Crisis and 'law of motion' in economics: a critique of positivist Marxism

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Abstract

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This paper restores the concepts of freedom, consciousness, and choice to our understanding of 'economic laws', so we may discuss how to respond to economic crisis. These are absent from orthodox economics which presents 'globalisation' or 'the markets' as the outcome of unstoppable forces outside human control.

They were integral to the emancipatory political economy of Karl Marx but have been lost to Marxism, which appears as the inspiration for mechanical, fatalistic determinism. This confusion arises from Marxism's absorption of the idea, originating in French positivism, that social laws are automatic and inevitable.

The article contests the organizing principle of this view: that economic laws are predictive, telling us what must happen. Marx's laws are relational, not predictive, laying bare the connection between two apparently distinct forms of appearance of the same thing, such as labour and price. Such laws open the door to democracy and choice, but do not unambiguously predict the future because what happens depends on our actions.

The commodity form conceals these laws, disguising the true social and class relations of society. Accumulation, however, undermines the circumstances that permit the commodity to play this role. The result is crisis, defined in this paper as the point when the blind laws of the commodity form are suspended and open political forces come into play.

In past crises, capitalism has restored the rate of profit through such destructive interventions as imperialism, war, and fascism. Economic laws, properly defined, offer society the real choice of alternative outcomes from crisis.

Keywords: Crisis, Rate of Profit, TSSI, Marxism

JEL codes: B1, B14, B3, B5

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1. Introduction

This article seeks to restore the notions of freedom, consciousness and choice to our understanding of ‘economic laws’, placing discussion about responses to economic crisis on a rigorous foundation. These concepts were integral to the emancipatory political economy of Karl Marx. They have been lost, I will argue, to mainstream political economy and also to Marxism, which is, with great irony, cast as the originator of the opposed notion of mechanical or fatalistic determination.

This is the result of two substitutions for Marx’s own ideas. As TSSI scholars (Freeman 2010, Kliman 2007) have established, modern academic Marxism has replaced Marx’s value theory with a re-interpretation casting it as variant of general economic equilibrium. This misuse, I suggest, accompanies an even broader misreading of his concept of economic law, imported from *French positivism.* The idea at stake is that society is governed by deterministic laws in which the actions of humans, and above all the collective choices of society, do not figure.

To clarify the extent of this misreading, I will distinguish a ‘relational’ law, for example that the magnitude of value is equal to the time of labour, or that profit is equal to surplus value, from a ‘predictive law’, for example that the crisis will end next year. The law most widely associated with Marx – the tendency of the rate of profit to fall – is widely read by Marxist scholars as predictive. I will argue that instead it expresses a relation in time: the rate of profit will fall for as long as capitalism accumulates value. It yields no prediction independent of what classes, states and nations *do*. This explains why it has been reversed several times, and also why the human cost has been so great; since accumulation is the means by which capitalism exists, when it is suspended, society can only be kept in existence by suppression or transition to something else. It took fascism and war to recover from 1929; recovery from the Great Depression of 1873-1893 and the crash of 1893 was achieved by imperialism. This law, hence, expresses a relation between action and outcome. It permits us to identify actions that can avoid the destructiveness of the last two ‘solutions’.

Marx’s signal achievement was to make transparent the central relational laws of our economy – such as those relating price to labour, and income to property – allowing society to grasp the link between what it chooses to do, and what happens as a result. This is a deeply emancipatory project: knowledge, for Marx along with the enlightenment tradition, is the means to freedom. Capitalism however conceals the true relation between our actions and their outcomes within the commodity form. The systemic consequences of individual decisions therefore take the illusory form of automatic laws which Marx sought, in his own words, to ‘lay bare’.

This endeavour stands in diametric opposition to the *Weltanschauung* which dominates modern thought and particularly neoliberal and even liberal thinking which view the workings of the economy as inevitable and outside human control – paradoxically in view of their nominal emphasis on freedom, to which we shall return. The best-known modern expression of this outlook is the portrayal of 'globalization' as an unstoppable process driven by the growth of trade, communication and travel. Its distinctive feature is inevitability. Its apostles discuss only whether it is good or bad; opponents are cast not just as morally wrong but *illogical.* Since it is going to happen in any case, it 'makes no sense' to oppose it: it would be like calling for the repeal of the law of gravity.

Two options are excluded. I will show they are two sides of the same coin. The first is the possibility of *endogenous self-contradiction*: that 'globalization' – or capitalism, or indeed, accumulation – may damage the conditions for its own existence, hence containing the seeds of its own destruction. The second is possibility that human agency may alter anything significant. Though communication, trade and travel are all peculiarly human and social by their very nature, their history is presented as an alien, inhuman force. These two failures are coupled in the analysis – or rather, lack of analysis – of *crisis*, which is the moment at which self-contradiction creates both the necessity for, and possibility of, a transition to something else.

Above all else, this idea dominates modern thinking about the economy. With the crisis, discussion on the joys of globalization seamlessly gave way to a moral panic about government spending. Country after country fell victim to a régime of retrenchment whose burden fell on working and above all poor people.[2] At first sight the grounds of the discussion had shifted. Following globalization's unexpected but not unpredicted (Freeman 2004) demise, government and even nations re-entered, stage right. Yet a shadowy figure stalks the corridors of power. True, it is said, we may be foolish enough to give destitute people a place to live, or let workers retire with fifteen entire years of life ahead of them – but, if we do, we will be punished. By whom? The markets. So, it appears, there never was a choice – the 'markets' have already decided what must be done.

A deep, persistent intellectual flaw, perhaps the most characteristic of the new Spenglerian age, underlies under both discourses. We, the people, made the institutions that are said to rule us. They are a product of our consciousness. It is literally absurd to assert that we cannot consciously shape or override them. It violates rational use of the word 'conscious'. Yet society has lost the intellectual capacity to think in any other way. 'Economic necessity' is like a construction of Orwell's Ministry of Truth, in whose invented language 'Newspeak' the very notion of social change could not be stated in words.

This was concealed, but never really overcome, by positivism's Austrian descendants like Hayek, who posed as champions of freedom by defining economics as the science of individual choice. It appears paradoxical that they were so often found on the side of tyrannical practices such as Pinochet dictatorship. But it is no paradox; their device leaves no place for *collective* freedom – the action of classes, states, nationalities, social movements, in fact any agency through which individual freedoms are actually realized. Hayek articulates the ideological opposition of wealth-owners to all forms of collective power other than their own. The market is 'theirs' and neither the rigid hierarchies of the corporation, nor the power of finance, is seen as an intrusion on freedom. Hostility is reserved for the state, the trade unions, and all forms of class organisation except those which uphold property and 'order'. The laws which still lie at the heart of the mythical world of neoliberal theory live outside the reach of collective intervention, that is to say, democracy. It is anathema that a people may choose to implement universal social rights; the market is the only permissible expression of collective will. So that a privileged half billion can afford health, food, and security, twelve times their number go sick, hungry and fearful. This, our world calls 'freedom'.

Marx made rigorous the enlightenment intuition that individual freedom rests on democracy, Marxism then evolved the different, alien notion that freedom means submission to 'laws of history'. Defending neither collective, nor individual freedom, nor even their mutual dependence, it has written itself into history as a champion of abstract necessity against free human action.

2. Positivist Marxism's poisoned chalice

The appearance of determinism in Marx's theory is reinforced, superficially, by his own writings. Is not the very notion of 'economic law' Marx's own? Did he not write (1992:92) that

> 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.

Is not his value theory 'all about' the 'determination' of prices and values? So, is his message not that we must recognize the forces shaping our destiny, embrace them, and obey them? Is freedom not, as Engels famously wrote, the 'recognition of necessity'? This fatalistic reading makes nonsense of his passionate involvement in the First International, his writings on politics and history and above all the equally famous Eleventh Thesis on Feuerbach (1972): 'Philosophers have hitherto only interpreted the world in various ways. The point is to change it.' Consciousness, and human action, are integral to Marx's concept of historical determination, springing from the Hegelian discourse on freedom and necessity which was the starting and end point of his philosophical journey.

The idea of 'iron' or 'inevitable' economic and social laws came into Marxism by a different route; via the rationalist tradition of the French revolution which transmitted itself into national workers' movements through leaders like Lassalle. It then evolved into what is variously called technical determinism or mechanical materialism (Coletti 1985, Labriola 1970, Lukacs 2000).

This doctrine was articulated quite late in the history of the enlightenment by Auguste Comte (1798-1857), who named it positivism. Confusion surrounds this word nowadays, which is why I refer specifically to 'French' positivism. It is reduced to the idea of using numbers or mathematics or even being exact. It gets confused with the logical positivism of the Vienna Circle (Stadler 1998), to which 'positive economics' can be traced. It is neither. Reduced to its essentials it is the notion that human life is governed by *externally defined abstract law*, as Comte (1856) explains with admirable clarity:

> To understand this economy aright, we must remember that it embraces not merely the inorganic world, but also the phenomena of human life, [which] 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.

Since our actions are all completely determined, all 'bad' things that occur can only be the result of our ignorance of the true laws of our destiny. Therefore, our task is to discover what those laws are, and obey them. This is explicit: Comte, above, states that the task is to 'recognis[e] our subjection to an external power'. He was equally explicit on the religious subtext, founding a 'religion of humanity' (Comte 1851-54).[3]

Though Comte's direct influence has faded such ideas are among the most influential of our age: How many victims have been claimed by the god of 'progress' and its cousins, the civilizing mission of imperialism, the superiority of the Western way of life, and our general contempt for any who do not fit modernity's arrogant self-image? 'Development', given birth in the archetypal vision of Walt Whitman Rostow's (1960) *Stages of Economic Growth* exacts an equally high price, reducing the economic choices facing poor countries to a pre-ordained course of historical development whose exemplars are the very countries that produce and maintain their misery.

