

PAUL MASON ON THE TRACK OF THE ELUSIVE ZERO MARGINAL COST.

This is the book of "Marxist" revelation. We are informed that communism is growing in the womb of capitalism, and that the mid-wife of history no longer has bloody hands but immaterial hands. Capitalism is dissolving into abundance in the hands of the connected knowledgeable individual surrounded by immortal machines. If only.

I finally purchased an e copy of Paul Mason's book for 99p. I thought I should wait for the price to approach zero to confirm his hypotheses that this is the period of global information and abundance. After all the marginal cost of reproducing his book electronically is infinitesimal. I obviously do not know how much of this 99p Mr Mason will pocket, nor whether this represents adequate payment for the great deal of time taken to research and write this book.

This book is resplendent with the golly-gosh gushing that always accompanies all new technologies and periods and which represents a loss of perspective. I would exercise caution. The internet, in relative terms pales into insignificance compared to the emergence of language itself followed by written language. Without language and recorded language, civilizations would not have developed and had they not, the internet would only exist in a parallel universe if at all. All that computers together with the internet and sensors achieve, is to raise communication to a higher level, speed it up, expand the connections and extend its reach. It does not represent the invention of communication.

Nor does the information age transform knowledge. It merely disseminates it more comprehensively and immediately. Take data mining. The fact that data mining is carried out by computers does not make it new. In the days before computers, shoppers buying their products were registered as sales (data). These sales were consolidated and transformed into orders (data). The orders in turn told suppliers how to regulate their production. Sure, this gathering in of information was slower, more cumbersome and more fragmentary, but it provided the same patterns of information data mining does today albeit not in real time. Data mining makes redundant the slower and more costly observations of good merchandisers who noted how quickly goods were leaving a store, and not only their goods, but those of competitors.

But, Mr Mason will reply, it makes the targeting of consumers that much more precise. Precise is not the term I would use, I would use the term annoying. Most consumers (over 70%) find targeted advertising on their phones, tablets and computers, intrusive and disruptive. This is being noted by the largest advertisers like Proctor and Gamble who are now increasingly questioning the merit of digital advertizing. If modern marketing, fathered by the nephew of Sigmund Freud in the nineteen thirties, is all about mood and emotion, then pissing consumers off with repeated and intensive adverts makes no marketing sense.

Even the information era is misnamed. It should be called the information overload era. People are being inundated with emails, messages and misinformation on a scale undreamt of twenty years ago. And it is even affecting productivity. A PEW study found that most office workers ignore the instruction not to engage with social media at work and that when they do engage with this media, it takes over 20 minutes before their attention is once more focused on their work. It even casts a question mark over whether all this information on tap actually improves productivity in many areas.

As an eclectic Marxist Mason knows that ignorance is oppressive, and, knowledge is power. Capitalism, like the priests of old, always keep their workers ignorant in order to manipulate and exploit them at work and in the shops. Despite the silicon chip speeding up the dissemination of knowledge, consumers continue to eat just as many potato chips cooked in health destroying, deodorized,

peroxidated, free radicalised and rank omega 6 oils. Despite the information age, the ignorance of consumers regarding food is just as great as it was 30 years ago. Any consumer wishing to educate themselves about good nutrition soon throws up their hands in horror as the internet peddles conflicting, confusing and deceiving information, because profits are put before people.

Which brings us to the cardinal point about the information age. It will not lead to a post-capitalist world by its development, rather its development will be constricted, distorted and manipulated by the capitalist system in the interest of profit. Today the battle over fake news exemplifies this. This is not the battle between factual and fake news. It is between the fake news of the establishment who always disseminated propaganda to protect their interests and the fake news of the demagogues and upstarts. So much for the all-knowing “general knowledge” (Marx) Mason describes as liberating us from the shackles of capitalism.

The fact is that instead of the internet providing the equivalent of clear water the capitalists have deliberately muddied the water making it virtually undrinkable. And if that is not enough, as we have seen recently, the muddy pond will be sealed off with actual censorship (Facebook deletion of sites for example), lest a few fish survive.

The BBC from its inception was the Bosses Broadcasting Corporation structured to both dupe and dope the masses. In the 1920s its central role in undermining working class struggles was identified. First it used radio, then television and finally the internet to peddle its fake news which was nothing else than the world view of the British capitalist class. It always lied about what was happening in the world, who was to blame for events and the role played by Britain and so on. Capitalism has every interest to produce information overload and provide misinformation.

An axe can be used to chop firewood, or it can be used to kill. The same with the internet. It can be the means for emancipation as much as it can be the means for oppression. Face recognition was not developed to open smartphones or take better pictures, it was developed for population control by the secret police. Before we are able to expropriate the means of information we have to first find ways around it, to trick it, to use it against itself, otherwise there can be no emancipatory struggle.

