest on the notion of an automatic cycle, what explanation is open to us?

Geographical and temporal unevenness

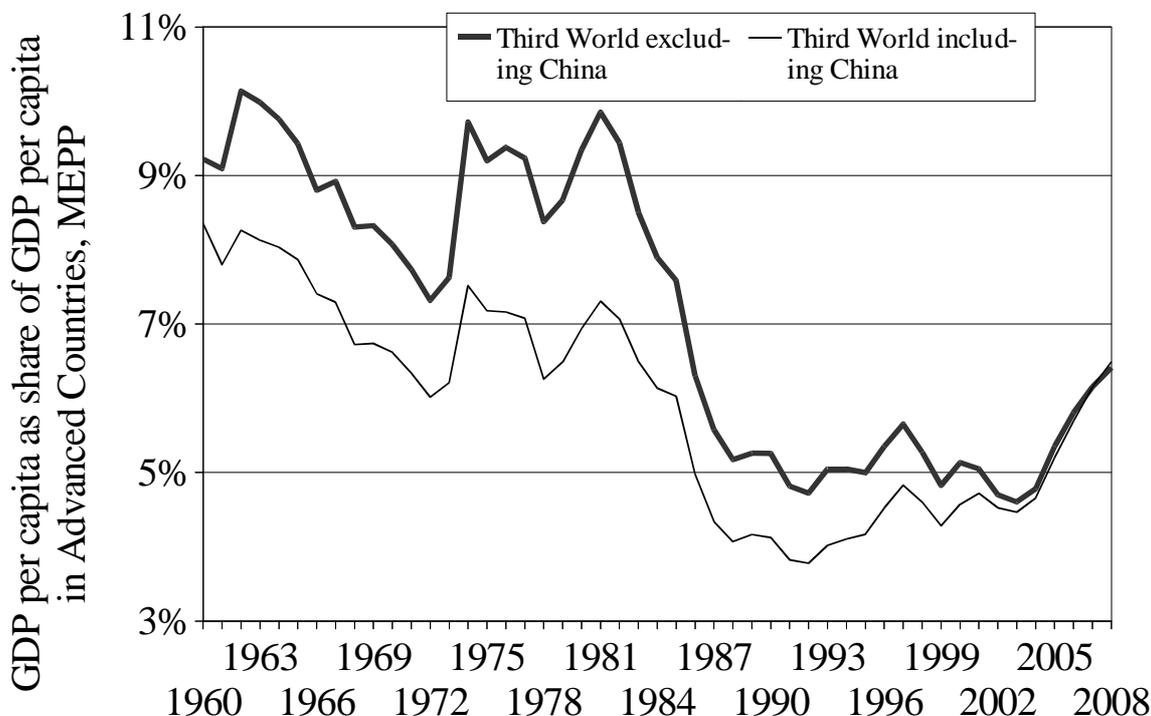
Chart 3 illustrates another trend of this type, less well established during Marx's life: the difference in average income between the small group of 20% of nations which the Communist International termed the 'imperialist' nations, and the rest of the world.⁷ Here I simply introduce the empirical facts, which I hope to show later, form an important role in the launching of booms and should be accounted an indispensable part of a complete formulation of the laws that govern them.

More detail on this trend can be found in Freeman (2009a). Here, I simply want to re-iterate that the polarisation of the world is a salient long-term feature of today's global economy.

⁷ Since modern China makes a significant difference, the graph shows the growth in world inequality with and without China.

These data are more hotly disputed, not to say ideologised. Yet one fact stands out which is difficult to dispute: unlike long slowdowns, the polarisation of the world is rarely reversed, and when it is, the reversal does not compensate the previous polarisation. In the history of capitalism, the world has got ever more unequal. At the dawn of the Twentieth Century, the average output of the richest country was seven times that of the poorest. By 1980 the figure was 142.⁸

Chart 3: World national inequality since 1960 (low = less equal)



How do crises end?

The question: 'does the empirical trend of decline reverse?' is 'of course'. This is an empirical, not a theoretical question. Empirically, long downturns do reverse and have done so at least three times.⁹ Marxism, and most importantly the Marxist Zusammenbruch tradition, has surprisingly little to say about this.¹⁰ Though it has much to say about crisis, it has little to say about recovery.

On the other hand as we have noted, the converse tendency, manifested most strongly in mainstream cycle theory, pays just as little attention to the causes of recovery because it supposes this recovery to be automatic or endogenous. Most endogenous Long Wave theories are mathematically exceptionally simple, and are known in mathematic dynamics as relaxation oscillators. They involve the depletion of some factor essential to expansion, such as entrepreneurial spirit or technological innovation, which is exhausted in decline and which, in some sense, the decline replenishes. This replenishment takes place 'behind the backs' of the entrepreneurs or innovators, so that no actual action or policy is required to bring it about.

Like the process of decline itself, this is an empirical matter. We need to study what did capitalism do, in the past, when it emerged from crises of the present nature. In so doing,

⁸ See Pritchett (1997)

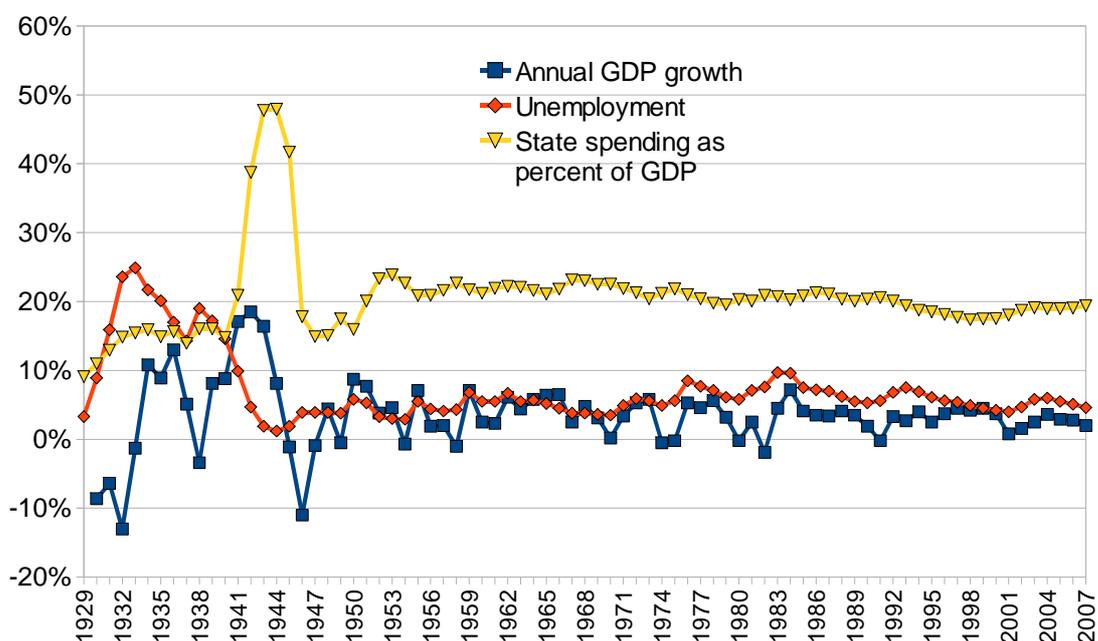
⁹ in the great boom that followed the crisis of 1848, the *Belle Epoque* that arose out of the so-called Great Depression of 1873-1893, and most recently, the 'postwar' boom which actually began in 1942, as we shall see.

¹⁰ Mandel (1999) is an important exception

we have to transcend the caricatures of debates about ‘inevitable breakdown’ and pose the question in a more advanced way.

My own starting point is the quotation from Trotsky already given. This in essence distinguishes between 'economic' and 'superstructural' factors. Nowadays, economics usually refers to these as ‘endogenous’ and ‘exogenous’ factors. It is surprisingly difficult to pin economists down to a precise definition of this term, so I will supply my own, which is the meaning assigned to these terms throughout this article.¹¹ Endogenous factors are those internal to capitalism. This term is not very well defined in the literature. In this article I will assign it a very precise meaning (see Appendix); endogenous factors are those uniquely associated with the market and nothing else: these are those factors that arise from the movement of prices, the quantities of goods produced, the origins of these goods, and their destinations. Their opposite, ‘exogenous factors’ are all those commonly called ‘non-economic’ – most notably political, social, cultural, or aesthetic.

Chart 4: Unemployment, output and state spending in the US economy 1929-2007



Source: US Bureau of Economic Analysis www.bea.gov. NIPA tables
 For details of tables used consult www.academia.edu/AlanFreeman

We can rephrase Trotsky’s argument, without distortion as follows: the recoveries are exogenous. They are brought about by great historical events and political upheavals, not by the spontaneous (or concealed) movements of prices and quantities brought about by the operation of the market itself.

