

Marx's Capital Translated For the 21st Century



Volume One
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Reading Marx's Capital

I first started reading Marx's *Capital* when I was fourteen, nearly fifteen. I doubt I understood much of it, and probably didn't finish it. I'd asked my dad to get me a copy, along with some other reading, from one of the blokes he worked with, who was a member of the Communist Party. My dad had worked in pretty much every Midlands car factory, before and at the start of the Second World War. He was continually moved from one to another because, although he was only 19 or 20, he was continually a thorn in the side of management, acting as a spokesmen for workers in the factory. In the end, having run out of factories to send him to, he had his cards literally filled with black ink, so he could not work anywhere, and went into the army. He was never in the Communist Party, he only joined the Labour Party after I did, but he was always a militant trades unionist and socialist. Mirroring what Trotsky says about the way Bolsheviks should act, I was told by someone who worked with him, in later years, that the bosses only tolerated him, because he was also an exemplary engineer, and worker. Politically, I owe everything to him, and its to him I dedicate this project.

I remember, sitting on the front step of our terraced house, in that Summer, in the 1960's, reading. The bloke who lived opposite, was also a lay trade union official, at the Michelin factory in Stoke. Given that it was a mining village, whose pit had closed many years before, he, like many of the other men, had previously been a miner. But, I will always remember the expression of surprise with

which he announced to my dad, as he came across to chat, “*He's reading Karl Marx!*”

Since that time, more than 40 years ago, I have read Marx's *Capital*, including *Theories of Surplus Value*, cover to cover every five years, as well as having studied Marx's ideas continually over that period. This project came out of my latest reading of *Capital*, begun nearly three years ago, when I decided to provide a summarised interpretation of it, as I went. Most people think that its difficult to understand *Capital*. It isn't. The main problems people face are that its written in a language of its time, the calculations are carried out in imperial rather than metric units, and fractions rather than decimals. The other main problem that people who have studied orthodox economics face, is precisely that they have studied orthodox economics, and need to unlearn it, in order to think about things in a different way.

My aim here is to try to put Marx's own words and ideas as faithfully as I can into modern language, to use metric measurements, currency and so on, and also where possible to relate what Marx has to say to current events and analysis of today's economy and society. In that context, where I think that Marx is not clear, gets something wrong, or where things today have changed relative to the conditions he was describing, in such a way, as to invalidate an idea, I will say so. To do otherwise would itself not be true to Marx's method.

I have an advantage here that Marx did not have, in that I am able to refer to the later volumes of *Capital*, and *Theories of Surplus Value*, to elaborate in Marx's own words, some of the ideas and concepts developed in

Capital Volume I. My intention is to provide, in future, an interpretation of the other volumes of *Capital*, and of *Theories of Surplus Value*, so that the whole work will be tied together as a complete whole.

Unlike other interpretations of *Capital*, my aim here has been to stick to Marx's own structure, and to simply provide a section by section interpretation of Marx's work.

Marx wrote *Capital* not to be some complicated academic exercise, but in order to be read and understood by ordinary workers. Given the level of education, at that time, for the ordinary worker, compared with today, the extent to which ordinary workers should be able to read it, and understand it can be gauged. Part of the problem here is that Marx's work has been poured over by the professional Marxologists, who have treated it in the same kind of way that Dan Browne uses various texts to uncover supposed hidden truths that only the initiated, or the ardent researcher, can know. In this reading of *Capital*, I will be doing the exact opposite. I will be reading *Capital* as Marx (and Engels) wrote it, and starting from the assumption that, as he wanted ordinary workers to be able to understand it easily, what he wrote is what he meant to say!

Having said that, it won't be just copying and pasting huge slabs of text. There is no point. Anyone who wants to read the original can do so, by picking up a book, or going to Marxists.org. In fact, I am recommending that you do that, because no one should be so lazy as to just take what anyone else says, without verifying it for themselves. Where I give quotes, it will be because Marx says something better than I could, or else what he is

saying is so important that I want it to be in his words not mine, or simply to provide authority for what I have stated. Apart from that, I will be attempting to simply summarise what he says, and where appropriate to try to clarify what is being said. Obviously, that means that this is my interpretation of what he is saying, which is again, why you should read his original text alongside my summary of it. I thought of highlighting, in some way, where the text is me elaborating on what he says, rather than just summarising it. That would have been too onerous, and I could not guarantee to have done it accurately throughout. Usually, it will be obvious which is which, and where not I will try to make it clear. But, again read the original, alongside or after, and it will become clear.

Finally, Marx says that the hardest thing to understand is his initial analysis of the commodity. In line with that, I have spent more time on that trying to make it clear what Marx is saying. Already reading *Capital*, and *Theories of Surplus Value* again, I have discovered new insights that had escaped me in all the previous readings I have undertaken.

Engels Preface To The First English Edition (1886)

The *Preface* was written by Engels in 1886, three years after Marx's death. Engels comments,

“The publication of an English version of “Das Kapital” needs no apology. On the contrary, an explanation might be expected why this English version has been delayed until now, seeing that for some years past the theories advocated in this book have been constantly referred to, attacked and defended, interpreted and misinterpreted, in the periodical press and the current literature of both England and America.” (p 13)

The First German edition had appeared nearly twenty years earlier in 1867.

Samuel Moore, a Cambridge professor of mathematics, who helped Engels with the reworking of Marx's mathematical examples, in *Capital III*, and who was a long time friend of Marx and Engels, undertook the task of translation. Moore's work prevented him from completing the task, which was taken up by Marx's son in law, Edward Aveling. Eleanor Marx carried out the work of checking quotations and restoring the original texts of passages, taken by Marx from the work of English authors and official publications, that Marx had translated into German.

The First English edition was based on the third German edition of 1883, which was revised by Marx. Later editions of the English version incorporated the changes made by Engels into the 1890 German Fourth edition.

In editing the work, Engels says that they relied upon notes that Marx had left for a proposed English edition that had originally been intended for publication in the United States, ten years earlier, as well as passages from the French edition of 1873; the purpose being to strike a balance between retaining the essence of the original concepts formulated in German, and their rendering in English.

A further problem in that regard relates to terminology. Words, even in English, that have one meaning in ordinary life, have quite a different meaning when used in a scientific context. In ordinary life, the term capital can have any number of meanings, from small savings in the bank, to a million pound piece of equipment; profit is used to denote any monetary gain, and so on.

But, Engels points out that, in developing a whole new political economy, Marx also had to take existing terminology, and give it a new more precise historically specific meaning, as well as creating new terminology to describe concepts that existing political economy did not understand.

Moreover, as Engels would emphasise later, in his *Preface to Capital Volume III*, anyone looking for fixed and frozen definitions from Marx has not understood his historical materialist method. As Engels describes there, precisely because the phenomena being analysed, in the real world, change over time, so the reflection of those phenomena in the realm of ideas, in the concepts, categories and definitions, used to analyse and describe them, change also.