Hence the fight over information has to be a conscious fight. That is why we have to change our slogan from “expropriate the means of production and the land” to “expropriate the means of production, the means of information and the land”. Used for the benefit of society, information technology makes building a future socialist society that much more practical. In any case if capitalism had not invented the internet, a socialist society would have invented it out of necessity.

Cycles and history.

I will not comment on Mason’s obsession with long wave theory except to say it is a contradictory mess. If as Mason says, capitalism continuously revolutionises production, (it is better to say revolutionises production wastefully as useful means of production are discarded), then it must speed up history. The process of revolutionising production is not two dimensional, it is three dimensional, an accelerating upward spiral. It is in the nature of technological development that they speed up processes, not only change them. When CAD/CAM (computer aided design) replaced draftsmen, it speeded up the development of new machinery both at the design and production stage. No new technology is adopted by capitalism unless it improves productivity, which means transforming the same function so that it can be done by fewer workers more quickly and often with reduced skill.

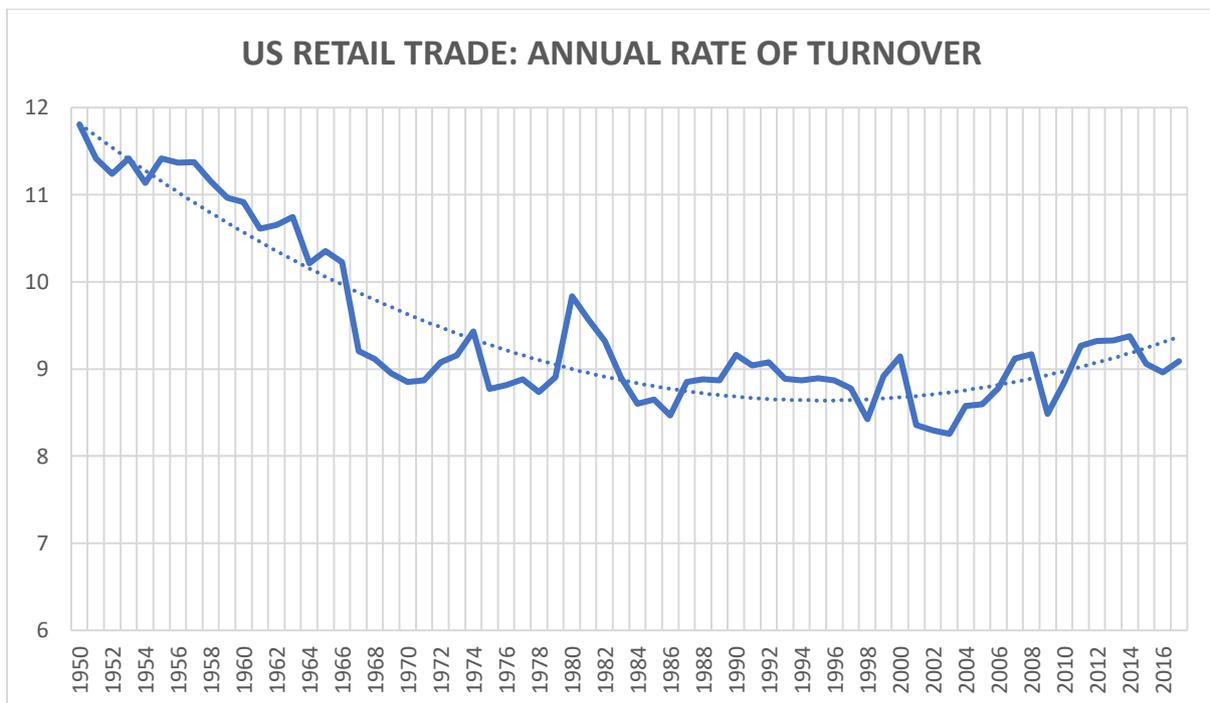
So why oh why, stick to these 50-year long-waves. A fifty year wave a hundred years ago is not the same fifty years currently. Much more is achieved and much more changes within fifty years now than

then. Marx only recognised one cycle, the industrial cycle (more commonly called the business cycle), the cycle that led to over-accumulation of capital relative to the production of profits resulting in the need to explosively overcome this constipation of the metabolism of capitalism. Though Marx spoke of a fairly regular cycle it is also true in hindsight, that it can vary, depending on the level of technical technique achieved, the world political structure and the balance of class forces.