Bourgeois enthusiasm for such ideas should come as no surprise. More surprising is the position of Marxism, which appears as the inspiration and origin of what can only be described as morbidly technicist fantasies. Its fatalism extends, in a different direction, to many leftists, in the idea that capitalism has no way out of crisis. However its dominant expression is Marxism's most characteristic positivist product: the academic current I term 'Marxism without Marx' (Freeman 2010). Within the general equilibrium interpretation it has foisted on Marx, it is impossible to formulate the idea that capitalism generates contradictions from within itself; that the rate of profit may fall, that the market may increase inequality between nations, that capitalism may fail to generate sufficient demand to call forth the continuation of accumulation (see Desai 2010 in this volume), or even that circulation may be interrupted by hoarding money.

This gives rise to a further paralysis. Unable to diagnose how capitalism can generate crisis, Marxist discussion is almost devoid of ideas on what to do about it. There is, virtually, no such thing as a 'Marxist response to the crisis'. I have suggested such responses elsewhere (Freeman 2009a) but it is not the purpose of this paper to repeat them. Here, I wish to show that by reclaiming Marx's theory, recognizing choice within it as an irreducible element, society may choose between all possible responses, identifying those actions whose outcomes are demonstrably consonant with their intentions. I claim, in short, that Marx, properly understood, offers an economically rational theory of political action. This is the most consistent interpretation of the famous dictum that opened this section.

3. The object of study: society in crisis

I do not claim that this project is simple. The difficulty lies in a contradictory fact at the centre of the problem that (present-day) Marxism fails to address: capitalism's inner laws express themselves in two apparently different ways during booms, and during crisis.

In the run-up to a major crisis, for periods lasting years and sometimes decades, the contradictions of capitalism express themselves as blind laws of motion, outwith human control. They *take the form* of apparently natural laws – a long, slow decline in the rate of profit, the inexorable separation of rich from poor nations, and so on. But at the point of crisis, and after, these accumulated failures burst out into the open and the very failure of the market brings explicit, conscious class action into play, creating the conditions to overcome these accumulated contradictions, whether using the retrograde measures of the capitalists, or by opting for superior ways to organize society. Class interests then come out into the open. Savage attacks on working and poor people in austerity budgets contrast with refusals to exact any price from the bankers and investors who caused crisis. Classes and nations are drawn into a maelstrom of ever more open political conflicts – as in Greece, for example – involving all the institutions they create or rest on, be they states, banks, corporations, armies, social movements, or indeed, riots. Capitalism's laws take the form of a battle of class forces. The meaning of 'law' mutates into its legal, juridical sense of laws passed by a government or imposed by a people.[4]

I previously (Freeman 2003) approached this with the idea that crisis is 'endogenous' – caused by factors internal to the workings of capitalism – but that exit from crisis is 'exogenous', depending on conscious action. Political economy itself establishes this very division in counterposing the 'political' to the 'economic' sphere or indeed to 'civil society'.

Should we then suppose that capitalism has two sets of laws, the one blind and economic, the other conscious and political? I wish to argue for a dialectical approach: for an *Aufhebung*, a synthesis, of two ideas of 'law' whose opposition, from a higher conceptual standpoint, arises from the one-sided understanding they offer when isolated from each other. This is not out of fanciful notions that it sounds erudite or looks good in a seminar, but because the object of study is the same: namely, capitalist society; specifically, capitalist crisis. Moreover, as this object evolves, the two aspects of economic law do not separate out neatly like magnetism and gravity so that each can be studied in isolation, 'government' on the left and 'markets' on the right. In a certain sense, the positivist error consists in the illusion that this separation is possible. Its illusory character is, I think, a key point in Marx's own critical understanding: capitalism's nature is to conceal its own operation from its agents. The very notion of an 'invisible hand' perfectly expresses this idea. Let us interrogate it, since it is the key to the synthesis we require.

Marx characterizes capitalism from the outset as *Ein ungeheure Warensammlung* – a monstrous collection of commodities. Mandel (1974) specifies capitalism as 'generalised commodity production' – a society which organises all, or nearly all, social relations through commodities. Marx's analysis of alienation and fetishisation focuses on the fact that in the commodity, the true nature of social relations is concealed, or rather, appears in an illusory form. It appears that I exchange an egg for a piece of paper; actually, I am taking part in an association of labour and gratification linking me to the farmer, the drivers, and the retailers, every bit as material as when my family sent me to the backyard to collect the material product of the hens' domestic labour.

Society's laws of motion become the laws of motion of the commodity form. But precisely because that form conceals these laws, they appear as blind and external. For this same reason, it is in crisis that this concealment falls away, not only in perception but also in practice. Because, and to the extent that, the commodity fails to organise social life, overt class agencies take its place.

These are not two different laws. The object of study – society – is a single entity, and cannot be split into two 'parts', one conscious of itself and the other inaccessible to that same consciousness. A concept of the 'laws of economic movement' has to subsume both the blind workings of the commodity form and the explicit action of class, nation, and state. I will argue that this renders, far more accurately than any positivist interpretation, Marx's own idea of 'law'.

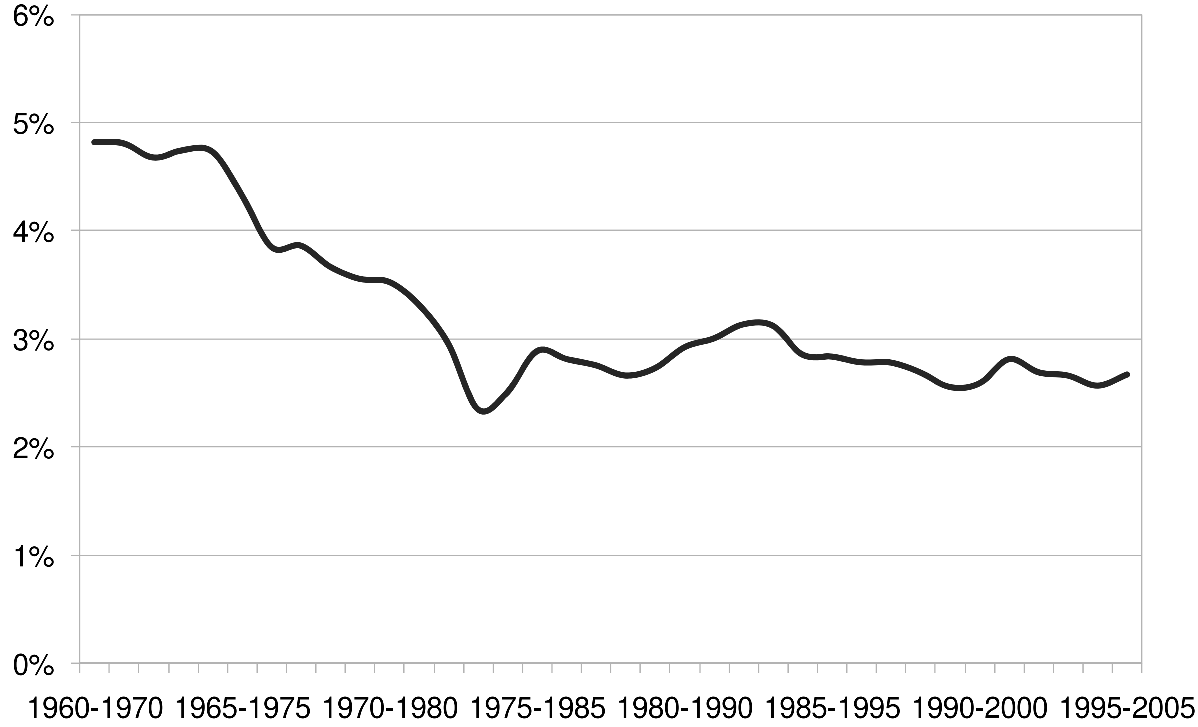
Crisis itself is also an object of study. It is a regularly-recurring moment of accumulation. It is not an accident, a 'deviation' or a surprise; it is constitutive of capitalism. I will criticize the popular notion that crisis is abnormal or unrepresentative of capitalism. After forty years of more or less continual decline, we have every right to conclude that the reverse is the case. An integrated conception of the law of accumulation must therefore apply at times of crisis as well as boom. Crisis is a specific phase of accumulation when relations between action and outcome become transparent and political action becomes a primary determinant of economic movement. This is, in fact, the most appropriate and rigorous way to define a 'capitalist' crisis. It is not just a monstrous collection of problems; it is that point when capitalism's normal mode of existence as a 'purely economic' means of reproducing society gives rise to intractable failures of governance.

This is of course an oversimplification; capitalism can be understood during booms, though less people do so, and they have less influence. During crisis, truth always remains to some degree concealed. However, in crisis, class relations are *clarified*. Choice is then posed in the following sense: its outcome depends not only on who takes the streets with greatest determination and force but on how well the actors formulate, and understand, the true choices before them. In crisis, above all, *consciousness* rises; this is the soil in which the seed of freedom can be planted. We seek a concept of 'law' that can water that parched flower.

4. Does capitalism have laws?

Does capitalism have any laws at all? I will briefly summarise the empirical evidence that it exhibits the two main features just described – endogenous, concealed, but self-contradictory decline, alternating with exogenous and explicit political reconstruction. The most recent 'long boom', widely recognized in the literature, originated with the phenomenal resurgence of the US economy during and after the war, following the prolonged depression of 1929-1941. Both the depression and the boom, were worldwide phenomena.