“Thus, though perfectly aware that both profits and rent are but sub-divisions, fragments of that unpaid part of the product

which the labourer has to supply to his employer (its first appropriator, though not its ultimate exclusive owner), yet even classical Political Economy never went beyond the received notions of profits and rents, never examined this unpaid part of the product (called by Marx surplus-product) in its integrity as a whole, and therefore never arrived at a clear comprehension, either of its origin and nature, or of the laws that regulate the subsequent distribution of its value.” (p 14)

Marx's original intention was to produce a “*Contribution To The Critique of Political Economy*”, of which “*Capital*” was to be just one part. He intended to incorporate into his analysis of capital an analysis of the development of economic thought, as historical excursus, to illuminate each specific element of his analysis. In fact, the whole work took on a different shape, as his study continued. Instead, this historical excursus, of the analysis of the development of economic thought, became the separate “*fourth*” volume of *Capital*, comprising the three volumes of *Theories of Surplus Value*.

However, elements of that approach remain in *Capital* itself, with Marx using quotations from different economists, not only to validate his own assertions, but also, as Engels puts it, “... *to indicate when, where, and by whom a certain proposition was for the first time clearly enunciated. This is done in cases where the proposition quoted is of importance as being a more or less adequate expression of the conditions of social production and exchange prevalent at the time, and quite irrespective of Marx's recognition, or otherwise, of its general validity. These quotations, therefore, supplement the text by a running commentary taken from the history of the science.*” (p 16)

The first volume of *Capital*, Engels states, stands on its own as a complete work, and had done so for twenty years. By contrast, the second volume was only complete in conjunction with *Volume III*. For that reason, Engels says, it is only when the third volume had been published in German that attention could be given to publication in English of both *Volume II* and *III*.

In fact, its questionable whether *Volume I* could be considered as a stand alone work, because of the range of questions it raised, in relation to the existence of a general rate of profit, the transformation of values into prices and so on.

Moreover, some of the conclusions, derived from *Volume I*, take on a different hue, when considered from the perspective of *Volume III*, let alone *Volume IV*.

Marx's Preface To The First German Edition (1867)

Marx begins by setting out that *Volume I* is a continuation of his “*Contribution To The Critique of Political Economy*”, published in 1859. The eight year gap between the two works was due to the repeated ill-health he suffered during the period.

Marx suffered repeated ill-health of various kinds throughout his life. Dr Anitra Nelson, a post-doctoral research fellow at RMIT University in Melbourne, says,

“Engels would later point out that overwork, smoking and poor eating habits, as well as his disorderly and sedentary lifestyle, were the reasons for Marx's constant illness.”

A professor of dermatology at the University of East Anglia in England named Stephen Shuster, in an article in the *Journal of Dermatology*, says medical evidence suggests that Marx suffered from a disease known as *hidradenitis suppurativa* in which the apocrine sweat glands—found mainly in the armpits and groin—become blocked and inflamed. According to Shuster while Marx complained of excruciating boils, he was actually a victim of this chronic skin disease. But, Marx suffered with liver problems from a young age, and many of his health problems were caused by living in poverty for a large part of his life, only relieved by handouts from family and friends. The same poor living conditions were responsible for the deaths of four of his seven children.

Marx's mother belonged to the family that founded the Philips electronics empire in the Netherlands, and Marx relied on loans from his uncle Lion Philips, a wealthy Dutch tobacco

manufacturer and industrialist, while he was in London, as well as support from Engels.

Rather than *Volume I* of capital being a continuation of the earlier work, the content of the “*Contribution*” is effectively incorporated into *Volume I*. As Marx says,

“The substance of that earlier work is summarised in the first three chapters of this volume. This is done not merely for the sake of connexion and completeness. The presentation of the subject matter is improved. As far as circumstances in any way permit, many points only hinted at in the earlier book are here worked out more fully, whilst, conversely, points worked out fully there are only touched upon in this volume. The sections on the history of the theories of value and of money are now, of course, left out altogether. The reader of the earlier work will find, however, in the notes to the first chapter additional sources of reference relative to the history of those theories.”
(p 18)

For any science, Marx says, the beginning is always the most difficult. That is because the beginning requires new thinking, for the development of whole new concepts and categories, which, once developed, form the building blocks and scaffolding upon which more complex ideas are developed.

“The value-form, whose fully developed shape is the money-form, is very elementary and simple. Nevertheless, the human mind has for more than 2,000 years sought in vain to get to the bottom of it all, whilst on the other hand, to the successful analysis of much more composite and complex forms, there has been at least an approximation. Why? Because the body, as an organic whole, is more easy of study than are the cells of that

body. In the analysis of economic forms, moreover, neither microscopes nor chemical reagents are of use. The force of abstraction must replace both. But in bourgeois society, the commodity-form of the product of labour — or value-form of the commodity — is the economic cell-form. To the superficial observer, the analysis of these forms seems to turn upon minutiae. It does in fact deal with minutiae, but they are of the same order as those dealt with in microscopic anatomy.” (p 19)

In fact, as Marx says later, before Man can exchange commodities one with another, he must first exchange his own labour with Nature. It is necessary to produce before it is possible to consume, and only when it is possible to produce more than is immediately required to consume does it become possible to exchange the surplus product with others, so as to obtain their product.

The essence of value, therefore, long before even commodity production – the production of goods and services for the specific purpose of exchange – resides in production, in the performance of labour. It is the definition of the *Law of Value* that Marx gave to Kugelmann.

*“Every child knows that any nation that stopped working, not for a year, but let us say, just for a few weeks, would perish. And every child knows, too, that the amounts of products corresponding to the differing amounts of needs demand differing and quantitatively determined amounts of society’s aggregate labour. It is **self-evident** that this **necessity** of the **distribution** of social labour in specific proportions is certainly not abolished by the **specific form** of social production; it can only change **its form of manifestation**. Natural laws cannot be abolished at all. The only thing that can change, under*

*historically differing conditions, is the **form** in which those laws assert themselves. And the form in which this proportional distribution of labour asserts itself in a state of society in which the interconnection of social labour expresses itself as the **private exchange** of the individual products of labour, is precisely the **exchange value** of these products.”*

It is the definition of value that Marx gives, in *Chapter 1*, in relation to Robinson Crusoe, isolated on his island, producing for no one but himself, and historically, it is the example he and Engels give of the situation under Primitive Communism, where the society produces not commodities, but use values, and yet which, similarly, decides upon its priorities for consumption (demand) on the basis of use value (utility), but is forced to allocate its available social labour-time (supply) in accordance with the *Law of Value*, i.e. that the value of each product is determined by the quantity of social labour-time required for its production, and the proportion of total supply it constitutes is determined by the proportion of available social labour-time required for its production.

Here is Marx’s historical materialist method in action. The analysis of concrete historical relations, uncovering the laws that govern them, even when those involved, at the time, had no knowledge of those laws. The members of the primitive commune had no notion of “*value*”, but the reality of the *Law of Value* no less imposed itself upon them. They had a given amount of available social labour-time, and knew immediately what proportion of that labour-time was required for different activities. Like Robinson, they were, therefore, able to compare what they could produce, in that time, against the utility they were able to obtain from each type of activity, so as to maximise their welfare.

With a full understanding of the concept of value, a future communist society will be able to do the same thing. As Marx says much later, in *Capital III, Chapter 49*,

“... after the abolition of the capitalist mode of production, but still retaining social production, the determination of value continues to prevail in the sense that the regulation of labour-time and the distribution of social labour among the various production groups, ultimately the book-keeping encompassing all this, become more essential than ever.”