This rhythm of accumulation followed by over-accumulation is the circadian rhythm of capitalism. Like all circadian cycles it can stretch in summer with its longer days and compress in winter as the days shorten. Despite these fluctuations it is a definite rhythm which is captured in the graph below which plots the speed at which capital circulates. When the rate of capital accumulation accelerates so does the turnover of its circulating part. When it decelerates so does circulation. Turnover accelerates as the economy heats up, peaking just before each recession. As it collapses recessions ensue. And this happens without fail. It peaked in 1974, it peaked in 1980, it peaked in 1990, it peaked in 2000, it peaked in 2008 and it peaked in 2014. After each of these peaks it plunged by varying amounts depending on the severity of the recession. Once the recessionary phase was resolved it accelerated once more.

Of course, longer term trends can be read into the graph. But to be candid, all the computers in the world have not led to a more rapid acceleration today compared to the 1950s when the US, victorious in war and without rival competitors, was at the height of its prosperity, and, when most of what was consumed in the USA was produced within the USA often in the locality.

Graph 1.



(Source: BEA interactive data, GDP-by-industry Gross Value Added and Gross Output.
Based on the formula $GO/GVA + (GO-GVA)/GVA$)

Each grand cycle has to be analysed concretely, its features are unique and distinct. The graph shows that while technology has certainly speeded up turnover since 2003, it has not raised it above the 10 turnovers that prevailed up to 1966, the peak of post war profitability in the US when that country monopolised the world economy. What is also observable, is that the longer-term decline in turnovers

to the low point of 1970 coincides with the fall in the post war rate of profit in the USA and the onset of recessions.

It is also worth pointing out that while Mason provides valuable insights into the history of capitalism, what takes dozens of pages can be summarised in a few paragraphs. Capitalism does not reinvent itself. Its scientists invent new techniques of production which the capitalists build on very slowly at first. This was clear from the biggest transformation in production in the 20th century: assembly line production. What is interesting was how long it took. In 1804 the British Navy was already using a steam powered conveyor belt for making biscuits for its sailors. The meat packers of Chicago were using them by 1867. In 1892 the first modern conveyor belt was designed. In 1901 Sandvik developed the first steel-based conveyor belt which was introduced into the mining industry as early as 1905. The versatility of conveyors regarding speed and stop-start was aided by replacing steam engines with switchable electric motors. Only in the second decade of the twentieth century do we find the widespread adoption of this method of production, beginning with Ford.

Of course, capitalism is not a co-operative society. Hence adopting a new method of production on a large-scale, requires the enforced large-scale restructuring of the working class. This is done as it always has been in a capitalist society, by means of carrot and stick, with the tension being determined by the balance of forces between capital and labour. Assembly line production which brought the product to the worker rather than having the workers walk with or to the product, more than doubled productivity allowing wages to rise alongside profits. For the first time workers in the USA and parts of Europe, particularly after the second world, had sufficient discretionary spending to usher in the consumer age.

And of course, it had political consequences. This redivision of labour which by altering the ratios between the skilled and unskilled is always convulsive. It stirred up the endangered skilled layers while shifting the centre of gravity towards the rising mass of semi and unskilled labour. The general unions came to dominate the trade union movement displacing the more conservative and male dominated craft unions.

In the final quarter of the 20th century the international capitalist class, having suffered a collapse in profitability, uplifted their assembly lines and relocated them in poorer Asian countries with much lower wage rates. That was the basis for globalisation. Three technical developments made this possible, all of which derived from or were applied first by the military: the conveyor belt, the shipping container (US navy WWII) and the internet (US department of defence funded). Makes you wonder who the real entrepreneurs are? This relocation of production did not so much restructure the working classes in the developed capitalist world as dismember them. For the first time in history, the adoption of a new or improved technique of production has led to a long term impoverishment of the workers who originally produced them. Since 1973 the median wages in the US has fallen by 15%. This is an omen for the future as machine learning accelerates.

Zero marginal costs

However, this analysis of turnovers/cycles and history of the labour movement is a digression from the main point: the movement in prices to zero courtesy of information technology which is dealt with in Chapter 6 of his book. Mason is not the first to discuss zero pricing. In the 1950s, the proponents of nuclear energy promised nuclear electricity would be so cheap that the cost to consumers would be close to zero. It turned out to be the opposite. Today with nuclear decommissioning and storage costs rocketing, it is one of the most expensive forms of electricity.

Staying with electricity. Information technology is the application of binary electricity. Today the internet, together with the devices on one end and the servers on the other, consume 10% of global electricity. If the internet and its devices was a country, it would be the fifth biggest consumer. That was in 2016. By 2026 it could be consuming 20% of the world's electricity, making it the biggest consumer of all, bigger than China.