With this in mind, let us ask what, actually, brought about the recovery from the Great Depression of 1929. Chart 4 emphasises the decisive point. The boom of the 1950s was launched neither by the New Deal nor even the Great Depression, but the second Great War. Thus, US unemployment never really got below 15 per cent until 1940 – after which it sank to a little over one per cent and never rose above five per cent until the 1970s. Output growth rose by 1942 to an all-time high of 18 per cent.

The background to this was a level of state involvement in the economy never since seen – reaching nearly half of GDP by 1943. At the same time, the war itself achieved a complete

¹¹And in all my writings on this matter.

re-organisation of the system of world nations, breaking the colonial domination of the European powers and opening the world to US exports, whilst tooling up US productive capacity to the point where, by 1946, it was three times more productive than Britain. Nor were these measures any different from the rest of the advanced world, the recovery in Europe being led by Nazi Germany's state-led war machine, and in Asia by a similar drive from Japan. The postwar boom, in short, was not the outcome of any blind law. It was the result of conscious action of an exceptional, vigorous, and extended nature. It was exogenous.

If this is a general rule that explains the alternation of periods of decline with long booms, its discovery must be approached by reversing the way that Marxism traditionally approaches the matter. Most Marxist accounts, notably but not only those which have abandoned Marx, adopt an approach we term *Capital Worship*, and discuss at more length later on. From this viewpoint boom is 'natural' to capitalism. It is what capitalism normally does, and the difficult thing to explain is how it should ever stop.

Actually crisis is 'normal' to capitalism. It is the booms which are exceptional. Since 1929, there have been at *most* 30 years of stable growth.¹² The 'cause' of the present crisis is, actually, the absence of those abnormal factors which produce booms.

A second approach to the problem

We can now see that there are two sides to the actual empirical course of economic movement during the second half of the Twentieth Century. These are illustrated by Charts 2 and 4. There was an unplanned, endogenous descent into the crisis of 1929, followed by a politically-conscious, exogenous, ascent out of it which launched the boom that, in the USA at least, was already underway as early as 1942. The actual course of world development is thus the outcome of two factors: more or less blind tendencies of the market itself.

I can now state the problem, as I see it. These two movements form, in a certain sense, a unity. The conscious action which led to the recovery was provoked by an intense social and political crisis which was, in effect, the form in which the economic crisis expressed itself. But on the other hand, the instruments which various nations seized on, in order to extract themselves from this crisis, expressed themselves in the economy and, indeed, utilised economic mechanisms – for example, the prodigious spending of the US, German and Japanese states and, following the war, the 'tax and spend' instruments of the welfare state. We cannot, therefore, simply divorce one side of this motion from the other and speak of the decline as economic and the recovery as political. The decline was driven by economic forces, which expressed themselves ultimately in a political form; the recovery was led by political action, which expressed themselves in an economic form.

These are not two *different* economic laws. They are two sides of the *same* law.

The point can be illustrated by asking what we really mean by even such a 'natural law as the 'law of gravity'.¹³ The law tells us that bodies are attracted to each other, which, on a large mass such as the earth, means that things tend to fall downward if unimpeded. However, this law does not translate directly into the absurd statement that all buildings will fall down. The effect of the law of gravity can be thwarted, by a builder for example, who can construct a house that does not fall down. Does this mean that the law of gravity does not apply to builders? Clearly not: it determines the actions they must take in order to ensure

¹² See Mandel (1974) and C. Freeman (1995)

¹³ Marx himself makes frequent references to natural laws, in trying to explain what he means by an economic law. It might be thought from this that he has in mind a mechanical, automatic, or deterministic concept of law. This interpretation misses the point. Marx, fundamentally, does not treat *any* law as deterministic, whether natural or social, and from his days as a doctoral student of Democritus, never coincided in his thinking with the notion of a law as something that proceeded independent of free will.

their buildings do not fall. There is not one law of gravity for birds and rain, and another for builders. There is a single law which governs a number of circumstances.

An adequate formulation of the concept of 'economic law (or laws) of motion' should, surely be expressed in the same way. Any one-sided explanation will not work – it is simply unworkable, and unscientific, to declare either that a capitalist, market economy must inevitably grow or must inevitably shrink, or that politicians need take no account of economic forces. An economic law of motion must, in short, be expressed as a dialectical synthesis of the two aspects of a capitalist economy: those that operate blindly and behind the backs of the players – by virtue of the fact that the commodity relation has been permitted to organise their interaction – and those that arise from their conscious actions. These are two sides of the same coin. No formulation will work which treats them as two coins, particularly two coins in different currencies.

A theory which *uniquely* rests on political intervention cannot assess the role played by the market economy itself, and the long-run tendencies which it generates. Conversely, at definite moments, and under definite circumstances, conscious political action can not merely suspend, but reverse, the effect of these trends and the laws that underlie them.

Chart 6: growth rates of countries, 1980-2010, ranked in order of degree of the strength of protection against the free movement of capital

	1980-1990	1990-2000	2000-2008
China	8%	9%	10%
Vietnam	4%	6%	6%
Russia		-2%	7%
Vietnam	4%	6%	6%
India	4%	4%	6%
Korea	7%	5%	4%
South Africa	-1%	0%	3%
Brazil	-1%	1%	2%
United States	2%	2%	1%
Japan	3%	1%	1%

This dilemma comes to the fore, for example, in the many attempts that have been made by both political actors and by historians, to identify the role played by *force* in economic history and particularly in the history of imperialism. Writers such as Bagchi (1982) have rightly pointed to the enormous economic gains which the colonising countries of the world were able to secure, by virtue both of their colonial conquests and their governance of the colonies. But theorists of unequal exchange have rightly shown that there are market mechanisms, as a result of which value is transferred from countries with low productivity to those with higher productivity when these countries trade with each other.¹⁴ The polarisation of the world into its two great blocs of rich and poor nations thus arises from a *combination* of blind and conscious mechanisms.

¹⁴see for example Amin (1973), ESS (2008), Emmanuel (1970), Freeman (2007, 2009), Gunder Frank 1978, Palloix (1970)

The conscious intervention of states contrives to maximise the advantages secured by the colonial or dominant nations – and is, Bagchi rightly notes, significantly underestimated by historians and development economists alike. However it cannot be held *solely* responsible and indeed, if it were, it would be sufficient for the former colonial nations to achieve independence, and a level playing field in trade, to catch up with the rich nations. This is a questionable conclusion: the evidence, above all that of China's relation to the world, suggests that to stand a chance of catching up, the historically poorer nations require specific political measures – summed up in the notion of a developmental state – to ensure success. This developmental state is required not just to protect them against other nations but also to protect them against the market. As chart 6 shows, precisely those nations which, during the period of deregulation and liberalisation, maintained such defences as capital controls and a strong non-private sector, performed best in those years in which the 'market' was, in effect, more developed, more global, and more 'free', notwithstanding the many distortions which the rich nations have imposed, than at any time in the past.

The burning issue is this: which moments, what circumstances, and what type of actions are required to suspend the impact of such long-term laws as operate in a capitalist economy? However, once the prospect of conscious intervention is admitted, another factor makes its appearance: that of *choice*.

We know, for sure, that capitalism can escape from a long decline. But what was the price that humanity had to pay? The price of escape from the Great Depression of 1873-1893 was imperialism and the Great War. Escape from that of the 1930s followed fascism, World War II, Hiroshima and Nagasaki. Undoubtedly, capitalism can 'exit' from the present decline. The question is – at what price?

The next and obvious question is: is this the only choice? Does humanity *require* its Hitlers, its empires, its wars, in order to overcome crisis? The answer is as scientifically obvious as it is morally valid: there is more than one way to overcome crisis. Russia after 1917 and China after 1945, for example, chose very different responses to the economic crisis than did the USA, Germany, or Japan. These were purely national solutions, moreover. There are clearly different *world* courses of action that can both restore economic functioning – on whatever basis is required, which may of course be quite different from the present one, but in which market forces will undoubtedly play some role – and can address the huge social and environmental consequences of the present crisis, in the interests of humanity as a whole, instead of just one part of it.

The purpose of identifying the 'laws of motion' of the economy is then an eminently practical one. It is to permit us to determine the consequences of our actions: to determine which courses of action will lead to which results.

In short, what is required is a formulation of the concept of an economic law which is intimately and indissolubly bound to the concept of the choices we make, and their consequences for the 'economy' in the narrow sense, for society, and for the planet itself.

Where might the elements of a theoretical framework, adequate to this task, be found?

Why Marx?

This article attempts, among other things, to show that Marx's original approach contains the analytical and theoretical elements needed to formulate these problems and solve them, in such a way that it equips humans to act to control their own destiny.

I make no claim that Marx predicted events he never saw. My case rests on two theses. First, the *analytical elements* of his theory of the 'capitalist mode of production' provide a superior theoretical framework for analysing contemporary events – notwithstanding contributions as impressive as John Maynard Keynes – to anything since seen.