The existence of value as labour historically precedes its existence in its later forms, just as it logically precedes those forms. Humans produced products – use values that result from free human labour, as opposed to use values gifted free by Nature – for their own direct consumption, long before they produced commodities. But, they had to calculate the value of those products – the labour-time required for their production – so as to determine how much of one product they had to forego, in order to obtain a quantity of another, given their limited labour-time to produce them.

But, this fundamental reality, that one product's value can be equated to a given quantity of some other product, whose production must be foregone, is also the historical and logical basis of the value-form. The exchange value of a commodity is precisely this relation of the value of two commodities, the value of commodity A expressed as a given quantity of commodity B. For example, 1 metre of linen = 10 litres of wine.

Unless value logically precedes exchange value, exchange value itself cannot exist, because it is impossible to equate two

non-existent metrics! But, value could not precede exchange value logically unless it preceded it historically. And that is what Marx and Engels also demonstrate later, by showing the way primitive communities began to exchange surplus products, which then began to take place as more formalised trade, with the ratio of exchange starting to be done according to these relative values, and as the trade increases, so communities begin to produce a portion of their output specifically for the purpose of exchange, so that products become transformed into commodities, and the value of those commodities assumes the form of an exchange value, “... *whose fully developed shape is the money-form*”.

Marx writes,

“With the exception of the section of value-form, therefore, this volume cannot stand accused on the score of difficulty. I presuppose, of course, a reader who is willing to learn something new and therefore to think for himself.” (p 19)

And, he was right, because despite the many historical illustrations of what he means by value as opposed to exchange value, despite his explanation given in his letter to Kugelmann, and so on, to this day there are Marxists who simply repeat a mantra that the *Law of Value* only applies under capitalism. In that case, we would have to conclude from Marx’s statement above, that,

“...the human mind has for more than 2,000 years sought in vain to get to the bottom of it all ...”

that capitalism then must itself be 2000 years old!

The physicist, Marx says, observes phenomena where they exist, or else by conducting experiments in the laboratory. It is impossible to study capitalism by way of laboratory experiments, and so it can only be observed where it exists, in its most mature form, and that was in Britain. But, Marx continues, capitalism already existed in a number of countries, and was spreading across the globe. Analysing capitalism in its most mature form, therefore, merely pointed to what the future held for others.

“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.” (p 19)

In fact, as Lenin also pointed out, in his *“The Development of Capitalism in Russia”*, where capitalism is less developed, the conditions for workers tend to be worse. Writing about Germany, Marx says,

“In all other spheres, we, like all the rest of Continental Western Europe, suffer not only from the development of capitalist production, but also from the incompleteness of that development. Alongside the modern evils, a whole series of inherited evils oppress us, arising from the passive survival of antiquated modes of production, with their inevitable train of social and political anachronisms. We suffer not only from the living, but from the dead.” (p 20)

Each society could learn the lessons of others that had gone before it, Marx says.

“And even 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.” (p 20)

His aim was not to present a view of the capitalists and landlords through rose-tinted glasses, but Marx says,

“... individuals are dealt with only in so far as they are the personifications of economic categories, embodiments of particular class-relations and class-interests. My standpoint, from which the evolution of the economic formation of society is viewed as a process of natural history, can less than any other make the individual responsible for relations whose creature he socially remains, however much he may subjectively raise himself above them.” (p 20-21)

Marx's view, presented here in 1867, was itself, for the reasons his theory dictates, still not fully formed and limited by the material conditions he analysed. So, for example, whilst pointing out that political economy confronted,

“... the most violent, mean and malignant passions of the human breast, the Furies of private interest.” (p 21)

he goes on to note that,

“... within the ruling classes themselves, a foreboding is dawning, that the present society is no solid crystal, but an organism capable of change, and is constantly changing.” (p 21)

having noted that the UK Blue Book *“Correspondence with Her Majesty’s Missions Abroad, regarding Industrial Questions and Trades’ Unions”* had referred to an inevitable change in relations between capital and labour across Europe, and the statement of US Vice-President Wade that, after the abolition of slavery,

“... a radical change of the relations of capital and of property in land is next upon the order of the day.” (p 21)

Similarly, Marx had earlier pointed to the fact that, in Britain, the factory inspectors were *“competent”*, and *“free from partisanship”* and had *“respect of persons”*. In part, it was these facts that led Marx to believe that, in Britain, a peaceful and legal social revolution might be possible. But, in fact, the reality was, as Engels was to later describe, this simply reflected a more mature form of capitalism, in Britain, whereby the interests of big industrial capital became dominant. The factory inspectors were really just representing the more enlightened self-interest of capital in general, as opposed to the immediate interests of individual capitalists, driven by competition. They represented nothing more than the advanced guard of the bourgeois social-democratic state that was established at the end of the 19th century, which incorporated the working-class, via the trades unions, and the social-democratic parties that rested upon the same ideology of bargaining within the system, and whose emblem was the welfare state.

Marx's Afterword To The Second German Edition (1873)

In his *Afterword*, we get the sense in which Marx's method can, in no way, be described as mechanistic or deterministic. Although Marx's dialectic stands Hegel on his head, so that rather than the real world, and the movement within it, being merely a reflection of the development of *The Idea*, it is instead the change of material conditions which determines the evolution of ideas, there is no mechanical relation between the two. The process is more one of combined and uneven development.

For example, in his *Preface* to the *First German edition*, Marx had written,

“As in the 18th century, the American war of independence sounded the tocsin for the European middle class, so that in the 19th century, the American Civil War sounded it for the European working class. In England the process of social disintegration is palpable. When it has reached a certain point, it must react on the Continent. There it will take a form more brutal or more humane, according to the degree of development of the working class itself. Apart from higher motives, therefore, their own most important interests dictate to the classes that are for the nonce the ruling ones, the removal of all legally removable hindrances to the free development of the working class. For this reason, as well as others, I have given so large a space in this volume to the history, the details, and the results of English factory legislation. One nation can and should learn from others. And even 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.” (p 20)

But, at the time of the *American Revolution*, in 1776, capitalism was most certainly not developed in that country. The material conditions existing in North America were not ones of a developed and dominant bourgeoisie. Rather, North America was characterised by an overwhelmingly peasant economy, based upon a proliferation of independent small farmers. The bourgeois ideas that stood behind its revolution, to overthrow the Crown, and establish a bourgeois republic, did not flow from capitalist productive and property relations in America, but were transplanted there from Europe.

They were transplanted there in the heads of European settlers, many imbued with the *Protestant Ethic*, as well as in the form of the transfer of ideas, developed in Europe, where bourgeois property relations did exist, and formed the basis of the development of those ideas.

In other words, once material conditions have changed, that change brings forth its reflection in the realm of ideas. But, once that has occurred, those ideas take on a life of their own, and themselves act as a material force for change. Ideas, once so developed, appear as books, culture, art etc. which itself acts upon all those who come in contact with it, wherever they are, and whatever material conditions exist within their particular society.

To take other examples, in Russia, in 1917, the economy not only was not based upon material conditions in which the working class was dominant, but where not even the bourgeoisie was dominant, and yet the powerful ideas developed by Marx, and which grew as a reflection of the growth of the European working-class, and of socialised production, took root there, and acted as a powerful force, in bringing about a revolution, which Trotsky states was largely carried through on the back of a peasant war.

The same is true of the Chinese revolution in 1949, which is carried out almost entirely by peasant forces, fighting under the banner of working-class ideas!