But electricity production is currently polluting. Mason deals with this crisis extensively in the latter part of his book which makes this example so apposite. So, the information age, which is being used to highlight global warming is actually adding to global warming. Further, if we consider that in the USA 29% of human made greenhouse gasses emanate from producing electricity, then the internet etc. will contribute between 3 to 6% depending on year. According to the World Bank, pollution cost the world economy \$4.5 trillion, so taking the mid-point figure of 4.5%, the information technology sector costs the world \$205 billion. \$205 billion wipes out the total post-tax profits of \$115.8 billion (2017) made by this industry in the USA (BEA, Table 6.19D). In sum \$205 billion is about what the global Hi-Tech corporations earned post-tax in 2017.

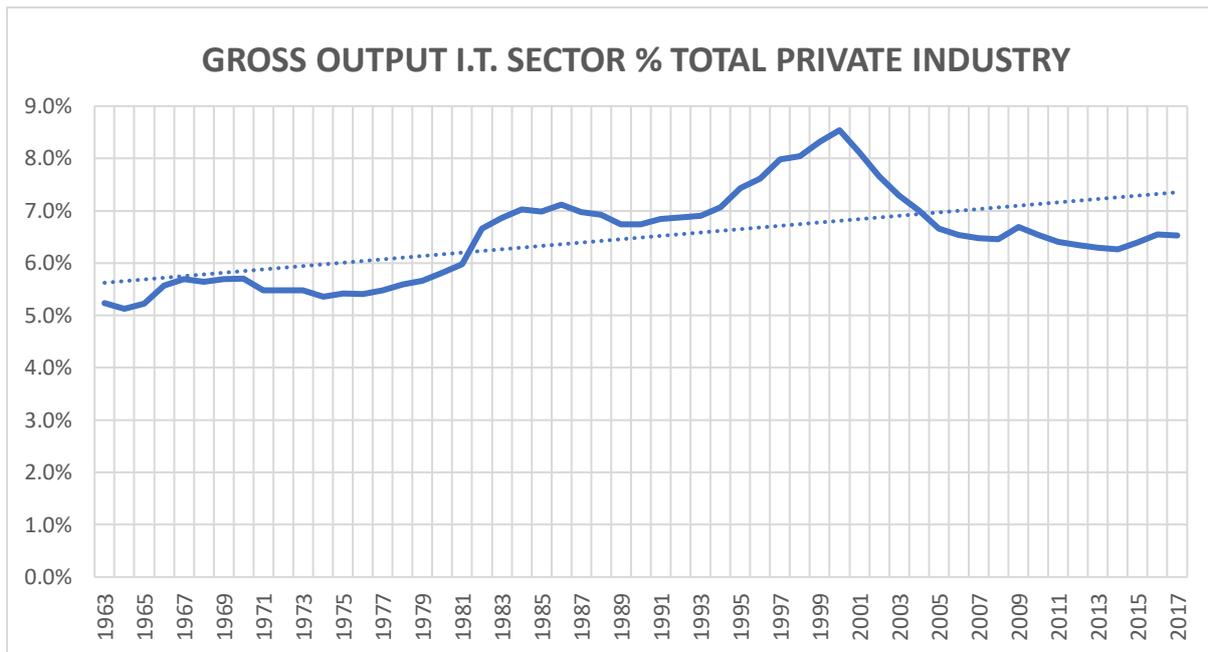
This point is being made that if we are discussing socialism, we need to sharply distinguish between paid costs and actual costs of production. This is the nub of the matter not the issue of monopoly pricing. Hence the first rebuttal of Mr Mason's costless hypothesis is that socialism alone destroys the distinction between paid and unpaid costs of production. The very distinction on which capitalism rests, because when the paid costs of production equals the actual costs of production, there would be no unpaid labour, hence no profits. The capitalists only recognise paid costs, the costs they have to pay for like wages; they do not count costs they do not have to pay for like dumping emissions on the environment. Thus, when we are discussing zero cost production Mr Mason, are we talking of zero paid costs or zero actual costs?

The fact is that capitalism already thrives on zero cost production and has for two centuries. In Britain a couple provides on average 23 hours of domestic labour equal to one third of their total hours of work. UK GDP in 2017 was £2.04 trillion and employee compensation was £1.003 trillion while corporate profits were £0.404 trillion (ONS UK National Accounts, The Blue Book). Using these figures to factor for unpaid domestic labour, we arrive at a figure of £0.440 billion equal to the whole of corporate profit. In other words, if the capitalists paid for domestic labour, the labour that provides them with their next generation of workers and the labour that keeps workers fit to work would wipe out their profits if it was paid.