Second, the world we live in is still capitalist. Despite all changes, it is still a society of 'generalised commodity production', organised around the economic relation to which Marx dedicated the most exhaustive examination yet seen – the commodity.

A single, primary idea underlies these two theses: Marx's abstractions are both confined to capitalism, and extend to all of it. His analytical categories are the most general, and most abstract features of that system, rigorously excluding everything that might depend on some particular feature of his own age, yet importing no imposition from any previous age. No subsequent system of thought has set itself these goals. This makes his theory indispensable to any more concrete or contemporary analysis.

A second question however arises, also central to this thesis: it may well be that Marx's thought is adequate or even useful. But is it not the case that *subsequent* development in theory has produced something superior – that theory, as well as reality, has evolved since Marx's day and that, therefore, Marx's own theories are of purely antiquarian interest? I argue that this is not the case.

One side of the proof is the fact – now somewhat more widely recognised than three years ago – that mainstream, neoclassical and neoliberal theories have failed to supersede Marx's. I do not need to labour this point, since it is evident almost to the whole world that economics has signally failed to anticipate the most serious crisis since 1929 (see for example Colander et al 2008, Freeman 2009b)

There is another and more controversial issue, however: I assert that 'Marxism' itself has both parted company irrevocably from Marx, and in the process of this retrogression, rendered itself theoretically incapable of rising to the tasks outlined above. This is the subject of the next section.

Economics without Marx

Many Marxists have failed to appreciate the remorseless, concerted and intransigent nature of the onslaught that feeds this idea. Most of all, honest Marxists have failed to grasp that the principal target of Marxism is Marx's own theory. This lack of understanding is probably the principal reason that for such a length of time, the illusion has persisted that modern Marxism bears any real relation to Marx.

This is surprising, because the claims involved have been stated often and clearly by the parties involved. Steedman's (1981:27-28) post-Sraffian manifesto is explicit:

The objective of the book is to present well-established results in a coherent and (as far as possible) simple way, emphasizing that arguments entirely consistent with Marx's materialist analysis both provide answers to some of the important questions with which Marx grappled and show that *his value magnitude analysis is irrelevant to those answers*.

This same idea is laid out in Roemer's (1989:11) *Free to Lose*:

[T]he focus of this book, exploitation as defined by Marxist theory, is in fact the particular form of exploitation associated with capitalist property, with unequal ownership of assets (excluding skills and other people) that are useful as means of production. In chapter 9, *I discard entirely the classic Marxist definition of exploitation in terms of surplus labour*.

Hodgson (1980:273), spells out a recurring refrain:

It will be evident to the reader that many of the above ideas are either inspired by, or directly attributable to, the works of Marx and Engels... We must point out, however, that in contrast to the theory of Marx and Engels, *our theory of exploitation is not based on the labor theory of value*

Morishima (1973:8) notwithstanding the politeness of the wording, presents the matter devoid of all pretence:

Rigorously speaking, we cannot admit Marx unless he is prepared to abandon the labor theory of value

At first sight, this appears as if it were an intellectual grouping departing from Marxism. If only. The *same* position – that Marx’s views can (and should) be reached without his theory – dominates Marxism itself. A salient example is the conscious choice of Brenner (1998:12ff) whose meticulous empirical work brilliantly confirms Marx’s analysis – a conclusion he goes out of his way to avoid. ‘[T]he ultimate result of [capitalist] innovation,’ he writes

...can only be to reduce the exchange value of the goods produced in their line and thus, directly or indirectly, to reduce the exchange value of the wage, and thus to *raise* the average rate of profit, given again the (Marxian) assumption that the real wage remains constant. *It certainly cannot be to reduce the rate of profit.* Formal proofs of this result can be found in Okishio (1961) as well as in Roemer (1978a, 1978b)

The idea that Marx’s “insights”, or “inspiration” should be defended, whilst his actual theory is abandoned, is a not just a sideline but the defining theme of modern Marxist economics. Thus Laibman (2004):

according to the 20th-century Marxists – perhaps Winternitz (1948), Dobb (1955a, 1955b), Sweezy (1970), Sraffa (1960), Meek (1956), Bródy (1970), Steedman (1977), Shaikh (1977), Harris (1978), Lipietz (1982), and Duménil (1983) may represent this category; see also Laibman (1973, 1992) – the *failure to transform inputs in the value tableaux is in fact a drawback, or an insufficiency, in Marx’s presentation*, which caused violations of either simple or expanded reproduction conditions and produced an incorrect measure of the profit rate, *and was corrected by later generations of Marxists.*

The list of writers cited by Laibman is inadvertent testimony to the breadth of the view that Marx’s economics are wrong. Laibman invokes the pantheon of Marxist political economy – and he is right to do so. All these writers indeed endorse his claim that Marx’s theory of value, as stated, cannot be valid. We find similar statements in the writings of almost all academic writers on economic matters who proclaim an affiliation to Marx. The view that ‘Marx’s economics were insightful but wrong’ is the unreflecting common-sense belief of virtually all theoretical Marxism.

Marx without economics

Debates on Marx’s economics are easy to dismiss as obscure spats among technical specialists. This misunderstands their significance. Economics Without Marx catalysed a broader trend, for which economics of any kind was a dispensable encumbrance. Recoiling from the mechanical materialism of the Second and Third Internationals, Western Marxists were drawn to dissident ideas on philosophy, politics, sociology or aesthetics from Gramsci, Lukacs or Benjamin, ignoring equally challenging economic ideas from the likes of Grossman or Rosdolski and indeed, the economic theories of even those thinkers thus lionised.

“Cultural Marxism”, an extreme variant, sought in effect to free aesthetic criticism from all economic trappings. Its roots lie in the Institute for Social Research, endowed by multimillionaire Felix Weil, which on taking refuge from Nazi persecution in New York became an incubator for post-‘68 Marxism. Kuhn (2007:186) records its directors’ hostility to the outstanding economic work of Institute member Henryk Grossman, arising from fear that its conclusions would alienate funders:

By 1939, Horkheimer and Adorno, in particular, had concluded that Marxist economics was significant not as a means to understand concrete developments in capitalist societies, but only as an ironic demonstration of its contradictions.

This pre-existing anti-economicism neatly intersected the anti-Marxist onslaught of the 70s. The 'Hotel Grand Abyss', as Lukacs dubbed it, mutated into a transatlantic home from home for academic radicalism, complete with granny flat for the post-Sraffians, campsite for post-Modernists, and watchman's hut reserved for an itinerant post-Soviet *Freikorps*.

What remains in academia today, though it calls itself Marxism, no longer bears any relation to the ideas of Karl Heinrich Marx. On one side, it provides a 'Marxist' economics that explicitly rejects, and constantly labours to deny, Marx's own economics, and on the other side it offers cultural, sociological and philosophical theories which, while attempting to maintain some link to the Marx's non-economic ideas, have severed these from any meaningful connection to the two economic ideas which alone provide their coherence: that under capitalism, all social relations are organised in and through the commodity form, and that the commodity form is in itself a relation between alienated labours.

Marxism without crisis

Marxism Without Marx faces two insurmountable problems. First, it cannot theoretically deduce most of Marx's main conclusions from its interpretation of Marx,¹⁵ Second, this interpretation – which is in fact an independent theory, though it is presented under the cover of 'Marx's own' theory – cannot explain reality.

These problems are, naturally, corrected. Since Marx's theory does actually explain reality, it is hardly surprising that a body of thinking which begins from a wholesale rejection of this theory, should fail where Marx succeeds.

More precision is however needed. Which theoretical elements, in Marx's own analysis, achieve what Marxism has failed to achieve? I argue that two of these take precedence. First, Marx's quantitative theory of value – that the magnitude of value is determined by the time of labour. Second, the capacity of Marx's theory to deduce crisis from the *internal* movement of capitalism, including (but not confined to) the contradiction between accumulation and the rate of profit – more commonly referred to as the 'tendency of the rate of profit to fall' or the 'tendential decline in the profit rate'.

As regards the determination of the magnitude of value, noting only at this point that it provides the crucial desired link between political action and economic outcome which makes possible a science of political economy (as opposed to distinct sciences of economics and politics). It is a commonplace (though denied by Marxism Without Marx) that *because* a definite sum of money represents a definite sum of labour, that we can identify the social consequences of a monetary transaction. Less obviously, we can identify the economic consequences of a political action. If the state, for example, taxes a source of income, or provides a social benefit, this is not merely a monetary transaction but a reorganisation of the labour of society. If we do not know – or even worse, if we deny – any connection between money and labour, this causal link cannot be defined. We will return to this later, focussing here on the causes of crisis.