Yet, as Marx states, there are limits to this. That was behind his comments to Vera Zasulich, about the ability for Russia to skip the stage of capitalism, and move straight from the existence of the village commune to socialism. It is also, ultimately, what lies behind the failure of the Russian and Chinese revolutions.

Ideas, as material forces, can only take you so far. Ultimately, the material conditions required for the fruition of those ideas must also exist, or very rapidly be created. That is also the problem with liberal interventionism. It seeks to establish modern bourgeois social democracies, where the material conditions for such societies do not exist, and where it is not prepared to engage in the huge level of productive investment required for the creation of such material conditions.

Across the Middle East and North Africa, for example, there were good reasons why Bonapartist regimes existed, where feudal monarchies had been overthrown. The feudal monarchies were themselves largely a product of colonial

regimes established in the 18th, and 19th centuries. In the 20th century, when oil became a vital element in providing the energy that industrial economies required, the major oil suppliers, in the Gulf, were able to obtain large rents from the supply of oil, without the need for industrial development of their economy.

As Marx analyses later in *Capital*, rent is the form of revenue obtained by the landowner, and forms the basis of feudal relations. In those economies, where industrial development does occur, a bourgeoisie develops in opposition to both feudalism and colonialism. But, in many of these economies, this industrial development is weak, and they also face other vertical social cleavages, such as tribe, religion and so on, which play a greater role, given the lack of more powerful horizontal cleavages, along the lines of class. Industrial development, therefore, proceeds under the political regime of Bonapartism, much as it did in France under Louis Bonaparte, in Germany under Bismark, to an extent, in Britain, under Cromwell, and in Latin America under Bolivar and other such leaders.

In fact, the Liberal theorists, like Hayek, themselves place a greater stress upon the notion of liberty – meaning freedom essentially in relation to the individual and property – even if it has to be enforced by a “*benevolent despot*” than they do democracy, which they see as a potential threat to liberty, because the masses may seek to use it to impose upon the freedom of the individual and property owners.

“We have no intention, however, of making a fetish of democracy. It may well be true that our generation talks and thinks too much of democracy and too little of the values which

it serves. It cannot be said of democracy, as Lord Acton truly said of liberty, that it 'is not a means to a higher political end. It is itself the highest political end.' ... Nor must we forget that there has often been much more cultural and spiritual freedom under an autocratic rule than under some democracies – and it is at least conceivable that under the government of a very homogeneous and doctrinaire majority democratic government might be as oppressive as the worst dictatorship.”

(Hayek – The Road To Serfdom – Chapter VI)

In many ways, it could be argued that, prior to the establishment of bourgeois social democratic regimes, towards the end of the 19th century, after, at least, male workers got the vote, that the liberal regimes that existed were themselves a form of Bonapartism.

The true nature of bourgeois democracy, therefore, since the end of the 19th century, has been a bourgeois social democracy; a state within which the interests of big industrial capital are reconciled with those of the working class, upon which that capital relies for the furtherance of its political interests, as against small capital and landed property. The big industrial capital itself assumes the form of socialised capital appropriate to such a regime, in the shape of joint stock companies, co-operatives and state capital.

The mechanism by which this social democracy operates is through the mediation of the trades unions, and social democratic parties – including the social democratic elements within conservative and liberal parties.

Its only on this basis that the working class can be given the vote, and drawn into political activity, without threatening the rule of this big industrial capital. But, that requires that this industrial capital must itself have developed to such a stage whereby it can present the workers with at least the prospect of a more or less continual improvement in their material condition, which it does through improvements in the real wage (made possible by continual rises in productivity) through the development of welfare states, and through greater state intervention, regulation and planning both at the level of the large firm and of the state.

Without those material conditions in place, there is no possibility of establishing a stable bourgeois social democracy, and attempts at liberal intervention, to simply impose such a political regime are utopian and doomed to failure, as witnessed recently in Egypt, Syria, Iraq, Libya, Afghanistan and so on.

In his *Afterword to the Second German Edition*, Marx discusses this relation between ideas and material conditions further, in relation to Germany. He writes,

“The appreciation which “Das Kapital” rapidly gained in wide circles of the German working class is the best reward of my labours. Herr Mayer, a Vienna manufacturer, who in economic matters represents the bourgeois point of view, in a pamphlet published during the Franco-German War aptly expounded the idea that the great capacity for theory, which used to be considered a hereditary German possession, had almost completely disappeared amongst the so-called educated classes in Germany, but that amongst its working class, on the contrary, that capacity was celebrating its revival.” (p 23)

The reason was that, in Germany, capitalist development lagged behind that in Britain and France. Marx quotes, Gustav von Gülich, to illustrate that this lack of development left Germany relying upon the development of political economy elsewhere.

“This “science” had to be imported from England and France as a ready-made article; its German professors remained schoolboys. The theoretical expression of a foreign reality was turned, in their hands, into a collection of dogmas, interpreted by them in terms of the petty trading world around them, and therefore misinterpreted.” (p 23)

But, by the time capitalist development did take hold in Germany, it was no longer possible for German political economy to analyse things impartially, because the rise of a powerful working class, now armed with its own ideas, forced the ideologists of the bourgeoisie to focus their attention on its defence and justification.

“In so far as Political Economy remains within that horizon, in so far, i.e., as the capitalist regime is looked upon as the absolutely final form of social production, instead of as a passing historical phase of its evolution, Political Economy can remain a science only so long as the class struggle is latent or manifests itself only in isolated and sporadic phenomena.” (p 24)

It is for that reason that, in England, the last great representative of political economy is Ricardo, who begins his analysis from the perspective of the existence of class struggle, in the form of the struggle of the bourgeoisie against landed property, reflected in the struggle between rent and profit, and between

capital and labour reflected in the struggle over wages and profit.

But, for Ricardo, this class struggle, and its particular form, is not something that arises out of specific historically determined relations of production, but rather exists as a Law of Nature. Both Smith and Ricardo were engaged in the analysis of political economy at a time when the class struggle between capital and labour was minimal. As Marx sets out, in his analysis in *Volume I*, during the period of manufacture proper, i.e. before the introduction of machine industry, the size of the population, and the market, increased more or less in line with the growth of production.

“The contests about wages in Manufacture, pre-suppose manufacture, and are in no sense directed against its existence. The opposition against the establishment of new manufactures, proceeds from the guilds and privileged towns, not from the workpeople. Hence the writers of the manufacturing period treat the division of labour chiefly as a means of virtually supplying a deficiency of labourers, and not as a means of actually displacing those in work... During the manufacturing period, handicraft labour, altered though it was by division of labour, was yet the basis. The demands of the new colonial markets could not be satisfied owing to the relatively small number of town operatives handed down from the middle ages, and the manufactures proper opened out new fields of production to the rural population, driven from the land by the dissolution of the feudal system. At that time, therefore, division of labour and co-operation in the workshops, were viewed more from the positive aspect, that they made the workpeople more productive.” (Chapter 15, p 404-5)

Consequently, bourgeois political economy could focus its attention on a more scientific analysis of the unfolding economic realities, and, in particular, how those realities were being held back by the remaining feudal relations. As Marx describes, in *Theories of Surplus Value*, even Ricardo had no analysis of crises, as crises of overproduction of capital, because he had only ever experienced financial crises such as those that arose due to financial speculation, and the issuing of excess bank notes by the private banks.