Hence all the free labour contributed in terms of reviews, free to use programmes is valueless. It is similar to domestic labour. When used by the capitalist class it reduces their expenditure of capital. And where it reduces the value of labour power it increases their profits. In a socialist society the distinction between free labour and paid labour is ended for ever. All useful labour, and what can be more useful than birthing and nurturing new life, becomes social and is recognised for what it is, a contribution to the pool of social labour. All useful labour is now paid, because the Microsofts and Googles of this world with their exploitation and monopolisation of mental labour will no longer exist.

It is also important to provide perspective and context. The first is to assess the actual size of this potential zero cost sector of the economy. The graph adds up all the segments of the economy that deals with software, both its writing and use. Together they still add up to less than 10% of the US economy. And interestingly they have not grown since the mid-1980s when the I.T. revolution began.

Graph 2.



(Source: BEA Interactive Data: GDP-by-industry, Gross Output Tables.)

So much for priceless production. Of course, Mason is correct to conclude that there is only one cost of production, socially necessary labour time. I will not comment on his confusing of value and market value as this does not add anything here. He is also correct to point out that as workers are made more productive by technical means, they produce commodities more quickly. This being so there is less labour time fixed in these commodities, and therefore they become cheaper.

Over time this is reflected in falling prices, the monetary expression of labour time. Of course, since the mid-19th century the capitalist class has gone out of its way to refute that labour is the sole source of value. This is quite odd, given how in their more honest moments, they obsess over labour productivity, and how today, with low rates of productivity and falling demographics they wonder where their wealth is going to come from.

So, can software reduce the cost of things to zero despite monopoly pricing propping up its market price. Here Mason touches on a phenomenon without really being able to analyse it. Hitherto the traditional division of labour has been to minimise intellectual labour (mental labour) and maximise physical labour. The new division of labour emerging as a result of machine learning (artificial intelligence is a misnomer) is the reverse. There will be a proportionate rise in intellectual labour and a proportionate fall in unskilled physical labour resulting in a diminution of total labour time. More precisely the rise in intellectual labour, despite the fact that it counts as multiples of unskilled physical labour, will not compensate for the massive fall in physical labour as responsive mechanical robots displace workers.

Of course, here we are referring to the reduction the number of productive workers, those actually producing commodities and therefore profits. In this decade statistical authorities around the world have been categorising software as capital, because most software lasts more than a year. I will not discuss the confusion this conversion of cost into capital has caused as I have done so elsewhere on this website. One of the effects of this capitalisation will be to aggravate the pressure on the rate of

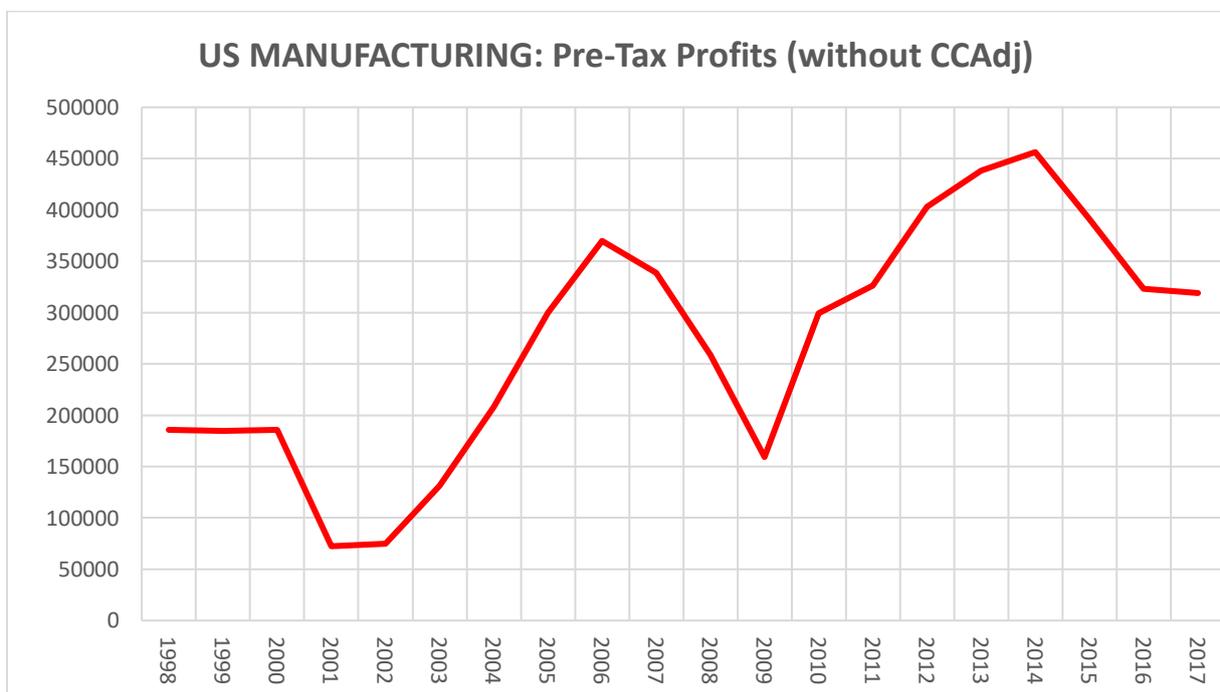
profit, which the alteration the balance between intellectual and physical labour is already causing. This is explained by the graphs below.