To reach the heart of the problem, we focus on the best-known of Marx's explanatory accounts – the 'law of the tendency of the rate of profit to fall' (TRPF). Marx did not argue that this was the sole cause of capitalist crisis – far from it – but in a key chapter of *Capital* Volume I – chapter 25, entitled 'the law of motion of capitalist accumulation', he offers a straightforward explanation of the TRPF, suggests why it underlies at least some of capitalism's difficulties, and studies the relation between this law and a series of other social and economic phenomena including the reserve army of labour and the industrial cycle.

Our focus is on the *mechanism* that Marx proposes to explain the TRPF. He outlines this in the chapter just mentioned:

¹⁵See Kliman (2007, especially chapter 4) for a full discussion of this point

The specifically capitalist mode of production, the development of the productive power of labour corresponding to it, and the change thence resulting in the organic composition of capital, do not merely keep pace with the advance of accumulation, or with the growth of social wealth. They develop at a much quicker rate.

The point to which we wish to draw attention is that the falling profit rate is for Marx, an outcome of accumulation. This is a process endogenous to capitalism.

The mechanism can be simply stated: each year, a certain amount of value is produced (equal to the total new labour time worked during that year). Of this, a proportion is consumed by workers, in the form of the wage; a portion is consumed by capitalists, being withdrawn from profits by them for their personal consumption and to finance the (not inconsiderable) ‘unproductive overheads’ of keeping the capitalist system in existence – the state including the police and the army, the banks, and so on.¹⁶ The remainder is invested.

The stock of capital, in value terms, therefore rises – by an amount equal to what was invested. This stock of capital is, however, the denominator in the average rate of profit of society as a whole. Therefore, the average rate of profit will fall, approximately proportionally to the proportionate increase in capital stock.

This can be offset if workers produce more value, or consume less. But biology sets an absolute limit to this – profits cannot rise above the maximum amount of labour which the living and working population can expend. In general, profits keep step with the rise of the working population. The rise of capital stock, however, proceeds indefinitely and without limit.

In time, therefore, there is only one way for the rate of profit to be restored: if the *process of accumulation itself is suspended*. This is what happens in slumps, particularly big slumps, during which capital is devalorised and used up and investment actually becomes negative. Does this explanation match the empirical facts? It is, after all, simple enough to verify. We just need to keep track of the actual movement of capital stock in value terms, profits in value terms, divide one by the other, and see whether the one explains the other.

Chart 5 shows the profit rate of the US economy, next to an explanatory variable I call the Accumulation Ratio. Its denominator is capital stock, as in the profit rate, but the numerator is output. It can fall *only* if capital stocks grow faster than output, exactly as Marx suggested to account for the falling profit rate observed in the nineteenth century.

Marx’s theory says that the falling profit rate arises from the process of accumulation itself – that is, endogenously.

This clearly explains the falling phase of the profit rate. Accumulation accounted for almost all the decline in the profit rate since its wartime peak and 82 per cent of the variation in between. In contrast, the share of profits in output – the conventional explanator – fell by only four percentage points, from 32% to 28%. Conversely wage cuts had an infrequent and temporary impact, at no point offsetting the preceding fall in the profit rate. Marx’s theory that accumulation is the cause of the declining profit rate is strikingly confirmed.

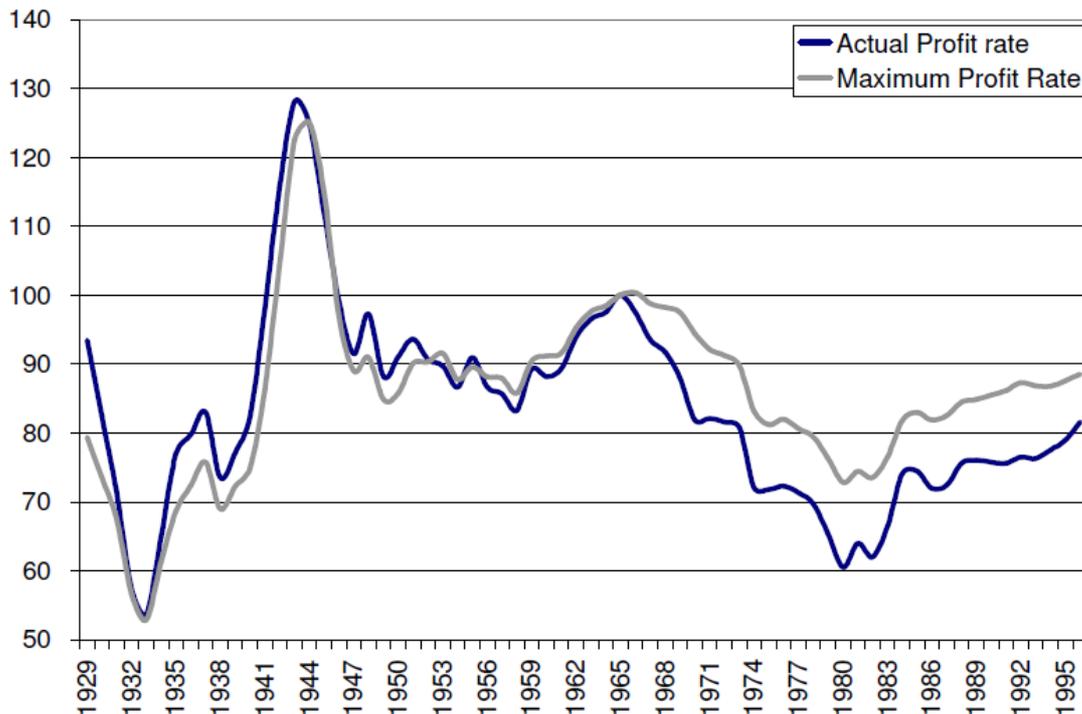
Just as significantly – we will return to this point – the law also explains the steep *rise* in the rate of profit to its peak of 1944. This arose from an equally sharp collapse of the value of invested capital, shown in the chart as a sharp rise in the accumulation ratio. The two magnitudes track each other almost perfectly. This collapse in capital stock was not, however, brought about by the slump but by the war. We will return to this point – at present, however, we focus exclusively on the relation between accumulation (the increase

¹⁶ The word ‘unproductive’ has a specific meaning which we will return to: it means that these activities produce no exchange value.

in the value of capital stock) on the one hand, and the profit rate on the other. From this point of view the *entire* course of the profit rate in the USA fully confirms Marx's account, as given above.

But on the basis of the theories of Marxism Without Marx, the accumulation ratio should not bear any relation to the observed rate of profit. Yet, according to the standard, simultaneist theory to which Marxism Without Marx holds – as noted by Brenner, in a passage advocating this view – this is logically impossible. The theory is scientifically false: it predicts something that clearly does not happen.

Chart 5: Accumulation and profit rate in the US economy 1929-2007¹⁷



Source: US Bureau of Economic Analysis www.bea.gov. NIPA tables
 For details of tables used consult www.academia.edu/AlanFreeman

Note that the primary issue is not ‘whether Marx’s theory’ (or any other) predicts that the profit rate will fall, or whether such an alleged prediction is correct or false. The issue is *mechanism and explanation*: The precipitate rise of the profit from 1939-1946 and its subsequent long decline are observations, not predictions. The question is: which theory explains them? There are two basic variables in the profit rate: capital stock, and the rate of

¹⁷In the graph above I have used replacement-cost measures of capital stock, because these are the measures normally used by Marx's 'Marxist' critics. Kliman (2010) argues, in my view correctly, that historical-cost measures are superior, and closer to Marx, because they do not falsely revalue the capital advanced to pay for them. It should never be forgotten that the advances made by the capitalists are *money*, not physical goods. The denominator in their return on capital – that is, their profit rate – is this advanced money, and is best measured therefore by the cost of the goods that they purchased *at the time they purchased them*. The reason that simultaneist interpretations get the rate of profit wrong is that they suppose, when the price of a capital input has decreased, that the capitalist who originally paid for that input, can costlessly write down his or her past expenditures. If the capitalists could indeed forget their past expenditures, not only would the profit rate rise remorselessly as Okishio's theorem predicts, but financial crises themselves would be almost impossible. However, in this section of the article my primary intention is to establish that the profit rate which Marx's own critics themselves use, behaves in a way that their own theory, on their own admission, proves impossible – that is to say, the overwhelming cause of the very decline in the profit rate that these figures demonstrate, is the outcome of accumulation. I therefore use current-cost figures to illustrate this point, but urge caution in using these figures for any further purpose.

exploitation. The issue is the relative weight of these two factors. The data supply the answer: changes in the rate of exploitation may have an offsetting (or additional) effect on the rate of profit, but the magnitude of such changes is not comparable with that of the size of capital stocks and is way insufficient to explain the scale of the actual changes observed over any period longer than a few years.