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

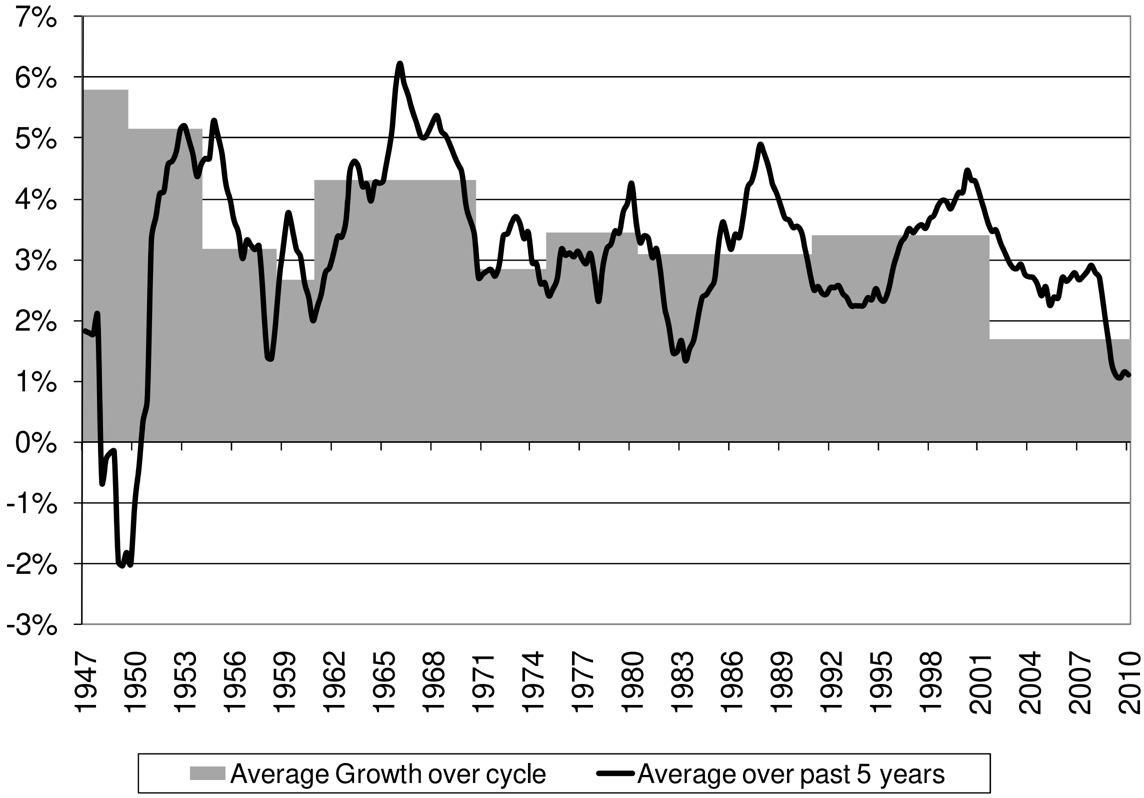


Source: IMF (World Economic Outlook); Groeningen RuG project, German national accounts, author's calculations

It is more controversial, although widely recognized, that this boom ended around the end of the 1960s with no comparable resumption of growth. Since then, the overall movement of the world economy, particularly the US economy, has seen a more or less protracted decline with lower growth rates, increasingly explosive financial crises, decreasing capacity utilization, and rising unemployment.

Chart 1 illustrates the basic point, showing the long-run trend of growth in world GDP since the war. Chart 2 presents the same indicator for the US economy, for which longer run figures are available. Cyclic variations can obscure the overall downward trend; however, two facts make it reasonably difficult to claim it is absent. First, each successive major peak of the long-run moving average is lower than the last. Second, average growth over the business cycle, as defined by the National Bureau for Economic Research (NBER), has been systematically lower since 1970. It is just possible to interpret this, with Duménil and Lévy (2004), as a double boom with a trough in 1974 and a new peak in the neoliberal years. But this stretches the fabric of evidence close to tearing point: in no cycle since 1961-1968 has growth risen above the average of the whole of previous period; and growth before 1968 only briefly, between 1953 and 1961, fell below the highest post-1968 point.

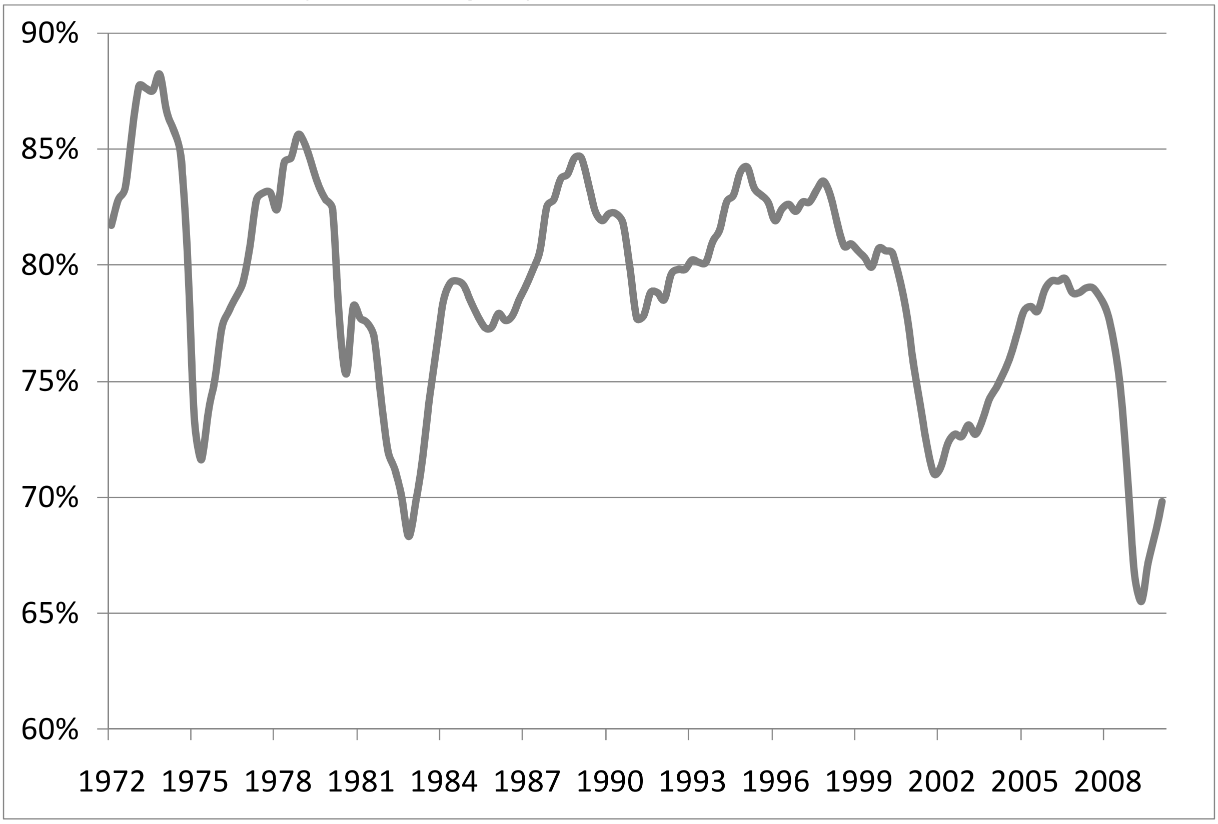
Chart 2: Growth rate of US real GDP



Source: US Bureau of Economic Affairs NIPA table 1.1.6 US GDP in chained 2005 USD

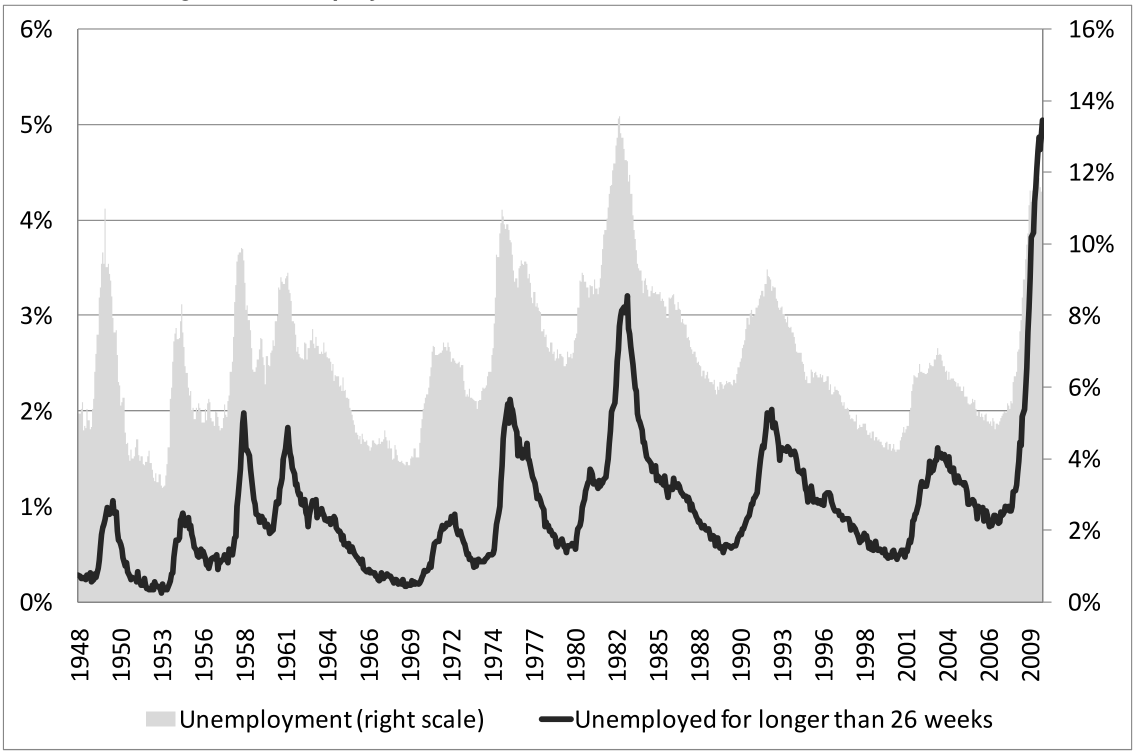
The pattern of decline becomes even clearer when the picture is completed with further evidence. Chart 3 shows the long-term decline in industrial capacity in the US since at least 1973. Chart 4 illustrates the relentless growth in unemployment, most critically long-term unemployment – the best indicator of the reserve army of labour – which is now nearly twice the rate of any other postwar year and significantly higher than the 1974 peak.