It is only with the development of machine industry proper, and particularly with the introduction of the steam engine, on a large scale, so that many more machines can be put into operation, that output begins to expand faster than the growth of the market, so that commodities are overproduced, and glut the market.

“On the one hand, modern industry itself was only just emerging from the age of childhood, as is shown by the fact that with the crisis of 1825 it for the first time opens the periodic cycle of its modern life. On the other hand, the class struggle between capital and labour is forced into the background, politically by the discord between the governments and the feudal aristocracy gathered around the Holy Alliance on the one hand, and the popular masses, led by the bourgeoisie, on the other; economically by the quarrel between industrial capital and aristocratic landed property - a quarrel that in France was concealed by the opposition between small and large landed property, and that in England broke out openly after the Corn Laws.” (p 24)

So, on the one hand, already this introduction of machine industry proper brings about the first real crisis of

overproduction, in 1825, which leads to workers being thrown out of work. It is no longer that machines are required to compensate for an inadequate supply of labour, but begin to actually replace them, setting up an immediate basis for antagonism between capital and labour. The growing effect of this machinery was seen in the Luddite machine breaking activities between 1811-16. As Marx says,

“It took both time and experience before the workpeople learnt to distinguish between machinery and its employment by capital, and to direct their attacks, not against the material instruments of production, but against the mode in which they are used.” (Chapter 15, p 404)

And so this began, even during Ricardo's time, to be reflected in the writings of Sismondi, which focussed one sidedly on the evils of capitalism without recognising the progressive and revolutionary aspects it contained, as the necessary preconditions for historical development.

Later, Lenin had to spend considerable time arguing against the reactionary nature of such *“Economic Romanticism”*, put forward by the Narodniks, even though many of them were themselves committed revolutionaries. We see the same thing today, in the shape of advocates of *“anti-capitalism”*, and the reactionary, essentially peasant movements of Greens and other environmentalists.

As Marx describes in *“The Communist Manifesto”*, therefore, although during this period, the material conditions begin to develop for the increasing class struggle, between capital and labour, the workers still have not developed their own ideology to reflect their interests, and whenever they see the presentation of those interests by these reactionary forces, the memory of

their previous subjugation is still fresh enough in their minds as to align themselves with the bourgeoisie against it.

“The aristocracy, in order to rally the people to them, waved the proletarian alms-bag in front for a banner. But the people, so often as it joined them, saw on their hindquarters the old feudal coats of arms, and deserted with loud and irreverent laughter.”

(The Communist Manifesto)

In August 1819, in St Peter's Fields, in Manchester, it was not just workers who assembled in protest, but also industrialists opposing the political regime of landed property, and insisting on the need for electoral reform. The alliance between the bourgeoisie and proletariat continued through to the opposition to the Corn Laws.

Once the bourgeoisie secures political power in England and France, the door is open for the class struggle between capital and labour to become more acute. However, it should be born in mind that in neither England nor France did the bourgeoisie truly secure that political hegemony.

In his *Inaugural Address to the First International*, in 1865, Marx relates the comments of Lord Palmerston in opposing the *Irish Tenants Rights Bill*.

“The House of Commons, cried he, is a house of landed proprietors.”

In fact, it is only with the *1911 Parliament Act* that the industrial bourgeoisie, via the Liberal government, restricted the ability of the House of Lords to reject the Finance Bills put through the Commons, and its ability to continually frustrate

other bills. In France, the political regime of the bourgeoisie runs through the dictatorship of Napoleon Bonaparte, the constitutional monarchy of Louis Phillippe, and the regime of Louis Napoleon before the industrial bourgeoisie secure outright control via the establishment of the Third Republic.

Given what was said earlier, in relation to the requirement for the necessary development of the productive forces, to enable the establishment of a modern social democracy, it is clear why these bourgeois regimes pass through these phases of Bonapartism and other forms of despotism.

“Thenceforth, the class struggle, practically as well as theoretically, took on more and more outspoken and threatening forms. It sounded the knell of scientific bourgeois economy. It was thenceforth no longer a question, whether this theorem or that was true, but whether it was useful to capital or harmful, expedient or inexpedient, politically dangerous or not. In place of disinterested inquirers, there were hired prize fighters; in place of genuine scientific research, the bad conscience and the evil intent of apologetic.” (p 25)

As Engels describes in his later *Preface to “The Condition of the Working Class in England”*, in the earlier period, the working class had been drawn in behind the bourgeoisie as a whole, against the feudal aristocracy, but now it was the workers being drawn in behind the big industrial capital, not just against landed property, and the financial aristocracy, but also against all those backward looking sections of small capital. This in itself reflected a change in material conditions, as private capital was replaced by socialised capital, in the shape of the joint stock companies, co-operatives and state capital.

*“The Reform Bill of 1831 had been the victory of the whole capitalist class over the landed aristocracy. The repeal of the Corn Laws was the victory of the manufacturing capitalist not only over the landed aristocracy, but over those sections of capitalists, too, whose interests were more or less bound up with the landed interest – bankers, stockjobbers, fundholders, etc. Free Trade meant the readjustment of the whole home and foreign, commercial and financial policy of England in accordance with the interests of the manufacturing capitalists – the class which now [These words belong apparently not to Bright but to his adherents. See *The Quarterly Review*, Vol. 71, No. 141, p. 273.-Ed.] represented the nation. And they set about this task with a will. Every obstacle to industrial production was mercilessly removed...*

Chartism was dying out. The revival of commercial prosperity, natural after the revulsion of 1847 had spent itself, was put down altogether to the credit of Free Trade. Both these circumstances had turned the English working class, politically, into the tail of the ‘great Liberal Party’, the party led by the manufacturers. This advantage, once gained, had to be perpetuated. And the manufacturing capitalists, from the Chartist opposition, not to Free Trade, but to the transformation of Free Trade into the one vital national question, had learnt, and were learning more and more, that the middle class can never obtain full social and political power over the nation except by the help of the working class. Thus a gradual change came over the relations between both classes. The Factory Acts, once the bugbear of all manufacturers, were not only willingly submitted to, but their expansion into acts regulating almost all trades was tolerated. Trades Unions, hitherto considered inventions of the devil

himself, were now petted and patronised as perfectly legitimate institutions, and as useful means of spreading sound economical doctrines amongst the workers.”

(Preface to the Second German Edition of “The Condition Of The Working Class”)

That in itself was reflected in ideology.

“The Continental revolution of 1848-9 also had its reaction in England. Men who still claimed some scientific standing and aspired to be something more than mere sophists and sycophants of the ruling classes tried to harmonise the Political Economy of capital with the claims, no longer to be ignored, of the proletariat. Hence a shallow syncretism of which John Stuart Mill is the best representative. It is a declaration of bankruptcy by bourgeois economy...” (p 25)

In Germany, therefore, capitalism only reaches a sufficient level of development to enable a specific German political economy to develop after its antagonistic nature, between the interests of capital and labour, had already been manifest in England and France, and which, in turn, had led to the development of ideas that represented the specific interests of workers in those countries also being developed.