Marxism Without Marx gets this wrong. Moreover, it needs to be grasped just how badly wrong. Their theory *unequivocally predicts that what is observed, cannot occur*. In establishing this point, we need add nothing to what the Marxists themselves have established. Their assault on Marx, we should recall, included an exceptionally rigorous proof, due to Okishio, that the rate of profit could not possibly fall as an outcome of technical change. Yet, it has. A scientist from any other branch of knowledge would conclude that they have, exceptionally thoroughly, disproved their own theory.

What lies behind this failure? Is it 'fixable' – is there some minor error in the theory which can be corrected to put it right? Certainly not, if we are to believe the volume and vituperative nature of the writings which for many decades have been offered as irrefutable proof that Marx was wrong. The next step of our argument is to go deeper into the theory, and grasp what lies behind its failure.

The doctrine of general equilibrium

To understand what lies beneath the failure we have just proven, we need to return to the basic origins of Marxism Without Marx. This lies in its adoption of, or acquiescence to, the paradigm known as 'general equilibrium'.¹⁸ The method of general equilibrium dominates and overshadows the whole of mainstream economics and many of its heterodoxies. It is *par excellence* the ideological expression of capitalism triumphant.

First – and in order to establish that Marxism is a variant of it – let us establish what the general equilibrium paradigm consists of. We employ Kuhn's term 'paradigm' to the General Equilibrium Method because it expresses a comprehensive approach to economics as a whole, in all its branches and specialisms, overriding other differences between its disputants. It involves not only a calculation but an ontology. The prices, values, and profits of any equilibrium solution are *defined* by the solution to the equations. This is more than mere 'mathematics'; it is the philosophical basis of a system that defines what the objects of economics consist of.¹⁹

The method is, at its core, Platonic. For Plato, the 'true' objects of the sensuous world are the ideal forms of which they are merely imperfect materialisations. A 'true' circle is the perfect ideal circle of mathematics, and every actual circle is a defective ideal circle – not quite round enough, containing wobbles, rough at the edges, and so on. In like manner, the 'true' objects of the general equilibrium universe are the ideal, hypothetical prices that the market *would* settle down to, if only it were perfect.

There is a vital difference even from Plato, however. An ideal circle is in some sense the abstract truth of a real circle, because all real circles really do approximate to the mathematical ideal. Real economies, however, do not approximate to the equilibrium ideal. In fact, they do not behave anything like it. This is why its predictions do not match reality.

So why bother with the method at all? The key to this does not lie in the realm of science but in the ideological function of economics. General Equilibrium theories, no matter whether marginalist, physicalist or even ISLM Keynesian, have a property that is extremely

¹⁸ See Freeman (1996)

¹⁹ 'There exists, first, the unchanging form, uncreated and indestructible, admitting no modification, and entering no combination, imperceptible to sight or the other senses, the object of thought' (Timaeus 20, in Plato (1965:70).

attractive from an apologetic point of view: it is impossible to deduce from them the possibility that capitalism can generate crisis endogenously, from its own internal laws of motion. Mathematically this is shown in a short appendix to this article, and the reader who wishes to go further can consult, for example, Freeman (1999). The reason is not, however, difficult to understand. The *premise* of any equilibrium theory is that the market will reproduce itself without change. Assuming this is so, we can write down a number of 'simultaneous' equations and solve them, to predict prices, the quantities of goods produced and sold, given only some externally-given magnitudes – in neoclassical economics, the preferences of consumers and the production functions of the enterprises.

The assumption that the market will reproduce without change means that it is assumed, from the outset and as a principle of the calculation, that nothing within the market itself can cause it to change between one period and another. There is therefore no reason, for example, for any price to rise or fall, or for any agent to consume more or less, or produce more or less. Such a system can in principle continue in the same state, without change, for ever. Only an external, exogenous change – in technology, or preferences – can cause the system to adjust. This is expressed mathematically in the appendix to this article.

The question is then, of course, what happens when such an external change does take place? The solution adopted – a generally termed 'comparative statics' – is to suppose that the market will then move from one perfect state to another. During the course of a period of production, it will adjust the perfect equilibrium state corresponding to the old conditions, to a new perfect equilibrium state corresponding to the new condition. It recognises that in moving from one state to another, there will be disturbances, and the economy will for a time be in an 'imperfect' state corresponding to neither set of external conditions. But, crucially, it holds that such disturbances or 'adjustments', as it calls them, are ignorable and can be discounted. The economy can be analysed *as if* its motion consisted of a sequence of perfect states, in each of which, there is no divergence from market perfection.

This has a fundamental consequence. It means that the 'law of motion' of the economy – if any – is entirely governed by exogenous variables – the preferences of the individuals and the technology of the producers. Nothing from within inside the market itself can possibly affect its course of motion. If, therefore, there are empirically any forces that do arise from within the operation of the market itself, these will be discounted by the theory.

But, actually, there are such forces. The economy does not behave as comparative statics predicts. Key 'endogenous' effects of its motion are *greater than*, and systematically *overrides*, the effects of external changes.

This fact is recognised by such critics as Keynes, for example, in his root-and-branch hostility to Say's Law – the earliest formulation of the General Equilibrium approach, basically denying that the adjustment process of the market could give rise to interruptions in which money was hoarded without being spent.

It is also, interestingly, denied by the Austrian economics generally recognised to be Marx's fiercest ideological opponents. General equilibrium was only comparatively recently adopted as the paradigm of economics. First systematised mathematically by the French economist Léon Walras in the 1860s, it remained nevertheless an outlier in economic theory as a whole for most of the nineteenth century and it was not really until Marshall's concerted offensive against the early marginalists²⁰ that it became accepted as the canonical method of economics.

²⁰ Cf Dobb (1973:184) on the Marshall's objections to Jevon's 'catena of causation'

Marxism without crisis

Not surprisingly, acceptance of this paradigm has become the price of admission to the mainstream. It claimed an early victim: Marxism.

The justification offered is a persistent allegation, refuted by scholars working with the Temporal Single System Interpretation (TSSI) of Marx (Kliman 2007, Freeman and Carchedi 1996) have refuted: that Marx “fails to transform inputs” into prices. Marx actually, however, supposes that the capitalists do purchase inputs at their value mediated by money – that is, their price. However, he assumes this is the price prevailing when they *start* production. The Marxists make their capitalists pay the price prevailing when they *finish* production. But this is an alternative procedure, not a correction. It constitutes an alternative definition of value, as Bortkiewicz (1952:23-24 [1905]), a personal admirer of Walras who wrote to him from the age of 19, explains with evangelical honesty:

Marx ... held firmly to the view that the elements concerned must be regarded as a kind of causal chain, in which each link is determined, in its composition and its magnitude, only by the preceding links ... Modern economics is beginning to free itself gradually from the successivist prejudice, the chief merit being due to the mathematical school led by Léon Walras.

This requires that prices be fixed during production, only possible – as Sraffa (1962:v) and Steedman (1981:19) explicitly acknowledge – if the market reproduces perfectly without any change of any kind. The theory which Bortkiewicz substituted for Marx's is an interpretation of Marx which is actually the target of all our earlier-cited critics. It reads Marx as a general equilibrium theorist.

The critics take one of two views. They either defend what they claim to be Marx's ideas whilst asserting that most of Marx's conclusions do not follow, or they discard Marx's theory and substitute some other, such as Sraffianism.

In either case, the theory they are left with is a general equilibrium theory. Thus Morishima (1972: 2) – credited, with Seton and Okishio, for the so-called ‘fundamental marxian theorem’²¹ – openly celebrates Marx as a founder of equilibrium theory, on which hermeneutic grounds at which we can only marvel:

Marx's theory of reproduction and Walras's theory of capital accumulation should be honoured together as the parents of the modern, dynamic theory of general equilibrium

Crisis-free economics

I have, I hope, clearly established that 'Marxism' is not the same as Marx's own theory. Readers who wish to study this in more detail can refer to the copious literature establishing this, for example Freeman and Carchedi (1996), Freeman, Kliman and Wells (2004), or Kliman (2007).

I now however wish to consider where this theory, in its own terms, leads. What theoretical conclusions can actually be drawn from it? The most basic feature of all general equilibrium theories is that it is impossible to deduce any internal tendency to crisis.

This is because an equilibrium model eliminates, by assumption, all forces bringing about the fall in the profit rate and global polarisation – the two most decisive empirical trends of modern capitalism, as we have observed. Such models do not, and cannot possibly, account for these empirical trends because they are designed not to.

We can understand this point both mathematically, and intuitively. Mathematically, it arises because the *only* variables that can affect the motion of the economy are those external to it. Nothing which arises from the movement of prices or quantities can affect it. Only the

²¹ disproven in Kliman (2007)

technology adopted or the preferences of the consumers can affect the course. If, therefore, capitalism contains any internal tendencies to crisis – such as the tendency of the rate of profit to fall – the equations of comparative statics will not capture this and cannot predict it.