Much of this intellectual labour will take the form of an input into the goods producing sector because most of the software will be developed and patented outside of it. In this sense goods producing companies will be client companies. So, inputs and capital will rise. On the other hand, the destruction of labour time within the goods producing sector will sharply devalue its output. Not only that, but the value added (or realised) in this sector is not simply a question of the value produced there, but results from the difference between the value of its outputs and the value of its inputs.

So, this sector will face a double squeeze. Less value will be produced, and, less value realised, meaning the rate of exploitation must rise exponentially if the amount of profit is to be maintained. Here Mason is right. The rapid devaluation of production does compress the rate of profit. Already it appears this effect is becoming visible. (However, we should also add that the fall in manufacturing profits is partly due to a reduction in the value transferred from countries like China as they ascend the value chain).

Graph 3 is based on raw profit figures which exclude the annual adjustments for capital consumption found in more regular pronouncements on profit. This moves it closer to the amount of new surplus value realised in this industry each year, rather than the fully adjusted profit figures. In Graph 3 we see a sharp fall in current profit.

Graph 3.



(Source: BEA Table 6.17D. GDP and Personal Income Tables.)

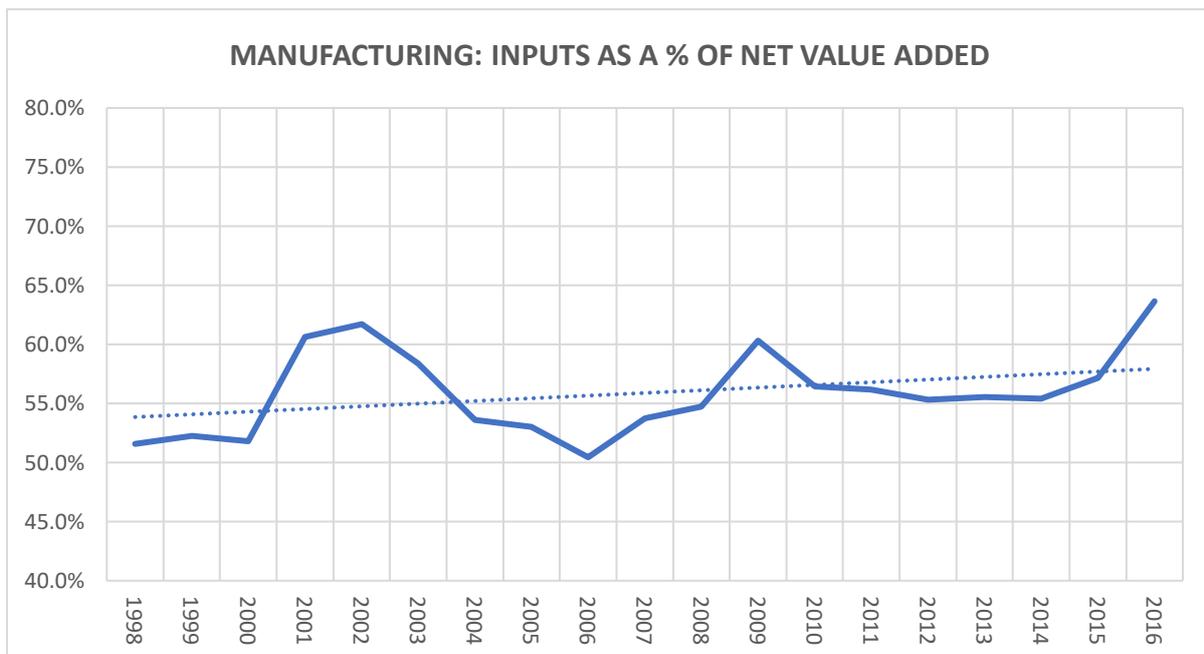
In nominal terms profits are below those found during the 2006 peak. Since 2007, money according to the GDP deflator, has depreciated 17%. Therefore, 2017 profits in real terms are no higher than that found in 2004. Given that half the S&P 500 corporations emanate from the manufacturing sector, the 240% rise in their share prices since 2004 is Jaw dropping.