“And meanwhile, moreover, the German proletariat had attained a much more clear class-consciousness than the German bourgeoisie. Thus, at the very moment when a bourgeois science of Political Economy seemed at last possible in Germany, it had in reality again become impossible.” (p 25)

And its also under these conditions that bourgeois ideology itself divides into two great camps that essentially represent the

interests of fractions of capital. On the one hand are those wholly apologetic representatives of capital, that in essence look backwards, and represent capital as essentially being what it was in the 19th or even 18th centuries. They represent the interests of the small capitalists, who are the historical remnants of that form of private capital, as well as the idea of free markets, such as those which exist in the realm of finance. These are conservative forces, whose ideological representatives, in the 20th century were people like Mises and Hayek, and whose ideas are the foundation of conservative parties such as that in Britain or the Republican Party, in the US.

On the other hand are those ideologists who recognise the modern form of capitalism, based upon mammoth socialised production that requires a regulation and planning of production, over the longer term, via the intervention of the capitalist state. The representatives of this big industrial capital, therefore, are the social democrats, such as Keynes, and whose ideas are the foundation of social democratic parties like the Labour Party, or the US Democrats, as well as the social-democratic wings of conservative parties.

“Under these circumstances its professors fell into two groups. The one set, prudent, practical business folk, flocked to the banner of Bastiat, the most superficial and therefore the most adequate representative of the apologetic of vulgar economy; the other, proud of the professorial dignity of their science, followed John Stuart Mill in his attempt to reconcile irreconcilables. Just as in the classical time of bourgeois economy, so also in the time of its decline, the Germans remained mere schoolboys, imitators and followers, petty

retailers and hawkers in the service of the great foreign wholesale concern.” (p 25)

In Britain, these ideas took the form of Fabianism, and Hal Draper is correct in his analysis that in Germany, the basis of the SPD was at least as much the ideas of the Fabians and Lassalleans as it was the ideas of Marx.

“That very model of a modern social-democracy, the German Social-Democratic Party, is often represented as having arisen on a Marxist basis. This is a myth, like so much else in extant histories of socialism. The impact of Marx was strong, including on some of the top leaders for a while, but the politics which permeated and finally pervaded the party came mainly from two other sources. One was Lassalle, who founded German socialism as an organized movement (1863); and the other was the British Fabians, who inspired Eduard Bernstein’s “revisionism.””

(Hal Draper – The Two Souls of Socialism, Chapter 5)

After Marx's *Capital* first appeared in Germany, the bourgeoisie attempted to ignore it, but the growth of the workers' movement, and the need to present ideas that specifically reflected the interest of workers, as against capital, made that impossible. But, the German representatives of the bourgeoisie were already incapable of presenting a rebuttal of those ideas that were being increasingly popularised through the workers' press. Even to this day, the literally billions of dollars that are spent through the bourgeois educational systems have only been able to provide ever more detailed descriptions of the way capitalist economies work, whilst contributing nothing to the understanding of the driving

mechanism of those economies, or refuting the analysis of that mechanism provided by Marx.

Marx then goes on to a discussion of his scientific method, and the extent to which it was misunderstood.

Rather than just relying on his own response to his critics, Marx refers to the “*excellent*” work of Professor Nikolai Sieber (“*David Ricardo’s Theory of Value and of Capital*”) in which he refers to Marx’s work as a necessary sequel to the work of Smith and Ricardo. Sieber's own work is marked, Marx says, by

“ *... the author’s consistent and firm grasp of the purely theoretical position.* ” (p 26)

The Comtist *Revue Positiviste* had complained, simultaneously, that Marx treated economics metaphysically and also that he confined himself, “*to the mere critical analysis of actual facts, instead of writing receipts (Comtist ones?) for the cook-shops of the future.*” (p 26)

In response to the charge of metaphysics Marx responds by quoting Sieber.

“*In so far as it deals with actual theory, the method of Marx is the deductive method of the whole English school, a school whose failings and virtues are common to the best theoretic economists.*”

The other criticism of Marx's work was the dialectical method of presentation. But, Marx quotes a number of reviews, which described his presentation favourably.

“The Saturday Review always hostile to my views, said in its notice of the first edition: “The presentation of the subject invests the driest economic questions with a certain peculiar charm.” The “St. Petersburg Journal” (Sankt-Peterburgskie Vedomosti), in its issue of April 8 (20), 1872, says: “The presentation of the subject, with the exception of one or two exceptionally special parts, is distinguished by its comprehensibility by the general reader, its clearness, and, in spite of the scientific intricacy of the subject, by an unusual liveliness. In this respect the author in no way resembles ... the majority of German scholars who ... write their books in a language so dry and obscure that the heads of ordinary mortals are cracked by it.” (Note 1, p 26)

But, in relation to this dialectical method of presentation, Marx also quotes at length from a critique of his work in the *St Petersburg European Messenger*. The comments contained in it amount themselves to nothing but a presentation of the dialectical method, Marx comments. It is worth, therefore, summarising those comments.

“The one thing which is of moment to Marx, is to find the law of the phenomena with whose investigation he is concerned; and not only is that law of moment to him, which governs these phenomena, in so far as they have a definite form and mutual connexion within a given historical period. Of still greater moment to him is the law of their variation, of their development, i.e., of their transition from one form into another, from one series of connexions into a different one.” (p 27)

The determining social law, therefore, is not just that one form of society gives way to some other form of society, so that

capitalism as much as feudal society and slave society before it is only temporary and transient, but that the reason that one form of society gives way to another is itself rooted in material conditions, in particular, those which govern the way man goes about production. The determining factor, therefore, is not ideas that somehow spring ready formed from out of the ether into Men's heads, and cause them to develop some new type of society, but material facts, which lead to a process of development in much the same way that evolution causes a development of species in the natural world.

Marx himself had made a similar point in his *Preface to the First German Edition*, where he wrote that his standpoint was, “... *the evolution of the economic formation of society is viewed as a process of natural history...*” (p 21)

“Marx treats the social movement as a process of natural history, governed by laws not only independent of human will, consciousness and intelligence, but rather, on the contrary, determining that will, consciousness and intelligence. ... If in the history of civilisation the conscious element plays a part so subordinate, then it is self-evident that a critical inquiry whose subject-matter is civilisation, can, less than anything else, have for its basis any form of, or any result of, consciousness. That is to say, that not the idea, but the material phenomenon alone can serve as its starting-point. Such an inquiry will confine itself to the confrontation and the comparison of a fact, not with ideas, but with another fact.” (p 27)

On this basis, Marx's method proceeds by first objectively gathering these facts, and comparing them in one period as to another. The idea that any law can operate in one period as in another must be rejected because the manifestation of that law

will differ according to the specific historical conditions, which exist in each particular period.

“In other words, economic life offers us a phenomenon analogous to the history of evolution in other branches of biology. The old economists misunderstood the nature of economic laws when they likened them to the laws of physics and chemistry. A more thorough analysis of phenomena shows that social organisms differ among themselves as fundamentally as plants or animals. Nay, one and the same phenomenon falls under quite different laws in consequence of the different structure of those organisms as a whole, of the variations of their individual organs, of the different conditions in which those organs function, &c. Marx, e.g., denies that the law of population is the same at all times and in all places. He asserts, on the contrary, that every stage of development has its own law of population. ... With the varying degree of development of productive power, social conditions and the laws governing them vary too.” (p 28)

Marx then describes his own position on the difference between his method of analysis and of presentation.