Intuitively, the matter is even simpler: the method of general equilibrium makes the *presupposition* that the market is perfect – that it is in such a state that it will continue indefinitely without change. It *deduces the solutions to its equations* from this presupposition. It is therefore no surprise whatsoever that an imperfection *within the market* – a possible failure to reproduce perfectly – cannot be predicted by this failure.

What, then, of boom – the counterpart of decline? In order to investigate this, we first need to probe much deeper into what, on the basis of Marx's theory, we understand 'crisis' to be.

Part II: Law and contingency

Why is Marx's crisis theory different from any other?

We now pass on to the central issue in this assessment: the role of conscious human action: the relation, in Hegel's terms, between the realm of necessity and the realm of freedom.

Almost all twentieth-century discussions of Marx's 'law of motion of capitalist society' arise from attempts to ground his theory exclusively on one single aspect of the inherently contradictory fact that capitalism possesses laws which, nevertheless, human action may supersede. They begin either from a one-sided reading of his theory as an explanation of how capitalism works, or in an equally one-sided reading of it as a proof that capitalism must fail. Indeed, this probably expresses the central contradiction in all economic thought.

One of the main aims of this article is to show that this simplistic polarity does not exist in Marx's thinking. I seek to clarify how he transcended it, and show why it is not transcended in any other existing body of thought to this day.

The best place to start is Positivist thinking, which still informs most practical political thought. In its early Nineteenth Century origins, positivism sought to formulate laws of social motion with equivalent strength to those of mechanics, applicable however to human life, not the heavens:

To understand this economy aright, we must remember that it embraces not merely the inorganic world, but also the phenomena of human life, though more modifiable than any others, are yet equally subject to invariable laws; laws which form the principal objects of Positive speculation. Now the benevolent affections, which themselves act in harmony with the laws of social development incline us to submit to all other laws, as soon as the intellect has discovered their existence. The possibility of moral unity depends, therefore, even in the case of the individual, but still more in that of society, upon the necessity of recognising our subjection to an external power. By this means our self-regarding instincts are rendered susceptible of discipline. In themselves they are strong enough to neutralise all sympathetic tendencies, were it not for the support that the latter find in this External Order. Its discovery is due to the intellect; which is thus enlisted in the service of feeling, with the ultimate purpose of regulating action. (Comte 1856)

The most characteristic formulation of this mathematical determinism comes from Pierre-Simon Laplace (1951:4), arguably the true father of mathematical positivism

An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed, if this intellect were also vast enough to submit these data to analysis, it would embrace in a single formula the movements of the greatest bodies of the universe and those of the tiniest atom; for such an intellect nothing would be uncertain and the future just like the past would be present before its eyes.

Laplace's all-encompassing determinism collapses, once we ask the question: *which intellect?* If this intellect were human or indeed, material, it would itself be subject to the

laws it sought so majestically to describe. In that case, it could not describe itself. The one thing of which, by definition, any conscious intellect is 'uncertain' is its own next action. If any intellect is 100% certain what it will do next, consciousness plays no role in its actions. Therefore, it is not actually conscious, in any meaningful sense, since consciousness so defined has no effect on anything that happens. What is the point of the idea of consciousness, if it can change nothing?

But if this intellect is not human – or, in more general terms, if it is not part of the universe of materially-determined consciousness – it cannot exist. It is as otherworldly as the eternal 'good' of the Neoplatonists.

Nevertheless, a simplistic Laplacian determinism was extremely influential within the Marxism of the late Nineteenth and early Twentieth Century, being phrased by the leaders, and conceived by the participants, in terms of 'iron laws' – of the economy, of society, of dialectics, and of history. This had material roots. For workers labouring under great privation, often suffering heavy losses, it was a source of almost religious solace to think they were taking part in some inevitable working out of history, which could humble the mighty despots against whom they battled and raise them up in these despots' place. Progress, the Second International's Marxism proclaimed, was *inevitable*. The working class was the instrument of its destiny.

The language of inevitability, of the necessity of progress, and crucially of the 'external' nature of social laws, was taken over almost unmodified into the formulations of Soviet Marxist orthodoxy.²² This too was perceived by a generation of communists, locked in a struggle against the barbarities of German fascism, as an inspiration to struggle beside the Russian people against what often appeared as overwhelming odds.

It is easy to pass judgement on this absorption of positivism into the workers' movement. One should not however forget that it was very much the spirit of the age, of all classes. It was the *leitmotif* of US interwar and wartime culture and indeed, the USA presented itself every bit as much as the USSR as the incarnation of human destiny, the pinnacle of progress to which all other nations could but dream to aspire. Paradoxically this same idea is all-too-evident in the work of many American Marxists, who in accepting and indeed, promoting, the mythical presentation of their own country as the 'highest form' of social progress, often do little more than place a Marxist veneer over it.

When we, with our comfortable distance from events, weigh up the intellectual deficiencies of this idea against the sacrifices endured by that entire generation to which we owe freedom from fascism, we should be wary of finding too much fault. It is an entirely different matter when the spiritual energy of a dead generation is prostituted to the intellectual pretensions of a live one.

The highly mathematicised reformulations of Marx's value theory adopted by modern Marxism are the grandchildren of both traditions. The core idea that informs them is a *deterministic* statement of the 'law of value', reducible to a set of simultaneous equations with a single, unique, valid solution. Indeed the response of this school to its temporal critics is conditioned by an almost pathological fear of indeterminacy. Thus Mongiovi (2002:22)

Temporal Single System models avoid the appearance of inconsistency by introducing so many degrees of freedom that Marx's invariance postulates cannot possibly be violated: the models are so open-ended that they explain nothing at all.

For Mongiovi, who accurately states the paradigmatic framework of Marxism Without Marx, the 'problem' of long-run theorisation is to arrive at a fully determinate prediction of the relation between prices, profits, wages and value. Actually, this is impossible. The

²² Ref Labica

determination of actual prices, profits and wages is necessarily indeterminate in any expression able to describe the real world because the real world is itself indeterminate.

The actual magnitude of the profit generated by society, or the proportion of its resources it will allocate to making machines instead of food, is determined by the sum of all social, economic and natural forces at work in it, ranging from a storm in Alberta to a butterfly's dance in Zimbabwe. It is only *because* temporal formulations of Marx's theory are open-ended that they can explain anything other than some hypothetical mathematical world masquerading as a society.

The primal urge for determinateness, once it collides with the real world, meets a basic problem. Unlike the heavens, society, in which we live, is man-made. If it possesses laws, governing our own conduct, they are laws of our *own* making. And, since we made them, we can break them. Unlike the heavens, we possess consciousness. Any such laws, if they exist, therefore cannot *possibly* be determinate.

In like, but kindlier vein, Foley (1997) objects to my own temporal formulation of Marx's theory that

Accounting identities ... cannot by themselves constitute a predictive or explanatory theory, so that Freeman's discussion is inevitably only the first step toward the development of the type of theory he calls for.

This would be a legitimate criticism, if the objective of these identities was to achieve a determinate prediction. But to seek a determinate prediction of a social law of motion is to misconceive, completely, what such laws consist of.

The depths of the problem must be appreciated. Laplace was a founder of modern probability theory. French positivism was not at all averse to formulating its social laws in terms of probability, to escape the problem presented by a completely mechanistic formulation, of individual caprice and variation. To this day schools such as econophysics²³ claim that social laws can be formulated as *statistically* determinate – determinate in the average and if numbers are large enough.

This entire paradigm is wholly inadequate. The problem of consciousness means that social laws cannot even be *statistically* determinate. What social average could be large enough to compensate, for example, for the 'disturbing' effect of World War II or for that matter, the war in Iraq?

The difficulty is not that social laws apply in a loose or fuzzy way, but that at moments of crisis, or in the face of determined conscious political intervention, they do not apply at all. The law, and the suspension of the law, co-exist and at all times constitute a unity that must be apprehended as such. The error in all mechanical formulations, whether of Comte, Laplace, or Farjoun and Machover, is the very idea that a social law can be 'external', that is, that it can be formulated independently of the outcome of conscious human action.

The dichotomy between risk and uncertainty which Keynes's thinking has brought to the fore, is a further reflection of this philosophical fact. To acknowledge that something is uncertain is, in modern, technically-competent capitalism, merely another way of saying that we have the option to change it, but abjure the instruments needed to do so.

The thoroughgoing nature of Marx's differences with positivism need to be appreciated. Throughout his life (Freeman 1999), he held that the market actually *has* to fail, in order to succeed:

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...

²³ ref machover etc.

[S]upply 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 moment in it. (Marx 1975:260)

It is *because* capitalism does not reproduce perfectly that it can reproduce at all. Suppose too many cars are produced. Car prices fall, car industry profits fall, and capital migrates to where more profit can be had. Suppose there is a general overproduction in society as a whole. In that case, since prices are falling, value may be accumulated by simply holding general purchasing power – money, or commodities such as oil or art works which can be expected not to participate in the general fall in prices. Withdrawal of capital from production provokes a ‘correction’ of the general overproduction – generally over a period of some time – and so on.