Chart 3: US manufacturing industrial capacity



Source: US Bureau of Economic Affairs, series CUPM, quarterly, seasonally adjusted

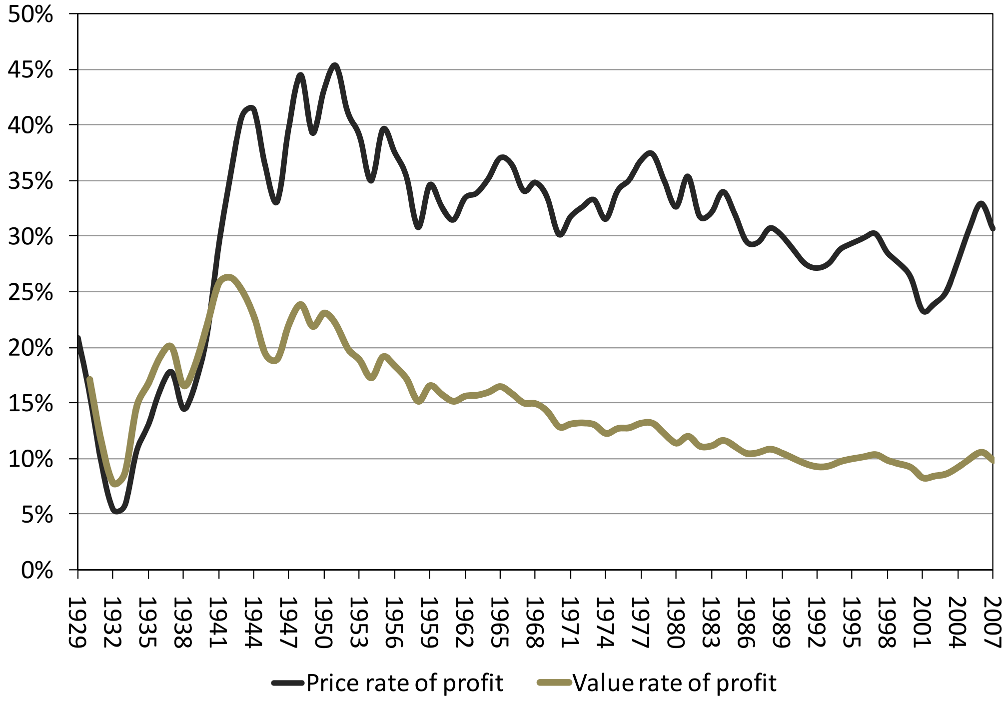
Chart 4: US long-term unemployment



Source: US Bureau of Labour Statistics, CPS (household) unemployment monthly, seasonally adjusted

Finally chart 5 from Kliman (2010a) shows that the profit rate of the US economy, either in value or price terms, has trended downwards since the war, at no point returning to anything remotely resembling its postwar peak.

Chart 5: US profit rate



Source: Kliman (2010a)

Is this decline a unique event? Have similar things happened before? Most certainly. Long declines follow every expansive boom like the *Belle Époque* of 1893-1914 (C. Freeman 1995) and the Golden Age of 1942-1968. They have a lawlike character; they last a long time covering at least two industrial cycles, during which they show no serious sign of stable or permanent reversal. Each such crisis exhibits a long period of depressed growth, high unemployment and falling prices affecting the whole capitalist world. 1873-1893 was widely referred to (Krugman 2010) as 'The Long Depression'.

Their endogenous nature is almost undeniable. The very fact that they happen regularly – at least four times since the industrial revolution – suggests they share some common feature. This makes it hard to blame the crisis on allegedly new phenomena like 'financialisation' and exposes the difficulty facing Brenner (1998): having ruled out Marx's 'Malthusian' explanation, he has to resort to behavioural explanations, for example some special form of competition after the war. This may or may not explain the present decline. Does it explain 1929? Or 1873? Similar problems beset Krugman's (2010) diagnosis that 'this third depression will be primarily a failure of policy'. When a historical event of this scale repeats itself three times, under entirely different circumstances, something beyond policy is at work.

It is also hard to sustain that this common feature is political or governmental, precisely because of the immense variety of political circumstances involved. The very longevity of these declines means that such 'exogenous circumstances' change repeatedly. And finally, the depth of those measures that do finally bring them to an end, suggests that the forces producing them are deeply embedded in the nature of capitalism – that, in Marx's (1991:350) words, capital 'comes up against a barrier to the development of the productive forces which has nothing to two with the production of wealth' which 'comes into a conflict at a certain stage with the latter's further development.'

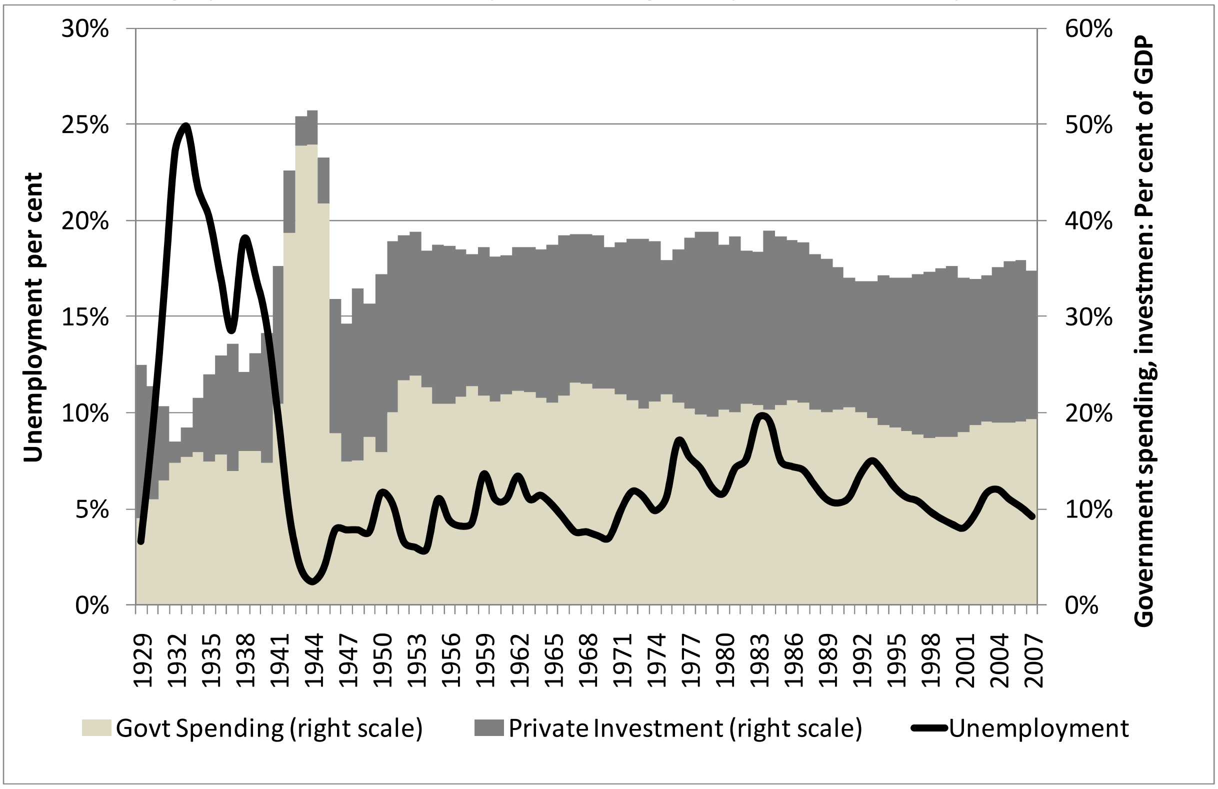
5. How do crises end?

Must such declines go on forever? A significant left Marxist trend held this view and still does. The theory of *Zusammenbruch* or inevitable collapse, associated (probably unjustifiably; see Zarembka 2003, Kuhn 2007) with the work of Luxemburg and Grossman, was endorsed by a significant section of the left Russian workers' movement, and strongly influenced Council Communism. The tendency to predict crisis as inevitable and unstoppable persists today. I think it is however mistaken.

The residual positivist influence it expresses is nevertheless decisively different from both neoliberal positivism and that of Marxism Without Marx. The latter are celebratory and apologetic, ascribing to capitalism miraculous powers it does not have. Left positivism overstates capitalism's difficulties. The main political risk is fatalism – since capitalism is in such an awful mess, the conclusion is easily drawn that it will collapse of its own and we can build socialism on its bitter ashes. There has never been an unstoppable crisis, and there are no historical or rational grounds for supposing that one will occur in the future. The profit rate *was* restored, and the Great Depression *did* come to an end. Given the havoc this 'restoration' inflicted, the idea that one should do nothing except prepare for socialism comes suspiciously close to consent to its barbarism.

However – and this is a very big however – recovery is not automatic. Even a cursory study shows that reversals from major crises are achieved by conscious and, indeed, brutal 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, but opposed, world victories of the US and the Communist Powers.

Chart 6: Unemployment, investment and government spending in the US economy 1929-2007



Sources: US Bureau of Economic Analysis NIPA tables; VanGiezen, and Schwenk (2002)

The postwar boom was launched neither by the New Deal nor the Great Depression, but by World War II. 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 was a level of state involvement in the economy never since seen – reaching nearly half of GDP by 1943. The threat of communism spurred not only German and Japanese reconstruction but the Welfare State itself, while war completely re-organised the map of the world, breaking the colonial domination of the European powers and opening the world to US exports, whilst tooling up US productivity, reportedly, to three times that of Britain. The postwar boom was, in short, exogenous.

Any conception of 'economic' law as purely mechanical is, hence, not merely theoretically misguided but directly contradicts the facts. Mainstream theory and Marxism are, I believe, looking through the telescope from the wrong end. The issue is neither 'Will the crisis go on forever?' (it won't) nor 'Will it end on its own?' (it won't) but 'what ways out are there, and what is their price?'

6. Predictive and relational laws in economic theory

To answer to the questions just posed, we must return to theory. I begin by distinguishing between 'relational' and 'predictive' laws. These correspond approximately to the two main headings under which economics studies regularity, though I will attempt more precision in their definition.

Relational laws are usually termed 'identities', of which the most famous is the national accounting identity Y=C+G+I+(X-M). It is drummed into undergraduate macro students that this does not tell us whether society will invest, consume, import, or export. It simply asserts an arithmetic identity: the value created each year is equal to the total usages made of that value. Relational laws may be false, for example Say's law, usually formulated as 'supply creates its own demand'. This shows a relational law is not void of content, nor even in the strict sense a tautology. If identities were tautological by nature, there could be no such thing as a false identity.