“Of course the method of presentation must differ in form from that of inquiry. The latter has to appropriate the material in detail, to analyse its different forms of development, to trace out their inner connexion. Only after this work is done, can the actual movement be adequately described. If this is done successfully, if the life of the subject-matter is ideally reflected as in a mirror, then it may appear as if we had before us a mere a priori construction.” (p 28)

But, Marx continues, his dialectic is the opposite of that of Hegel. For Hegel, it is the process of thinking within the human brain, “... which, under the name of “*the Idea,*” he even transforms into an independent subject, is the demiurgos of the real world, and the real world is only the external, phenomenal form of “*the Idea.*” (p 29). But, for Marx, *The Idea* is merely a reflection of the material world itself. The reason for utilising the dialectical method of presentation, and his recognition of the role of Hegel, was itself a statement by Marx of his response to those, “...who now talk large in cultured Germany, to treat Hegel in the same way as the brave Moses Mendelssohn in Lessing’s time treated Spinoza, i.e., as a “dead dog.”” (p 29)

The Hegelian dialectic justified the existing state of things. The unfolding of *The Idea* was essentially the process of creating this perfect state, via the actions of philosopher kings. But, the rational materialist dialectic is its opposite, because it directly posits the concept of continual material change, and consequently changes in the form of society.

“... because it regards every historically developed social form as in fluid movement, and therefore takes into account its transient nature not less than its momentary existence; because it lets nothing impose upon it, and is in its essence critical and revolutionary.” (p 29)

Preface (1872) And Afterword (1875) To The French Edition

The *French Edition of Capital I* was published in parts, and Marx wrote to Maurice Lachâtre, in March 1872, concerning the project, his letter acting as a *Preface* to the work. In his letter to Lachâtre, Marx sets out that the good thing about serialisation would be to make it more accessible to the working-class. The negative was that, because the first chapters are the most difficult, serialisation would prolong the process of the reader obtaining the answers they sought, and they “*may be disheartened because they will be unable to move on at once.*” (p 30)

The work was translated by J. Roy, and Marx worked to modify Roy's text to make it “*more intelligible to the reader.*” But, this led to an uneven style, as these modifications were made similarly in parts. It led Marx to revise the entire text, which was the *Second German Edition*. These revisions and references to the French edition formed the basis of the *Third German Edition*, which Marx did not live to publish, and which was published by Engels.

Preface To The Third German Edition (1883)

Marx died on March 14th 1883. The task fell to Engels, therefore, of publishing the remaining volumes of *Capital*, along with the new German edition of *Capital I*, for which Marx had left notes, including his references to the French edition.

Its useful to remind dogmatists, let alone those with less than honest intent, when they use this or that phrase or sentence from Marx's work, to prove a point, that neither was he infallible, nor were his writings written in stone. Each new edition was evidence of that, as Marx corrected "*slips of the pen*", poor formulations, and yes, even errors.

Marx had intended a significant change for the *Third Edition of Volume I*.

"It was Marx's original intention to re-write a great part of the text of Volume I, to formulate many theoretical points more exactly, insert new ones and bring historical and statistical materials up to date. But his ailing condition and the urgent need to do the final editing of Volume II induced him to give up this scheme. Only the most necessary alterations were to be made, only the insertions which the French edition ("Le Capital." Par Karl Marx. Paris, Lachâtre 1873) already contained, were to be put in." (p 32)

The additions and revisions related mostly to the later part of the book on "*The Accumulation of Capital*". Engels' revisions were based on these notes left by Marx, his revisions to the

Second German Edition, as well as verbal instructions given by Marx during their conversations.

“Thus not a single word was changed in this third edition without my firm conviction that the author would have altered it himself.” (p 33)

Engels also explained the reason for not changing the units of measurement used in the book, despite the fact that, in Europe, the metric system had become dominant, and Germany now had a new currency. The reason, he explained, is because the examples were taken from English industry, and England remained the dominant global economic power, with global trade being conducted in pounds sterling, and using imperial measures. It is a justification which no longer holds, and where possible I have used decimalisation rather than fractions, and metric measurement rather than imperial for ease of understanding and calculation.

Preface To The Fourth German Edition (1890)

The main changes in the *Fourth German Edition* were to formalise the text and footnotes. Some longer footnotes were consolidated into the text, and additional notes were inserted for clarification, or where historical developments had occurred.

A large part of the *Preface*, however, is taken up with a discussion of a controversy that began during Marx's lifetime and continued after his death. It surrounded challenges to Marx's literary honesty.

In his *Inaugural Address To The First International*, Marx had referred to a *Budget Speech*, by Gladstone, (April 16th 1863). Marx also refers to the speech in *Capital*. The point being made was the extent to which the economic prosperity of the time was being enjoyed by the whole population or only a rich few.

Marx quotes Gladstone's Budget Speech, where he states that such a situation, where only a rich few benefited would be one that caused him “*apprehension*” and “*pain*”, and yet he continues.

“The augmentation I have described and which is founded, I think, upon accurate returns, is an augmentation entirely confined to classes possessed of property.” (p 37)

Marx's use of this quote, in *Capital*, provoked a response from the *German Manufacturers' Association*, via the journal *Concordia*. An article, attacking Marx, was published

anonymously in March 1872. It later transpired that the article had been written by Lujo Brentano.

In this article, it was charged that Marx had falsified Gladstone's Speech, in which it was claimed the sentence about, "*this intoxicating augmentation of wealth and power ... is ... entirely confined to classes of property*" was not to be found, and must, therefore, have been fraudulently inserted by Marx. In fact, it was the case that in the *Hansard* report of the speech, those words do not appear, but things were not that straightforward.

Marx had not quoted the speech directly from *Hansard*, but from newspaper reports of the speech. Had it been the case that Marx could not produce newspaper reports agreeing with his claim he would have been on shaky ground, but, in fact, Marx produced several newspaper reports of the speech, all recorded at the time, which backed up his account.

Marx brought forward in evidence a report in *The Times*, which more or less repeated exactly what Marx had said. *The Times* stated,

"That is the state of the case as regards the wealth of this country. I must say for one, I should look almost with apprehension and with pain upon this intoxicating augmentation of wealth and power, if it were my belief that it was confined to classes who are in easy circumstances. This takes no cognisance at all of the condition of the labouring population. The augmentation I have described and which is founded, I think, upon accurate returns, is an augmentation entirely confined to classes possessed of property." (p 37)

Brentano complained that it was normal to rely on *Hansard* rather than second hand newspaper reports. Marx responded that it was clear that after the speech, Gladstone had got the passage removed from *Hansard*, a practice that was not unknown.

Brentano claimed that the *Times* report and account in *Hansard* were “*substantially in complete agreement*” despite the fact that the *Times* report included the supposedly falsified statement, whilst the *Hansard* report did not.

Marx gave a further response on August 7th, in which he also quoted the reports of the speech from the *Morning Star* and the *Morning Advertiser*, of April 17th 1863. Both reports echoed Marx's statement and the report in the *Times*. Both referred to Gladstone's comment that he would look in apprehension if the increase in wealth were confined to “*classes who are in easy circumstances*” and both reports referred to his further comment that it was the case that this augmentation was, in fact, “*... entirely confined to classes possessed of property.*” (p 37)

Marx went on to compare the three newspaper reports with the *Hansard* report to show that it was clear, by comparing the texts that Gladstone had conjured away the phrase in the *Hansard* report.