When we compare the value of inputs to these profits we are beginning to glimpse the predicted rise in the value of inputs relative to profits. In 2007 the ratio of inputs to profit was 1034% and in 2017 it

was 1189% (BEA Tables: GDP-by-industry, Intermediate sales). The average for the three years between 2015 and 2017 was 1067% compared to the three years ended 2007 amounting to 978%, an increase of 9%. However, it is too early to be conclusive.

A more consistent way of examining the data is to compare inputs to the net value realised in manufacturing. Inputs are treated in Graph 4 below more selectively. The only inputs taken are service inputs, that is immaterial inputs provided by the KLEMS tables found in GDP-by-industry published by the BEA on its interactive site. However, as R&D and in-house software has now been capitalised and removed from service inputs, I have added back Intellectual Property investment. Although the series ends in 2016 the phenomena described is beginning to make an appearance. The relative fall in new value realised is showing up against the relative rise in the inputs workers use to produce it. Between 1998 and 2016 there is a ten percent rise in inputs. The BEA should be publishing data within the next two months covering 2017 and if the trend continues upwards, then the hypothesis regarding the shift towards intellectual labour and immaterial production will be more conclusive.

Graph 4.



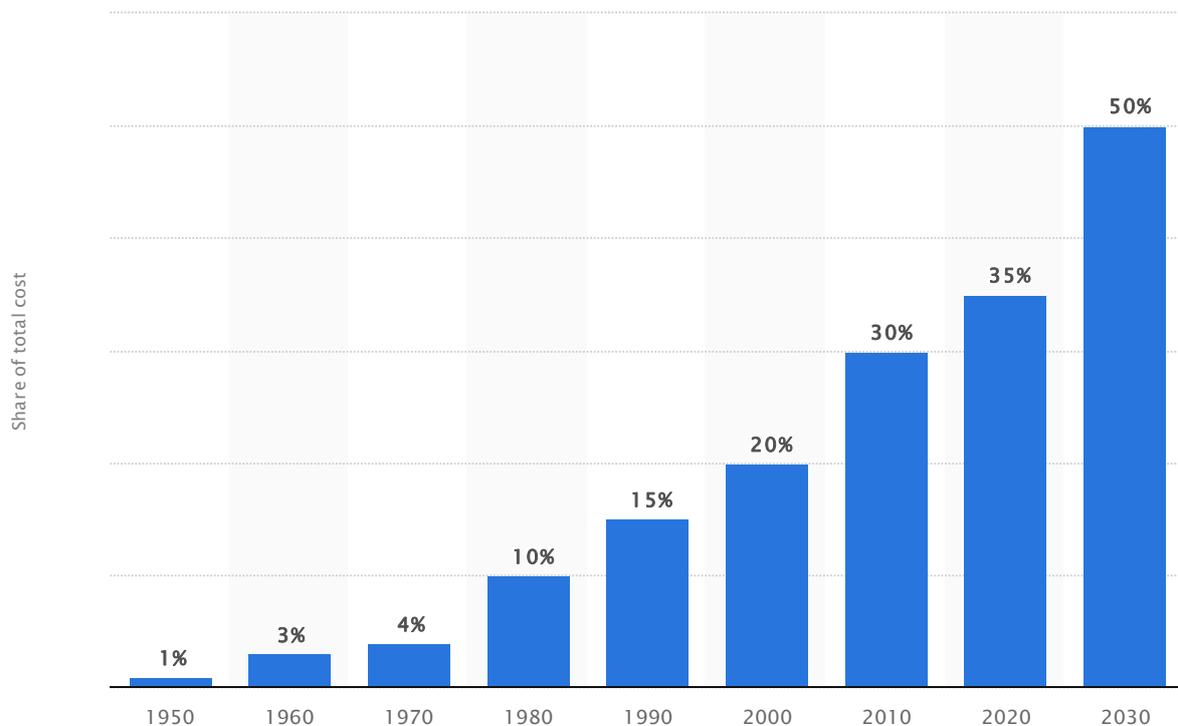
(Sources: GDP-by-industry KLEMS table for service inputs, Fixed Assets Table 2.7 for IP investment.)

This is a much better approach than Mason's zero cost reproduction model for software. The fact is that software seldom stands alone. It needs to be incorporated into a material device, either to play it, to use it or to be driven by it. With regard to machinery it initially makes a piece of machinery more expensive. In addition to the basic unit there is the cost of the electronics, sensors and the internet of things.