Predictive laws are sometimes discussed as behavioural laws and sometimes as laws of motion. In either case they are called on to calculate the future state of the economy. To many, forecasting is the true arcane business of economists, whose job is to tell us how much wealth and employment the economy will create, just as a weatherman is supposed to tell us when it will rain.

To most Marxists, Marx's 'law of motion' is predictive: it tells us what will happen next. This is what I wish to challenge. To get at the problem, I will interrogate the notion of 'automatic' recovery, beginning from the surprisingly modern subject of cycle theory. This little-known branch of mainstream thinking, integral to the way it neutralized the concept of crisis, has occasioned little Marxist critique.

Until really quite late in the nineteenth century, all interruptions to economic growth were perceived as a crisis – anomalous, threatening and unexpected. Marx, in moving from *Grundrisse* to *Capital,* began speaking of the 'industrial cycle' (Chapter 15 vol 1 p283) where he had previously spoken only of 'commercial crisis' or 'money crisis'. At the same time, the French Economist Clément Juglar (1862, 1915, see also Besomi 2005) wrote what has since become, more or less, the definitive account of what is now called the business or trade cycle. Research culminated in the work of Wesley Mitchell (1927), founder of the NBER, and was marked by a wide-ranging interwar debate involving Hayek (1933), Keynes, and many Russian Marxists (Day 1981) notably Maksakowski (2004) whose work has only recently become known in the West.

Marx and Juglar are often credited with the contemporaneous 'discovery' of the business cycle; yet their concepts of it diverge markedly. For Marx, the cycle, though regular, nevertheless manifests itself in crisis:

> The life of modern industry becomes a series of periods of moderate activity, prosperity, over-production, crisis and stagnation. The uncertainty and instability to which machinery subjects the employment, and consequently the conditions of existence, of the operatives become normal, owing to these periodic changes of the industrial cycle. Except in the periods of prosperity, there rages between the capitalists the most furious combat for the share of each in the markets. This share is directly proportional to the cheapness of the product. Besides the rivalry that this struggle begets in the application of improved machinery for replacing labour-power, and of new methods of production, there also comes a time in every industrial cycle, when a forcible reduction of wages beneath the value of labour-power, is attempted for the purpose of cheapening commodities (Marx *op cit*)

This cyclic movement is therefore an expression of a more intractable problem: capitalism undermines the conditions for its own existence. The overarching, primary cause is capitalism's persistent tendency, most clearly manifested in the falling profit rate, to accumulate without reproducing the social and economic conditions required for it to function as capital. This produces a series of more or less serious, and never entirely predictable, explosions. During this process, the conditions for supersession by a new state of society mature and accumulate, bursting out eventually in social and political convulsions – for which the working class must prepare by developing organisations capable of taking over society and transforming it.

From Juglar a rather different idea emerged: the cycle was a natural and even desirable feature of capitalism. An important adaptation of the rather implausible 'laws of evolutionary motion' sought by the classical economists took place. '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,' writes Besomi (2010:1) 'The champion of this view is, as is well known, Schumpeter, who propagated it on several occasions.'

Cycle theories became particularly attractive, above all in times of economic crisis, because crisis is empirically difficult to reconcile with the notion of unilateral progress. Evolutionary laws by their nature encounter crisis as an interruption. They assert a continued and unidirectional movement; for example the long-run trend of world population growth, or that capitalism indefinitely raises productivity. Yet any allegedly evolutionary law may be interrupted. The Black Death, it is generally accepted, set back European population growth by over a century. In a recession, output growth halts. Has the potter's hand then shaken?

Economists at least are not in the habit of reporting that any such law is untrue. They tend to say is that it has been interrupted, as one would say about gravity, when a falling object hits the ground. What excites their interest is, however, the reason for the interruption. If one is predisposed, not to say funded, to report that the capitalist economy is the highest state of nature, it is irksome when the glorious march of progress grinds to a halt. Economic thought, until the late 1870s, tended to regard its periodic crises as serious, mysterious and threatening occurrences, portents of significant and unknown danger, much as early civilisations greeted comets and eclipses. As the economic journalists have discovered (although the academic economists are still thinking about it) large crises do not sit very well with fairytale theories of market perfection.

Two basic explanations can be offered. The most common is *exogenous interference*: something was 'done to' the economy – bad banking, Napoleon, greedy workers, communists, state interference, 9/11 – the list has not stopped growing. But the recessions of the industrial cycle are repeated and somewhat frequent, and have gone on throughout history. Excuses based on external interference wear thin. Cycle theory provides a get-out, not dissimilar to some Christian explanations of evil: imperfection is the means to perfection. The cycle is a 'natural' manifestation of capitalism which cleans out inefficiencies and restores balance. Provided we do not enquire too deeply how a perfect system produced these inefficiencies in the first place, the notion of natural order can be restored. Schumpeter commends Marx for discovering the underlying cyclical process:

> He [Marx] aptly says that 'the superficiality of Political Economy shows itself in the fact that it looks upon expansion and contraction of credit, which is a mere symptom of the periodic changes of the industrial cycle, as their cause.' … We find practically all the elements that ever entered into any serious analysis of

> business cycles, and on the whole very little error. Moreover, it must not be forgotten that the mere perception of the existence of cyclical movements was a great achievement of the time. Many economists who went before him had an inkling of it. In the main, however, they focussed their attention on the spectacular breakdowns that came to be referred to as 'crises'. *And these crises they failed to see in their true light, that is today, in the light of the cyclical processes of which they are mere incidents* (Schumpeter 1965:41; emphasis added).

Schumpeter grasped that if crisis is a phase in a regular movement, it can be repackaged as a reversal. Damage has occurred: hardship and discontent ensure. Society asks 'how can this damage be undone?' Cycle theory allows the economist to claim that 'natural' market processes will correct the collateral damage inflicted by these same market processes. The best policy is then to do nothing, or merely 'work with' the forces that produced the crisis in the first place. Such ideas lie behind the bankers' consensus that informed post-stimulus European responses to the crash. Yes, markets caused the problem. What is the answer? More markets. The arsonists have taken over the fire-station.

Economic theory thus came to resemble 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. Cycle theory in this sense incarnates a quietist exhaustion of the progressive potential of liberal theory; it asks only how society may return to where it was, and ceases to consider the opportunity for, or even the necessity of, doing anything new. The insatiable quest for security extinguishes all critical capacity.

This culminated in Schumpeter's popularization of Kondratieff's theories of 'Long Waves'. His aim was to address the biggest problem facing simple Juglarian theories of the cycle: namely the convulsive and protracted crises described in the last section, which cannot be explained as a short-term periodic bounce. Schumpeter was one of the few mainstream figures to take this problem seriously, which is probably why, though few economists explicitly endorse his ideas, many quietly defer to them. He adapted Kondratieff's statistical discovery that long periods of rising prices alternate with long periods of falling prices, constructing a highly original if ultimately apologetic theory. Crisis, for Schumpeter, becomes an expression of regularity. Past economists, he says above 'failed to see [crises] in their true light, that is today, in the light of the cyclical processes *of which they are merely incidents*.' Crisis is back in Pandora's box as a 'natural' law – a repetitive, and above all automatic process, requiring only a little bit of creative destruction before normal service is resumed.

This manifests itself in the disputed concept of *endogenous* recovery of which Schumpeter's theory of Creative Destruction is the progenitor. The market itself establishes the conditions, after a long period of decline, for a long period of growth – a long boom. Thus, Schumpeter acknowledges (without much analysis, it is often said) endogenous causes of decline, suggesting that capitalism does have some serious problems – but counters by asserting that capitalism *itself* can solve these problems, if left to its own devices, that is, endogenously.

7. Determinism and endogenous recovery within the Marxist tradition

To what extent does Marxism distinguish itself from this view? Not far below the surface lurks the idea of *natural restoration*. It is almost commonplace in Marxist theory to assert that the role of crisis is the ‘restoration’ of the profit rate. The notion is as follows: capital stock rises during normal accumulation, and must then be reduced. In crisis; this is achieved by simply not producing. The crisis thus ‘automatically’ restores the profit rate. I have two problems with this idea. First, it is deeply fatalistic. Marxists, according to this notion, need do nothing except proselytize and wait. Second, it is empirically untrue. The great crises did *not* automatically restore the profit rate, even when – as in the case of the New Deal – they were accompanied by considerable government intervention. It took more.

A different, but classical, Marxist approach was introduced by Leon Trotsky in the course (Day 1981) of the seminal Russian crisis debates of the interwar years:

> One can reject in advance the attempts by Professor Kontrad’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 Kontrad’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? The difference between the two concepts is further clarified if we interrogate the word ‘recovery’ itself. This suggests that boom is in some sense the natural state of capitalism, which it achieves with little conscious effort by just being the capitalist system, whereas the declines are an unfortunate interruption. This idea is prevalent among Marxists, giving rise to a phenomenon I term ‘Capital Worship’ – a belief in the almost unlimited power of capitalist productivity to advance and improve without impediment. In this mindset, booms are achieved without no special effort or political intervention. This view was most strongly asserted in Brenner’s famous (1977) debate with the dependency school:

> 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)

Capitalism’s inherent tendencies to develop productive forces were never really in dispute. However, what sets them going? Persuasive evidence from Bagchi (1982) and Patnaik (2006) shows that the extended and continual application of political force accompanied, and facilitated, an immense mobilization of superprofits from around the world on which at least the initial accumulation depended. Marx studied this particular boom at some length, and his opinion contrasts with Brenner’s:

> [The] [c]olonial 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 emphasis added)

Real booms – prolonged periods of expansion – are moreover quite rare, not at all a natural state of capitalist affairs. The present decline, on Brenner's (1998) own recent testimony, has been under way for over forty years, much longer than any known boom. Much closer to reality than the theory of long waves would be a theory of long declines. Capitalist history makes a lot more sense, if we think of booms as politically-launched events that punctuate an inherently problematic process of development, instead of the natural form of its existence.