The critical point is that the market *must* ‘fail’ in order to succeed. Price must depart from value. Individual rates of profit must depart from the average rate of profit. Beyond this, Marx’s astute analysis of money and of the actual process of reproduction reveals, the very existence of money guarantees that at definite points in time, these departures will take the form of actual interruptions to reproduction, when capital withdraws into hoards, firms go bankrupt, unemployment rises, growth slows or becomes negative, and so on – in a word, crisis.

Thus, whilst Marx is frequently associated with the Positivist tradition, as a number of commentators starting with Labriola (1970[1897]) and Lukacs (2000) insistently observed, philosophically and theoretically he comes from an entirely different place. Wells (xxxx) points out, in particular, that whilst he grappled with many of the same problems as Positivism, he adopted a radically different approach and focus. The starting point, and the thread which runs through almost all his writings on capitalism, is that of *human emancipation* – freedom. His PhD thesis was about Democritus, one of the founders of the atomic theory, focussing on Democritus’ concept of the ‘swerve’ – an indeterminate deviation of the atom from its mechanically-determinate course. Democritus specifically introduced this concept to explain the phenomenon of free will.

Marx’s thinking evolved, not out the French mechanical rationalism which gave us the billiard-ball cosmos of Laplace, governed only by the laws of mechanics, but out of the Hegelian discourse on the realm of necessity and the realm of freedom. Marx’s problematic, in essence, was that of ascertaining what humans need to do, in order to become self-determining. His critique of capitalism rests precisely in the fact that, by in effect ‘delegating’ social decisions to the blind forces of the market, humanity places its fate in the hands of alienated economic forces that it cannot consciously control. These take the form of apparently mechanical laws only insofar as, and only for as long as, humanity surrenders its fate to the market.

Capitalism’s ‘Laws’ in short, apply insofar, and for as long as, we do not consciously subvert them. This in turn applies for as long, and insofar as, we leave it to the market to determine our fates.

Marx’s entire goal, in this sense, runs contrary to the stated goals of the Marxists, who perceive his economic theory as a means of *predicting* or *determining* how the economy will behave, regardless of what humans do. His aim is the exact opposite: it is to ascertain those points, and those mechanisms, through which the economy *ceases* to be predictable, opening the door to human agency.

Suspension of law

We have now passed to a feature of Marx’s understanding which, to our knowledge, is unique: crisis *is the means by which* contingency comes into play. Crisis signifies that the

commodity form has failed, in one respect or another, to organise human life. The potential for human self-realisation and action – freedom – becomes actual.²⁴ When capitalism suspends its own purely economic laws, it opens a space for humans. They have two options. They may create a new society founded on different laws. Or, as after 1893 and 1929, they may recreate capitalism on a new basis, following huge destruction. This is capitalist boom.

For equilibrium, in short, contingent factors are the cause of crisis. For Marx, they are the cause of boom.

This exposes more clearly the Achilles Heel of the movement that grew out of Marx's *opus*: it lies in that movement's understanding of the relation between explanation and action, between contingency and necessity. At its core is an utterly inadequate and superficial understanding of crisis itself, which Marx's genius theorised in a way that has never been improved on since. In Marx's thinking, crisis is neither a sudden interruption of normal capitalist life nor an inevitable outcome of iron laws. It is a particular moment in the evolution of an intrinsically self-contradictory system, a system for which, in a certain sense, crisis is an institutionally permanent feature of a system whose nature is to generate very long-term trends such as the fall in the rate of profit and the extreme polarisation of the world producing barbaric – but utterly unnecessary – levels of poverty and inhumanity, whilst accelerating every tendency towards mass destruction such as war and environmental catastrophe.

Such tendencies are not exceptional but normal – they are with us all the time. They are part and parcel of the way in which capitalism develops, and revolutionises, the 'forces of production'. They cannot be divorced from it. What we now call 'crisis' – an event such as the present one – constitutes the moment at which these long-term laws are *suspended* – at which they so undermine the capacity of capitalism to reproduce itself, that conscious class action is called into play, as for example in war or imperialism. or, The unprecedented bailout of the world banking system is an example, though merely an episode in the reshaping of a long-term capitalist response to the present crisis which has yet to emerge.

Marxism, in the past, played such an exceptional role because it informed a class other than the capitalists how *they* could act under circumstances of generalised political failure – at the moments when in Lenin's words, 'the ruling class could no longer go on ruling'. Above all, it informed them how to summon into existence alliances of all those whose lives were put in jeopardy by the persistent failures of the capitalist system, to propose and act on alternative principles of social organisation to those of private property, based on equality, justice, and the conscious management by humanity of its own destiny.

Marx's thinking could achieve this because of two capacities united in a single system of thought. On the one hand, it was capable of comprehending the *laws* of economic motion of society, and on the other hand the points at which, and the ways in which, those laws would be suspended and could be overcome. It specified neither an iron law of history, as it is often portrayed, nor ascribed to the political sphere the capacity to act without any economic constraint. It therefore spelt out the limitations of capitalist political action and the potential of working class action. It understood how, and expressed in the form of economic laws, by delegating the 'daily business of social reproduction' to civil society, to the blind forces of the market, the capitalist class sets insurmountable limits on its own capacity to step into the place of these blind forces when they fail. It identified the only class capable of truly and permanently overcoming these failures, and the necessity for that class to replace blind forces with conscious human decisions. It understood, in a word, the necessity of freedom.

²⁴ I am indebted to Julian Wells for this insight

Part III: boom

Capital worship

Once it is understood that the cause of crisis is endogenous, it ceases to be difficult to explain. It is a normal, natural, product of the course of capitalist development. As Marx clearly reasoned, it is simply part of what capitalism 'is'. The great difficulties encountered by both orthodox and Marxist economics in explaining crisis arise only because of the equilibrium method, which begins by assuming that crisis cannot happen. The real difficulty is to understand the cause of booms.

Discussion about such causes of boom, in Marxism, is not only underdeveloped but significantly misplaced. Confusion arises from a characteristic fetishism I will call Capital Worship. This comprises a one-sided insistence on capitalism's revolutionary capacity to develop productive forces, ignoring the mechanisms through which this capacity is realised. This leads to a systematic blindness towards two key historical facts about capitalism: the structural nature of crisis, and the geographical unevenness of capitalist development – in summary, the fact that capitalist development is destructively uneven in both time and space. In this last section, we will examine the intimate relation between these two. To equip ourselves to do so, however, we first need, as in the study of crisis, to understand where the errors in the existing conception lie

To understand the problem we should focus on three decisive political phenomena of the modern age:

- (1) Backwardness. Development is inseparable from underdevelopment. Systematic poverty and inequality are permanent features of capitalist growth.
- (2) Barbarism. Capitalism has no statute of self-limitation. Whether a capitalist opts for technology, Ponzi fraud, or a slave factory is, aside from the money to be made, entirely an outcome of political, social, and cultural circumstance.
- (3) War. Competition for sources of superprofit draws entire states into play. Colonialism, imperialism, repression and the suborning of whole governments are a down payment on every boom. Revolts and revolutions are the receipts.

In this section, we will argue that these features of capitalist development are not exceptions, anomalies, or historical survivals, but are constitutive of capitalism. It actually *requires* them in order to develop. Capitalist booms, we will show, depend on and arise out of them.

Therein lies the social and moral reason that capitalism needs to be superseded by a different system of social organisation; therein also lies the processes that generate a class, and class alliances, capable of achieving this.

This is clearest in a curious debate which took place in the 1970s, and which Marxism has never satisfactorily resolved: the debate over the 'transition to capitalism'. The centrepiece of this discussion was a celebrated work by Brenner in 1977, directed against the Dependency School's 'Neo-Smithian' Marxism. The title itself makes clear that Brenner considers himself to be defending some kind of Marxist orthodoxy. Although the discussion centred on the transition to capitalism, this was in many senses either a proxy or a war on two fronts. The same errors, Brenner argues, prevent Wallerstein, Gunder-Frank and the Dependency School from understanding the way capitalism develops in its early stages, and the modern causes of poverty and backwardness:

To take the view that development and underdevelopment are *directly* dependent upon, caused by, one another, Wallerstein resorts to the position that both development in the core and underdevelopment in the periphery are essentially the result of a process of transfer of surplus from periphery to core. He must thus end up by essentially ignoring any *inherent tendency* of

capitalism to develop the productive forces through the accumulation of capital (Brenner's 1977:60-61)

The core issue under discussion is whether capitalism in the advanced world *requires* its relations with the 'underdeveloped' or poor world in order to 'develop the productive forces' – in which case, backwardness and poverty are more or less collateral damage, a byproduct of a unfortunate historical accidents.