I would contest Mason's use of Deloitte's figures describing the fall in the costs of the internet and its associated devices. *"The current pace of technological advance is unprecedented and shows no sign of stabilising."* (Deloitte) It was already noted in 2015, before this book was written, that Moore's Law was breaking down as Intel struggled to move to a 10nm sized chip. At the same time the cost of Fabrication Plants soared to \$12 billion as the technology became more demanding. So, the picture is much more uneven than that described by Mason.

These addons not only makes machinery and equipment more expensive but consumer goods too. Mason is aware, and, his book describes in detail how capitalism invents new use values to compensate for the devaluation of production. It does indeed. Take cars for example. As the cost of producing the shell, the drive chain, the interior and the wheels, (in other words the mechanical side) has fallen, and as they have become more durable, motor car companies have been desperate to add value to their cars. The result, more and more electronics is being shoved into cars. In Graph 5 below, prepared by STATISTA the research group, the rise in the cost of electronics as a share of the overall cost of producing a car is shown. In 1950 it was negligible. By 1980 it had risen to 10% courtesy of the transistor. By 2000 that figure had grown to 20% and is now on its way to 35%.

Graph 5.



(Source - <https://www.statista.com/statistics/277931/automotive-electronics-cost-as-a-share-of-total-car-cost-worldwide/>)

The increasing load of electronics has had intended and unintended consequences. Firstly, it has meant the garages that service these cars have had to invest in as many computers and software as spanners. Secondly, they have enjoyed increased custom as cars now breakdown or register faults more frequently. While the reliability of the mechanical side of the car has improved, not so the electronic side. Today most unintended visits to the servicing garages are due to electronic faults which are often very tricky to solve.

In conclusion.

Mr Mason is quite right to say that the picture of immortal machines is no longer the stuff of science fiction. He is correct to recover Marx’s observations, that when the forces of production are stifled by the existing relations of production, these relations are burst asunder. However, the situation is more complex. Within the feudal mode of production, it was not only the forces of production that were developing, but new relations of production as well - money making relations. Things stand differently

with capitalism. New relations of production, co-operative relations of production are not developing, let alone maturing, despite John MacDonald and the Labour Party's pledge to use the state to assist co-ops.

What is unique to capitalism is that it dispossesses at least 80% of society from the means of life, converting them into workers who are forced to sell their labour power in one form or another. It is this class, made conscious of their historical possibilities, that will become the grave diggers of society. It will be they and not some digital grave digger which will end capitalism. But ending capitalism one way or the other is not a given. If China and the USA go to war using nuclear weapons, and this is not prevented by an international workers' revolution, then instead of the internet, humanity will be reduced to communicating with tin cans attached to string.

The importance of this book is that it focuses on the role that prices play and it ties it to labour time. The problem with the book is that it jumps to a priceless society. It therefore misses the crux of the matter. In the early socialist society, the profit motive is replaced by the motive of falling prices. Falling prices is the collective reward for collective labour, precisely what was missing in the USSR. It was this broken connection, not the technical problems that beset this economy with its limited technology, that destroyed its economy, because in the end it is about human beings not T based accounts.

The right to receive in proportion to contribution and the benefit of falling prices unites a working class divided by skill. This makes possible a dynamic socialist economic allowing for greater deductions, both relative and in absolute terms, for the social fund which alone can provide the material conditions to finally end these divisions. The left's obsession with the end of prices is utopian and a distraction from the real problems that will face the working class recently freed from capital.

Finally, on planning which Mason rejects in favour of the "knowledgeable society". Of course, we should reject the piece rate autocratic planning found in the USSR as an insult to workers. It was oppressive not liberating. We should also reject the primitive concepts of planning percolating through organisations such as the SWP and Socialist Appeal which still sees a role for the state in deciding what will be produced. Instead we should embrace consumer led planning, where the worker as a producing consumer alone decides what their consumption decisions will be. After all, if workers give of their labour, they must be rewarded by their product of choice.

Seen this way there is a fusion with technology. Just as every cell in the body is connected via the nervous system to the brain, so the internet will connect workers with the planners. Workers will develop a "general knowledge" of what can be produced in real time and the planners can be made aware in real time what has been chosen. By aggregating these choices, the plan is formed and modified over and over again. We no longer have inflexible set term plans but responsive plans.

Does this mean socialism is only now technically possible? That all the previous revolutions were for nought. It would be wrong to luxuriate in this thought. Had the USSR remained democratic with workers in control then it is likely that the internet would have emerged there first, and, long before it did in the USA. The 1917 revolution was not a mistake, the alternative would have been an immediate tragedy for workers there. Our task is not to unmake history, but to learn from it and ensure that we do not repeat its mistakes. Paul Mason's book unfortunately fails that test.

Brian Green. September 2018