All major booms followed a concentration of great amounts of value in one or two geographical locations, achieved by the forceful political mobilisation of resources, value and hence labour throughout the world. This is achieved in part through the market itself, which both reproduces and extends existing inequalities (Freeman 2009b) but depends critically on direct political intervention by the powers which function as geographical centres of each new phase of accelerated growth. If the US economy does not need its armed forces, what are they there for? Why did the postwar boom start in the war? If the industrial revolution had no need of Britain's colonial enterprises, what were the King's troops and merchants doing abroad and why was it so difficult to dislodge them? If the 'inherent tendencies' of Germany's industrialists was solely responsible for its spectacular rise, what was the function of Prussian Junkerdom, the 'National Economy', the arms race, World War I and fascism?

If Trotsky is right, periodic and often forceful political action is integral to accumulation. A concept of economic law which comprehends this is absent from nearly all modern economic thinking. Almost the only place we find it is in Keynes's writings, not uninterestingly because of his focus on policy. Yet the concept is completely explicit in, and integral to, Marx's own thinking.

8. Was Marx a determinist?

Marx's most famous allegedly 'determinist' remark appears in the preface to the first German edition of *Capital*, where he writes

> Intrinsically, it is not a question of the higher or lower degree of development of the social antagonisms that result from the natural laws of capitalist production. It is a question of these laws themselves, of these tendencies working with iron necessity towards inevitable results. The country that is more developed industrially only shows, to the less developed, the image of its own future.

However his discussions with the Russian Marxists exposed a far more nuanced approach, as evidenced by his correspondence with Vera Zasulich (Shanin 1984):

> In dealing with the genesis of capitalist production I stated that it is founded on "the complete separation of the producer from the means of production"... I thus expressly limited the "historical inevitability" of this process to the countries of Western Europe. And why? Be so kind as to compare Chapter XXXII, where it says:

> The “process of elimination transforming individualised and scattered means of production into socially concentrated means of production, of the pigmy property of the many into the huge property of the few, this painful and fearful expropriation of the working people, forms the origin, the genesis of capital... Private property, based on personal labour ... will be supplanted by capitalist private property, based on the exploitation of the labour of others, on wage labour” (p. 341, column II).
>
> Thus, in the final analysis, it is a question of the transformation of one form of private property into another form of private property. Since the land in the hands of the Russian peasants has never been their private property, how could this development be applicable?

In a draft of this letter he states that if Russia continues along the capitalist road ‘it will lose the finest chance ever offered by history to a people and undergo all the fateful vicissitudes of the capitalist regime.’ Losing a chance is a long way from a fatalistic recognition of inevitable necessity.

This restatement was not casual. Marx’s prolonged battle with Lassalle over the direction of the German Social Democrats centred on the latter’s ‘iron law’ of wages:

> The restriction of the average wage to the minimum that a people customarily requires, to reproduce and eke out a living is, I repeat, the iron and cruel law which governs the wages under present conditions.
>
> This law may be disputed by no one.... This iron and cruel law, gentlemen, you must above all stamp deep, deep in your soul and all your thinking must start from this point.
>
> In these circumstances I can give you and the whole working class an infallible method, which will free you of the illusions and deceptions. To anyone who speaks to you about improving the condition of the working class, you must first and foremost submit the following question: does he, or does he not, recognise this law. (Lassalle 1863 [my translation- AF])

Marx remained indignantly opposed to Lassalle on this precise point throughout his life, referring to him amongst his circle as ‘the iron man‘. Engels wrote of this to Bebel thus (March 18-28, 1875):

> our people have allowed themselves to be saddled with the Lassallean “iron law of wages” ... in *Capital* Marx has amply demonstrated that the laws governing wages are very complex, that, according to circumstances, now this law, now that, holds sway, that they are therefore by no means iron but are, on the contrary, exceedingly elastic, and that the subject really cannot be dismissed in a few words, as Lassalle imagined.

Marx’s conception of social change was never fatalistic nor mechanical, being posed in terms of complexities, indeterminacies, historical branch points and above all choices, in which the outcome was determined by the actions of the participants. What is the economic foundation of this historical, political and ethical vision? We noted in Freeman (2010) that in the ‘cultural turn’ a significant section of Marxism Without Marx, led by the Frankfurt School, abandoned interest in Marx’s economic theories. Retreating into the cultural, social and ethical dimensions of his analysis, they lost sight of the fact that in capitalist society, all such relations are organised by the commodity – the ‘cell form’ of the economy. It makes nonsense of Marx’s endeavour to divorce these two aspects of his analysis. It also makes no sense to suppose that he grounded an emancipatory, choice-centred theory of history on a deterministic, positivist analysis of the economy.

9. Positivism, rationalism and the origins of modern determinism

Where did we get the idea that economist's 'job' is to predict, to calculate the economy's future position like an alien external object, as astronomers forecast eclipses? As indicated, the answer lies in the early history of French rationalism. Philosophy struggled to free itself from the religious dogmas permeating the corrupt, intertwined layers of petty aristocracy and venal clergy, buttressed by, and maintaining in power, the decadent absolutist monarchy which was to provoke the Mother of Revolutions – 1789. The emerging enlightenment sought an alternative morality grounded in the human condition. Catholicism, for which Galileo's ideas remained as much an anathema as Darwin's were to become for Protestantism, deduced the necessity, duties and rights of the social order, true to its neoplatonic roots, from the perfection of the heavens, whilst the doctrine of the divine right of kings, established by the 'Sun King' Louis XIV, excused him all restraints of law. In absolutist France, revolutionary philosophy had to ground itself in *physics,* in mechanics. The simple fact that heavenly movements were ordained by nature was a mortal danger to the monarchy's pretensions. If reason regulated the universe, should it not govern society?

The most characteristic formulation of this mathematical determinism comes from the great mathematician and astronomer Pierre-Simon Laplace (1951:4), arguably the true father of mathematical positivism. Laplace, it should be recalled, when asked by Napoleon what place God occupied in his system, famously replied 'I had no need of this hypothesis'. He formulated the 'billiard-ball determinist' principle that, once the initial position and momentum of every particle in the universe was given, all its subsequent motion was completely determined by their laws of motion. Since 'every particle' includes the atoms that make up our bodies, this includes our own actions:

> 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 was deeply involved in social questions, providing early inspiration to the Comte's generation of moral reformers. This paragraph, however, establishes the critical weakness of his argument. Who is this 'intellect'? Is He the same as Comte's 'external power'? Does He hold court on some distant frozen planet? Does He read his emails? His reluctance to intervene is commendable, but has He fully considered the advantages of endowing a few large prizes?

The 'external power' does not exist – any more than the God He stands in for. The positivist formulation erects 'natural law' into a governing principle of the ruling order every bit as tyrannical as the old absolutist monarchy, with the disconcerting difficulty that, owing to the ruling power's unfortunate incorporeality, His head cannot be cut off. The construction is also intellectually holed below the waterline, though this was not really understood until quantum physics forced the natural sciences into recognise that an experiment's observer cannot actually stand outside it; that there can be no such thing as an 'external power' in a universe that by definition includes everything.

Laplace's all-encompassing determinism collapses once we ask: *which intellect*? If this intellect were human or indeed, material, it must itself be subject to the laws it is supposed merely to describe. But in that case, it cannot be a conscious intellect in any meaningful sense, since it would be deprived of any capacity to decide on its own actions. But if it 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' (Lovejoy 1990) of the Neoplatonists. The entire project of constructing a theory of the universe which contains conscious beings, from which conscious action is excluded as a causal factor, is self-contradictory. It is on this contradiction that physics was to shipwreck early in the twentieth century. It has taken the natural sciences a century and a half to re-formulate their own laws with the conscious observer in the script from the outset. By a supreme irony, Laplacian positivism lives on only in the social sciences and in fact almost exclusively in economics. Why this was this?

It is not difficult to understand why positivism appealed to the property-owning classes. Catholic support for the landowning classes was an irritant to the rising revolutionary bourgeoisie of the eighteenth century, driving it to seek materialist theories of the cosmos. With the rise of mass labour organisations, and the onset of a purely capitalist crises, further dangers surfaced. Darwinism began pushing back the boundaries of faith beyond what was comfortable even for a resolutely nonconformist populace. The most thoughtful section of the working class movement was resolutely atheistic, anti-clericalism becoming the hallmark of its revolutionary wing. Even merely protestant logic, in millenarian forms, could be appropriated by the working class as easily as by any godfearing protestant industrialist. The notion that 'divine justice', administered by revolutionary propertyless classes, implied an end to property and the installation of a collectivist order, was the inspiration for numerous European revolts dating back to the Levellers, the Hussites and indeed, the millenarian tradition (Cohn 1972) in general. A late nineteenth century rise in fundamentalist movements, often among the very poorest sections of society, placed further strains on traditional alliances between religion and power.

The centre of gravity of capitalist ideology shifted onto the new terrain of natural order. Social Darwinism – the survival of the fittest applied to human society – gained ground. Evolution furnished a useful rationalization of imperialism's 'civilising mission', with primitive peoples presented as closer to apes than humans, justifying all and every act of barbarism against them (Carpentier 2001). The notion that the capitalist economy *itself* was a creation of nature became more and more attractive, the more the market extended, the globe fell under its sway, and the more striking – in the West – its achievements became. 'Positive economics' consummated the urge to free the market from the pernicious influence of ethics, by presenting it as the ultimate in ethics. Theorems of optimality such as Pareto's, and the convivial marriage of marginalism with utilitarianism, provided a new answer to all ethical questions: there is no need to ask whether a given policy is bad or good because the market *itself* is good; nothing better exists. And why does nothing else exist? Because nothing else is *possible*. The market, in and of itself, requires no further justification. It is the natural order of things.

10. Why did Marxism become positivist?

Positivism's attraction to the bourgeoisie is understandable. But what was its appeal to the working class? A simplistic Laplacian determinism was extremely influential within the Marxism of the late

Nineteenth and early Twentieth Century. More work is needed to understand how this came to be, but it had reasonably clear material roots. For workers labouring under great privation, often suffering heavy losses, it was a source of almost religious solace, with a close affinity to Millenarianism, to think take part in some inevitable working out of history, humbling mighty despots and raising up the downtrodden. Progress, the Second International's Marxism proclaimed, was *inevitable*. The working class was the instrument of its destiny.