The essence of Brenner's analysis – which more or less dominates Western Marxist orthodoxy – is that, above all once capitalism has reached the stage of 'relative surplus value', of the great revolutions in productivity which fed the historic booms of the 18th and 19th Century, it is no longer dependent on any external source of support and, in particular, does not depend on the existence of 'pre-capitalist' forms of social organisation such as serfdom, slavery, forced labour in general or by implication – at the top end of the hierarchy – on landlord, monarchic or aristocratic classes. The development of capitalism is thus presented as a more or less uninterrupted boom which is 'self-feeding' – the expansion of the productive forces generates 'more and more' surplus and 'more and more' demand for machinery, in an essentially uninterrupted virtuous circle.

There are only two problems with this view: it is in conflict with the facts, and it is based on an erroneous theory.

Its conflict with the facts do not lie in the minute details of the historical relations in France, Eastern Europe or the colonies, on which I have no doubt Brenner's historical expertise is greatly superior. It lies in the 'big' fact that throughout its history, and right up to the present day, the growth of capitalism in the metropolis – particularly in its periods of relatively rapid expansion – have been unequivocally associated with the expansion of its overseas economic activities, with the intensification of its military interventions, with the barbarisation of social relations in the affected populations, and with an increased polarisation of the world. There is, as with capitalism's long declines, a fundamental conflict between what almost anyone can see with their own eyes, and what 'Marxist' theoreticians predict. If the colonies served no purpose and played no role in Britain's phenomenal rise to world economic ascendancy, what were they for? If the 'New Imperialism' had no bearing on the *Belle Epoque* boom of 1890-1914, why did the Great Powers do it? And as we have seen, the idea that World War II had no connection with the postwar boom simply does not stand up to the most cursory examination.

There is a clear connection between capitalism's overseas role, in which it essentially re-organised the pre-capitalist relations it encountered during its expansion to finance and lay the basis for its domestic expansion, with a combination of direct force and economic *Raubbau*, is attested by many historians. Most of all, however, it was the view of Marx himself:

Colonial system, public debts, heavy taxes, protection, commercial wars, &c., these *children of the true manufacturing period, increase gigantically during the infancy of Modern Industry*.... Whilst the cotton industry introduced child-slavery in England, it gave in the United States a stimulus to the transformation of the earlier, more or less patriarchal slavery, into a system of commercial exploitation. *In fact, the veiled slavery of the wage-workers in Europe needed, for its pedestal, slavery pure and simple in the new world.* (*Capital* Vol 31:915)

I have emphasised phrases which refer to the high points of capitalist growth because of the frequent misconception that Marx here discusses only so-called "precapitalist" relations.

Four circumstances have preceded every actual boom so far:

- (1) a massive devaluation of capital stocks;
- (2) a major re-absorption of the pauperised reserve army;

- (3) the centralisation of accumulation in a tiny number of geographical centres;
- (4) A global, *political* mobilisation of profit into these centres from all available sources

The Schumpeterian tradition treats these as consequences of boom. Trotsky (Day 1981) first noted that historically, they are preconditions. The postwar boom was launched in a world map redrawn under American leadership.²⁵ The ‘Belle Epoque’ boom of 1893-1914 was launched by imperialism. And two Industrial Revolutions were rooted from beginning to end in colonial expansion.

This brings us to the two sources of Marx’s superiority on which we the rest of this article will focus. The first is the category of superprofit, and the second is his analysis of the non-commodity and semi-commodity relations which capitalism transforms and raises to new levels of barbarity.

What constitutes an economic factor?

In history, there generally held to have been four major decades-long expansions of the type which Marx and the Marxists treat as ‘typical’ of capitalism. These have a number of features in common of which some are:

- (1) exceptionally high rates of average growth, lasting over 2-3 business cycles;
- (2) high rates of employment
- (3) rapid expansion of new and pervasive technologies such as water power (first industrial revolution), steam, coal and trains (second industrial revolution); steel and electrical power (Belle Epoque)

The causes of such ‘surges’ are hotly debated among the Schumpeterians where, however, the main discussion centres on the role of technology and potential ‘automatic’ mechanisms which this might give rise to.

Yet it is empirically evident that in every case, such booms followed conscious political, social and economic action of states and class organisations. The first industrial revolution followed in the wake of Britain’s colonial ascendancy, its defeat of Dutch, Spanish and Portuguese naval power. The second followed the Napoleonic Wars and the 1848 revolution. The third was preceded and accompanied by the ‘New’ Imperialism, and the colonial division of the world’s surface; the fourth followed fascism and World War II.

Within the Marxist canon in general, the realm of political action that accompanies such events is treated as ‘superficial’ or superstructural. Trotsky even deploys these terms ironically in the quotation given above. Yet for Marx, the concept of base and superstructure is not reserved, in the main, to distinguish the economic from the political, but to distinguish the sphere of material being from the sphere of ideas – culture, laws, and so on.

Superprofit

Why? The explanation comes from Marx’s most decisive economic category – superprofit, a profit above and different from the average. As Mandel (1974:75-107) notes, this is for Marx (1991:373) the driving force of capitalism.

Neoclassical theory dismisses superprofit as “rent-seeking”. Equilibrium Marxism cannot define profit at all unless its rate is everywhere equal. But for Marx, the profit rate cannot possibly be equal.

²⁵ Even then, the additional spur of the threat from Russia and China was needed to impose discipline on the US’s fractious “partners”

This may make good a temporary shortage. It may also innovate, yielding a “technical” superprofit by producing something for less than its ruling market prices. In either of these cases, it will help ensure that reproduction continues.

But there is no necessary reason this should happen. The capital may go where social conditions permit low wages, long hours or for that matter, forced labour. It may go into drug-dealing or speculation. In a slump, it migrates to money-holding.

A boom arises only when technical superprofit – one particular form of it – becomes self-reinforcing. The demand for machines themselves, as Schumpeter notes,²⁶ becomes a driver of growth. Capital Worship supposes this apparently magical expansion is limitless.

First, however, the boom *itself* creates its own limits, as the rate of profit falls – exactly as figure 1 shows. And secondly, takeoff is not automatic. If technical innovation alone is could produce a boom, why did ICT produce only the dotcom bubble instead of a golden age? (Freeman 2001) Booms have preconditions. Investment must yield a sufficient return, possess enough initial capital, be sufficiently assured of markets, and find itself sufficiently free, to commit massively.

a deep and unrecognised economic consequence of his conception of value as the product of labour, namely, an absolute limit is set on the value at the disposal of world capital which is *not overcome* by technical advances, no matter how much these increase the physical mass of products available to us. All social relations, under capitalism, are therefore subjected and subordinated to the law that *whatever is appropriate by one capital is lost to another*. If, therefore, there is a prodigious growth in the value product of British, German, or US capital, this *cannot be because the British, German or US labourer has become more productive*. It *must* be because that value has come from elsewhere in the world capitalist system. Capitalist expansions are therefore, indeed funded and supplied by value transferred, by one mechanism or another

The state

What actually underlay the phenomenal growth of the US profit rate which raised it to its 1946 heights? Since we are now passing through a crisis of 1929 dimensions, I hope my readers will agree that this is probably the most important question of contemporary social and economic theory today. This recovery underlay virtually every relation of the world economy today to which any commentator refers. It is the unstated premise of virtually every modern work on the development of the world economy. Yet, enquiries into how it happened are few and far between.

We should begin with a discussion of invested capital stock. This is critical because it is the denominator in the rate of profit equation. According to the physicalist conception of Marxism Without Marx, there is only one way that invested capital stock may fall, namely, the liquidation of physical stock.

This is equally important: the same relation is under study whether the profit rate rises or falls: the 1939 recovery *also* expressed the fact that the basic determinant of the rate of profit is capital stock, not the rate of exploitation. The 1939 recovery was indeed, the outcome of a massive devaluation of invested capital stock.

Appendix: temporal and general equilibrium approaches

Technically, suppose that a is a vector of externally defined or ‘exogenous’ variables such as technology or consumer preferences and let x be a vector of ‘endogenous’ variables which the theory will predict – prices, and quantities produced and consumed. A fully general temporal formulation of the economy’s movement can be written

²⁶ See Perez (2002) who also offers a reasoned account of booms within the Schumpeterian tradition

$$x_t = f(x_t, a_t)$$

that is, the economy's state at time $t+1$ is some function (given by the economists' model) of its state at time t .

An equilibrium formalation relies on a general theorem of mathematics which tells us there is at least one value of x – let us call it x^* , with the property that if the economy is in state x at time t , it will also be in the same state x at time $t+1$. This is sometimes called its 'fixed point' An example of a fixed point is the position of a pendulum at rest. This equation can be written

$$x_t^* = f(x^*, a_t)$$

General equilibrium asserts that (for those cases that occur in actual economies)

$$x_t = x_t^*$$

or that x only diverges from x^* by some small and neglectable amount which, crucially, does not grow over time.

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