Lassalle's 'iron and cruel law' offers a further clue. As Marx ironically notes in his *Critique of the Gotha Programme*, what Lassalle actually deduces from this law is the role of the state. If capitalism can only drive down wages, the state must act to keep them up. In elucidating his own very different conception of the state, Marx sourly notes that Lassalle conveniently omits the trade unions along with all vehicles of working class action except the German Social Democratic Party. Beneath the Second International's mechanical materialism lurked the underpinnings of class compromises that heralded its subsequent decline: the idea of a passive and compliant people surrendering to necessity, entrusting their future to a powerful and wise state machine,[5] where its unruly elements could be exclusively represented by sagacious leaders. Lassalle indeed entered a pact with Bismarck, supporting the annexation of Schleswig-Holstein in return for universal suffrage (Marx to Kugelman February 23 1865; see Riazanov 1928). The notion of a different type of state based on a different type of economy, the outcome of the conscious choices of an active working class, slipped away.

The language of inevitability, of the necessity of progress, and crucially of the 'external' nature of social laws, was taken over almost unmodified into Soviet orthodoxy (Labica 1984), notwithstanding its revolutionary origins. The conception of a 'state safe for capital' took the form of a promise that the regime would not pursue revolutionary ambitious beyond its frontiers, becoming a fixed feature of soviet policy after 1936. The notion of 'progress' became identified with the soviet state itself, projected as the incarnation of the next stage of historical progress. This took powerful hold on the minds of a generation locked in battle against fascism. The struggle for progress took on a concrete national form, the Manichean gods of good and evil personified in the heads of state of the two greatest powers in the conflict.

It is easy to pass judgement. One should not forget that all this was very much the spirit of the age, the *Zeitgeist* of all classes. It was the *Leitmotif* of 20th Century US culture portraying America, just like the USSR, as the incarnation of human destiny, the pinnacle of progress to which others could but dream to aspire. Indeed this idea is all too evident in much American Marxism, which in accepting and even promoting the myth of their own country as the 'highest form' of social progress, often does little more than place a Marxist veneer over its civilizing mission.

When we, comfortably distant from events, weigh up the intellectual deficiencies of this idea against the sacrifices of a generation to which we owe freedom from fascism, we should refrain from 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. Following the prolonged defeats which culminated in the collapse of the USSR and the disintegration of the mass Western and Soviet communist parties, the theoretical heritage of Marxism fell into the near-exclusive possession of academia. The mantle of deterministic positivism settled comfortably on the shoulders of a social caste freed of accountability to, or responsibilities for, the great mass of those on whose behalf they claimed to speak. It put them, effectively, in the position of a priesthood – of securing a living as experts in, and interpreters of, the inevitable but impenetrable laws of the economy. We now turn to this ideological evolution and its consequences.

11. General Equilibrium Marxism: a positivist substitution

Freeman (2010) and Kliman (2010b) argued that Marxism, as we today find it, no longer bears any serious relation to Marx's economic theory. Marxism Without Marx adopted a substitute, originated by Austrian economist Ladislaw von Bortkiewicz (1902, 1905), in which Marx's theory of value is presented as a variant of general equilibrium. I now explore the tight theoretical relation between this interpretation and the positivist notion of economics as prediction, before showing how a temporalist interpretation leads in a very different direction. The academic presentation of Marx as a general equilibrium theorist begins with Sweezy (1970:53) who writes, in a formulation virtually unchallenged by Marxists since then, that

> The law of value is essentially a theory of general equilibrium developed in the first instance with reference to simple commodity production

Morishima (1972: 2) openly celebrates Marx as a founder of equilibrium theory, on 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

This is the universally-adopted assumption of modern Marxist academic economics and the principal cause of Marxism's present paralysis. This is clarified by the specific role of equilibrium – which now dominates and overshadows almost the whole of mainstream economics and many of its heterodoxies – in the theory of crisis, making it *par excellence* the ideological expression of capitalism triumphant. General Equilibrium theories, whether marginalist, physicalist or even ISLM 'Keynesian', have a property which makes them extremely attractive from an apologetic point if view: they *logically* exclude endogenous crisis. Breakdown arising from the market's internal laws of motion cannot be deduced from an equilibrium theory (Freeman 1999). The reason is not difficult to understand. The premise of equilibrium is that the market will reproduce itself without change. The equilibrium theorist writes down a number of 'simultaneous' equations and solves them, to 'predict' prices and quantities produced and sold, given only some externally-given magnitudes – consumer preferences in marginalist economics, production functions in Sraffa (1962), propensity to consume and liquidity preference in ISLM Keynesianism

But because the theorist assumes from the outset that the market reproduces perfectly, nothing within this market can cause any of these variables to change between one period and another. There is no reason for any price to rise or fall, or for anyone to consume or produce more or less. Such a system *must* continue in the same state without change except and unless an external change disturbs it. What happens after a disturbance? Does this not contradict the initial assumption? The equilibrium answer, termed 'comparative statics', is to suppose the market moves from one perfect state to another. It adjusts from the equilibrium state uniquely determined by the old conditions, to a new state uniquely determined by the new conditions. The theory does not deny that in theory the economy is, for a time, in an 'imperfect' state corresponding to neither set of external conditions. It however holds that such disturbances or 'adjustments' can be discounted. The economy can be analysed *as if* it consisted of a sequence of perfect states, none of which diverges from market perfection. Any 'law of motion' is then entirely governed by exogenous variables. In no case can anything from within the market itself affect its motion. If any forces do arise from its process of 'adjustment', the theory discounts them. Indeed this is why the variables considered by any such theory are partitioned into two categories, explicitly named 'endogenous' and 'exogenous'.

General Equilibrium is hence a mathematically pure presentation of the positivist view of a capitalist economy, whose trajectory is given entirely, with no additional determinations, by the exogenous variables. The predictions that arise are 100 per cent determinate. They eliminate not just crisis, but humans. Walras' players are so constrained that they have no means of actually reaching the prices his system decrees for them, leading him to invoke the mysterious 'auctioneer' – a figure remarkably similar to Laplace's 'external power' – to get them there. The determinacy of General Equilibrium is a primal requirement, and its absence in temporal interpretations of Marx engenders a near pathological fear. 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, as for 'long-run' economic theory on whose behalf he speaks, the 'problem' is to secure a fully determinate prediction of the relation between prices, profits, wages and value. Actually, this is impossible. Prices, profits and wages must be indeterminate in any realistic theory because the real world is itself indeterminate. The intrusive degrees of freedom of which Mongiovi complains are known as 'people'. 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.

This makes the copious body of work on a 'statistically determinate' correlation between values and prices (Ochoa 1984, Shaikh 1998, Cockshott and Cottrell 1998 and 2005, Tsoulfidis and Maniakis 2002), apart from its statistical flaws (Kliman 2002, 2005, Freeman 1998) particularly misconceived. The most interesting things in a capitalist economy occur not when prices are close to values but when they are distant. The driving force of productivity change is the excess profit a new invention yields, for the whole period in which it coexists with old and less productive techniques. The driving forces of financialization are profits with no remaining connection to underlying values. Imperialism is driven by the North's self-reenforcing monopoly of productive advantage, by gerrymandered commerce, and by plain robbery, its mobilisation of resource rents showing up in world oil prices surpassing values by factors approaching 30. Superprofits are described by Marx in many places as the actual driver of capitalist motion. Every divergences of price from value expresses a social relation, laying bare the source of the political power of the banker, the oil major and the imperialist. The purpose of an 'economic law' is to identify and account for these social relations, which, actually, run our world. An enterprise dedicated to proving them statistically insignificant merits a special Marxist place in the circle outside hell which Dante reserved for the Futile.

A more thoughtful observation comes from Foley (1997), who objects to the temporal formulation of Marx's theory as follows:

> 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.

The striking point of this criticism is the very fact that 'prediction' and 'explanation' appear, for Foley, to be synonyms. His criticism would be legitimate, if this were so. But for a temporalist, an 'explanation' means something that lays bare the relations, concealed within the commodity form, between real, human, social magnitudes such as labour, culture, care, love, or spiritual being, and the alienated, fetishised, dead symbols we call 'money' on the other. It is thus the very opposite of a prediction.

What did Marx think? A growing body of TSSI research (Freeman and Carchedi 1995, Kliman 2007, Potts 2009) has established that his theory was *temporalist* or as sometimes designated, *successivist*. The issue of determinism begins at this precise point. Within a successivist derivation, values at any given time depend on values at some previous time, and the labour performed since then. Prices are not 'determined' at all. They simply exist: they are *data*. This is why the 'transformation problem' does not really exist. It arises from the positivist notion that Marx's value theory 'determines' prices and 'determines' values, in the sense of predicting what they must be. The temporalist to the contrary seeks to establish the concealed relation between values, given by labour time, and prices, given by the real world, thus revealing what the prices actually consist of.

Most of the 'laws' we find in Marx's work are clearly relational. The law of value itself states that the amount of value produced by any capital – and by society as a whole – is equal to the time of labour it employs. It thus relates the two central categories of price and labour. The second such law connects source of income to property; workers, who sell only their own labour, receive wages; capitalists, who employ this labour, receive the rest. This expresses two social relations constitutive of capitalism – both value, and profit, are created by, and only by, the labour of workers hired by capitalists to produce commodities for those same capitalists to sell.

Note that relational laws are *exact*. A modern confusion identifies positivism with exactness, and the positivists own identification of exactness with prediction blinds them to the exactness of relational laws. This exactness must hold, because such laws express *qualitative* relations of identity: for example, that price is a *form* of value. The statement 'only labour can create value' could not hold if any such relation was in error by even 0.0001 per cent. There would then be a source of value other than labour.

Therein lies the importance of the transformation of values into prices, which is not a prediction at all, further underlining the futility of 'proving it empirically'. Moreover, it is false if it is not exact, so that it confirms nothing to show it is '97% true'. It demonstrates that the social and class relations established under the simplifying assumption that goods sell at their value,[6] are not modified when this simplification is relaxed.

The notion that 'mere identities' are devoid of content is seriously misinformed. Almost all physical laws are relational. As soon as astronomy got beyond Copernicus, it could no longer simply forecast planetary movements but had to asked why they happened. Newton's laws of motion are all relational. The best-known relational law in physics, Einstein's famous $e=mc^2$, gave us nuclear weapons. It would take a bold economist to claim it added nothing to knowledge. It is a relation between two forms of appearance – matter and energy – of the same thing, showing that two phenomena which appear distinct are actually related. This offers a more than superficial parallel to Marx's theory of value, whose power lies precisely the relations it establishes between quantities of labour and magnitudes of money.

These magnitudes become crucial precisely when we need to exercise collective choice, changing the social relations they express. Economists have so far only predicted the future in various ways. The point is to make it. Because we live in a commodity economy, these magnitudes present themselves as 'purely' economic. Universal health requires hospitals, doctors, drugs, not to mention health education. At first sight this is a money question – the 'cost' of the system. But, actually, it is a labour question: the time spent by the builders, doctors, nurses, medicine-makers, educators and indeed, patients. The same result could be achieved by free agreement, state direction, or some hitherto-unknown system of servitude. Whatever solution is contemplated, the changes really required will remain mysterious until money is understood to be a symbolic representative of labour.

We get a glimpse of this underlying reality when it is revealed, for example, that 12 per cent of all UK pensions are financed by the oil revenues of one single company. Why did we have to wait until the Gulf of Mexico got poisoned to find that out? A liberatory political economy would make all such relations transparent at all times and in all spheres of society. Society can then choose whether it wishes to tie the future of its elderly to the destruction of the flora and fauna of a large part of the Ocean, or to some more healthy and commendable activity.

12. The rate of profit: a temporal relational law

In the light of the above, what is the function of the law for which Marx is perhaps most famous, and which is almost universally viewed – whether to proclaim or dismiss it – as a predictive law of economic motion – the 'law of the tendential fall of the profit rate'? In this final section, I will argue that it should be understood as a *temporal relational law*. It has, however, the peculiar characteristic that when the commodity relation is functioning, as during booms, its form of appearance is blind, automatic and therefore, has predictive power. Its automatism arises precisely because the measures required to overcome it are abnormal to capitalism; it is, therefore, in a profound sense, a law *of* capitalism – it holds sway as long as capitalism functions as such.

First, what does Marx's own derivation establish? He occasionally employs the emphatic language of inevitability. However, his many careful qualifications make it clear that something quite different is intended. What is required in all such cases is to examine the logic of the argument, as expressed by its author. What does Marx's reasoning achieve, in its own terms? It demonstrates that the rate of profit will continue to fall for as long as accumulation continues. Again we must note that this differs from such vaguenesses as ‘it sometimes rises and sometimes falls’. It is an *exact* statement; its exactness may be appreciated only when its *qualitative* nature is grasped. The law Marx says, is ‘the expression, peculiar to the capitalist mode of production, of the progressive development of the productivity of labour’. (Marx 1991: 319). That is, ‘crisis is the result of accumulation’.

We can turn this statement around. The rate of profit will be restored if, and only if, accumulation *goes into reverse*. Stated this way, its superiority becomes clear. For orthodoxy, crisis is overcome naturally, as part of the functioning of capitalism. For Marx, it is overcome only if capitalism ceases to function naturally. Disaccumulation – the destruction of previously-advanced value – is an enormously disruptive process. It can be achieved, theoretically in one of two ways; if a long depression deprives large numbers of people (including many capitalists) of their living or if the state, which produces use-value without producing value, steps in and replaces the private investor, as in war or developmental states.

The law establishes two political and social facts. Accumulation undermines the circumstances which enable people to take part in it; and the consequence is large-scale social and political disruption. It is, in short, an explanation of crisis. In my view, this also demonstrates where Marx stands in relation to many one-sided, partial or monocausal theories of crisis. An account based on the TRPF is not *counterposed* to any particular explanation of capitalist crisis (underconsumption, overproduction, overaccumulation, social structures of accumulation, financialisation, etc). Each is a particular expression of the general law, and occurs to some degree in every real crisis. Marx (1991: 350) saw no contradiction in the almost casual assertion that the fall ‘promotes overproduction, speculation and crises, and leads to the existence of excess capital alongside a surplus population’ bringing together most monocausal explanations in one short bracketed subclause as mere expressions of the general law.

The real issues arise when one asks what can be done. Like the clown’s car, no ‘solution’ to crisis may be arrived at by addressing only one, or a few, or even all of these tendencies. To launch a boom, capitalism has to stop accumulating, which is to say in some very basic sense, it has to stop being capitalism as we know it. Needless complexity, arising from the peculiarities of a theory Marx never held, have obscured the simplicity of Marx’s reasoning. In the alien interpretation foisted upon him, ‘value’ is identified not with labour but with physical products. Capital is seen as a mass of objects: machines, food, raw materials, and so on. When Marx presents his own law in terms of quantities of labour, the logic is clear:

> it is a self-evident necessity, deriving from the nature of the capitalist mode of production, that as it advances the general average rate of surplus-value must be expressed in a falling general rate of profit. Since the mass of *living labour* applied continuously declines in relation to the *mass of objectified labour* that it sets in motion, i.e., the productively consumed means of production, the *part of this living labour that is* unpaid and objectified in surplus-value must also stand in an ever-decreasing ratio to the *value of by the total capital applied*. But this ratio between the mass of surplus-value to the value and the total capital applied in fact constitutes the rate of profit, which must therefore steadily fall. (Marx 1991:319, emphasis added)

This is every bit as relational as the transformation of values into prices; the only difference is that the relations exist in time. Each year, a certain amount of value is produced, equal to the total expended labour of that year. Each year a certain amount is consumed by workers. Each year, a certain further amount is unproductively consumed. What remains is invested. Time arises because the value cannot be invested before it is produced.

Time then enters in a second way: this investment grows as long as, each year, a part of the produced value is added to the advanced capital of society. Literally and almost by definition, the mass of advanced capital will rise until and unless this stops.

The confusion of the equilibrium, physicalist presentations arises because they suppose that this past advanced value can be 'wiped out' by technical change. This is not so. It occurred in the past, before the technical change, and cannot be wiped off the balance-sheets of the capitalists who spent the money. Nor can this value be destroyed in mere circulation. This is why the crisis is protracted. The initial, financial crisis simply brings prices into line with underlying values. Fictitious assets, based on the capitalization of income streams, fall towards the underlying value of the assets – in some cases, zero.

This is not enough, which is why 'financialisation' is an insufficient account of the process. Even such a dramatic adjustment does not eliminate underlying past values. The destruction of *value* requires much more; it calls for the transfer of the accumulated value back into society, by 'disaccumulation' in which capitalists use up what they have stockpiled, either by wasting it or by converting it into new products without replacing it. In short, to restore the rate of profit, net private investment must sink below zero. But capitalism's *raison d'être* is to invest. That's how it reproduces. When private investor leaves the field, society can no longer reproduce, rapidly descending into political crisis.

So why cannot this be overcome tomorrow? The obstacles are not economic but political. The investing class may withdraw from the economy not from society. Any measures to relieve the billions falling under the hammer of the crisis, or place their destinies in their own hands, attacks wealthy people who resist, but cannot restore. An effective programme is little more than a statement of how this resistance may be overcome.

In pure economic terms, remedies are not hard to find.[7] The Third Depression has a unique feature: with an average real GDP of $6,000, equal to that of a US citizen of the 1950s, the world can for the first time produces enough for everyone. The *only* limit on using it wisely is social. Any reasonably rich country can secure a decent future and a prosperous and equal citizenry by suspending all dividend payments, compelling its bankers to cease dealing in speculation and commit to a long programme of productive investment, by winding up all overseas armed activities, and making arrangements for large programmes of investment in education, information, culture, infrastructure and a sustainable way of life, all financed by large taxes reducing personal wealth to the minimum required for a comfortable lifestyle for immediate family. The rapid growth of China and India shows moreover that contagion from the rich countries' failure to undertake these measures can be corralled and limited by a sufficiently energetic developmental state.

These calculations are a no-brainer. The real problem is the present class balance of material interests above all in the rich countries. The problem is, hence, to enable those who choose so to do, irreversibly to alter this balance: that is, to translate between quantities of money and classes of people that reveals the likely political consequences of the measures proposed – be they universal rights, an associative economy tomorrow, or just plain higher taxes and more spending. But such laws are not those the positivist economics is accustomed to. They will not say how long the crisis will last or how deep it will go. They will tell us what we must do, in order to shorten it and above all, exit from it without the social costs of the previous one. The bottom line is this: social justice, organised through economic democracy, is the only lasting way for humanity finally to free itself from crises which, for the first time in history, are entirely of its own making. This, the true road to freedom, is what Marx, I am fully convinced, really intended.

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[1] I am indebted to Julian Wells who drew my attention to many of the ideas in this paper, and to my other fellow TSSI scholars. All mistakes are of course my own.

[2] The UK coalition government, in its June 2010 budget, wheeled out the magical '80/20' rule according to which 20 per cent of the deficit would be made good through tax rises and 80 per cent through welfare cuts.

[3] As did John Stuart Mill. The positivist religion was particularly influential in the Latin America where there are positivist temples to this day. The slogan 'Ordem e Progresso' on the Brazilian flag is a positivist nostrum.

[4] The depth and perhaps antiquity of this ambiguity is reflected in language; 'law; can mean either 'natural law' or 'law of the land' in a large number of languages.

[5] The very term 'state machine' gives the game away.

[6] The Bortkiewizc-Sweezy-Morishima interpretation is so universally taken for granted that Marxists almost everywhere assert that, in Volume I of *Capital*, goods are purchased at their value. This is not true. Marx's abstraction, showing surplus value cannot arise from circulation, applies to the sale price at the end of the period, not the purchase price at the beginning.

[7] The *Communist Manifesto*'s one-page economic programme offers a surprisingly modern-sounding package of measures would certainly overcome today's crisis, if implemented.