The matter then seemed to have been settled, until after Marx's death, Engels states that rumours began to emanate from Cambridge University about a literary crime committed by Marx, in *Capital*. The reports of the rumours were presumably provided by Samuel Moore.

On 29th November 1883, a letter in the *Times*, from Sedley Taylor, of Trinity College, outed Brentano as the anonymous author of the original charges, and spoke about his “*masterly conduct*” in supposedly exposing Marx’s duplicitous quotation.

Eleanor Marx responded to Taylor, but the *Times* refused to publish her letter, so she published her response in the monthly magazine *Today* (February 1884). She asked Taylor whether Marx had “*lyingly inserted*” the phrase attributed to Gladstone or not? Taylor could not deny that the phrase appeared in the *Times* report, and in the other newspaper reports cited by Marx.

Taylor then adopted a fall back position that it was not about this phrase, but about the actual meaning of Gladstone's speech, and whether this had been distorted. But, here, he is forced to admit that on his reasoning, Gladstone's speech contains “*a verbal contrariety*”.

Having praised Brentano's masterly approach, Taylor follows Marx in quoting from the *Times*, rather than, as Brentano had insisted must be done, from *Hansard*. But, according to *Hansard*, this verbal contrariety did not exist, because the second phrase had not been uttered!

Engels quotes Eleanor Marx's summing up.

“Marx has not suppressed anything worth quoting, neither has he ‘lyingly’ added anything. But he has restored, rescued from oblivion, a particular sentence of one of Mr. Gladstone’s speeches, a sentence which had indubitably been pronounced, but which somehow or other had found its way — out of Hansard.” (p 40)

Since that time, Engels concludes, no one had dared cast aspersions over Marx's literary honesty.

**Capital Volume I,
Part I
Commodities and Money**

Chapter 1 - Commodities

Section 1

The Two Factors of a Commodity: Use-Value and Value

Marx begins his analysis of *capital* with an analysis of the *commodity*. This is because, as he says in *The Preface*, although it's easier to make a visual analysis of a whole body than it is to make a microscopic analysis of the cells that make up the body, unless you do the latter, it's impossible to get an understanding of how the whole body works. Commodities are like the cells of a body, they are the basic building blocks of capital. As he says,

“The wealth of those societies in which the capitalist mode of production prevails, presents itself as an immense accumulation of commodities, its unit being a single commodity.”

What is a commodity? Marx describes it in terms of the heading of the chapter (*The Substance of Value and the Magnitude Of Value*). It combines two different things. Firstly, anything, in order to be a commodity, must satisfy some human want. That doesn't mean it has to be generally considered useful. For example, it might be generally considered that crack-cocaine is not socially beneficial or useful, but the fact that some individuals want it, and are prepared to pay for it, qualifies it as being wanted. For those who want it, it has what Marx describes as *use value*, or what orthodox economics

calls *utility*. This is one of the elements then of a commodity, its use value.

As Marx describes it, it is the *substance of value*, and its nature resides in its *quality* rather than *quantity*. Just as it is not possible to compare apples with oranges, so we cannot compare the quality, the use value of any commodity to that of another. For one thing, what is useful to you may not be to me.

It may be difficult to see the usefulness of some commodities at first. As Marx says, though, we are not bothered to what purpose people want to put these commodities. History shows the various uses to which commodities are put. For example, no one originally had a use for lasers. Now they are used in surgery, in CD's and DVD's and so on.

Commodities are also not just wanted by final consumers. Commodities are wanted by capitalists too. Coal is a commodity which is wanted by final consumers to burn, to provide them with warmth. But, coal is also wanted by capitalists to burn in power stations, or to fire kilns.

In short, the first requirement of a commodity is that it is wanted by somebody for something. It does not have to be a physical thing either. Entertainment provided by a singer, an actor or a dancer is wanted by some people to fulfil a need. But, the utility, the usefulness, the quality of the use value, cannot be separated from the use value itself. The utility of generating heat, provided by coal, cannot be separated from the coal itself – though, of course, a different heat can be produced by different use

values, for example, gas, wood, oil and so on. The utility provided by the entertainment of a singer cannot be separated from the singer. The utility provided by a recording of the singer is a different utility than that of a live performance. In both cases, the utility is a function of the quality and quantity. A high quality coal providing more heat than a poor quality coal. A larger quantity of coal more heat than a smaller quantity of the same coal, for example.

Being a use value is a necessary condition for being a commodity, but not all use values are commodities. Commodities are also things produced to be sold or exchanged. But, if a parent sings to a child, that is a use value, but it is not a commodity. If I dig coal or peat from my land to burn, it is a use value, but it is not a commodity, because in both cases they have not been produced to be sold. There are other things which are use values, which are not commodities. For example, air is a use value. Without it we could not live. But, it is not a commodity because it does not have to be bought, but is freely available. However, there was someone, recently, who was selling bottled fresh air. Here what is being sold is not air in general, but some specific air, to meet a specific need, and the labour involved in bottling it, however deluded we might think that need to be!

For most of Man's history, what has been produced are use values that were not commodities. They were useful items, including entertainment and the like, which were produced to be consumed directly, rather than to be sold or exchanged. Throughout Man's history, it has been the quality and quantity of these use values, produced and accumulated, that has been the measure of true wealth.

It is only when these use values begin to be traded extensively that the other element within the commodity – the *value* – manifests itself. Moreover, the more society organises itself to produce for the purpose of *exchange*, rather than direct consumption, the more it is this *value* that becomes dominant and becomes the measure of wealth. As this trade and exchange of use values increases, so this value itself takes on a specific form, the form of *exchange value*, the value of one commodity as expressed by a quantity of some other use value. It is to understanding the nature of this exchange value that Marx then turns.

The exchange value of commodities, the amount of one that exchanges for another, e.g. 1 ton of iron for 1,000 metres of linen, is constantly changing according to time and place. It seems then that the exchange value of a commodity cannot be intrinsic to it, but must be determined outside it. This indeed, is what orthodox economics claims. It claims that value is not objective i.e. is not something measurable within the commodity, but is subjective, i.e. is in the eye of the beholder, and is a function of the utility that consumers derive from it. Different consumers derive different levels of utility, and so value each commodity differently (or even the same commodity differently depending on how much of it they already have, and depending on the time and place). Exchange value then becomes a matter of the collective values that these consumers place upon different commodities at different places and times, what they are prepared to pay for them, and how much they demand in exchange to give them up. For orthodox economics then exchange value is identical to market price.

Marx's theory, on the contrary, shows that value is objectively measurable. What appears, at first, to be an accidental rate of exchange has very real material causes, and the reason that this rate of exchange is constantly changing is not because of different levels of utility derived by consumers, or changing preferences, but is due to the continually changing conditions of production, which bring about different values, and consequently exchange values, even when the utility provided by the commodity remains exactly the same.

That one commodity exchanges for another in a given proportion means that there is an equality between them, in so far as some shared quality they possess. For example, if I am comparing the weight of different items I might find that, on one side of the balance, I have to place four plums to balance two apples. The relation is determined by the relative weight of plums and apples. I can make the comparison only because they both share the quality of having *mass*.

If 1 ton of iron exchanges for 1000 metres of linen, it means that, similarly, the value of both is equal at this point. What quality is it that they share that makes this comparison possible. It is that they both possess value. Just as the weight of 8 plums and 4 apples is expressible as a given quantity of some third item, e.g. a 1 kg. iron weight, so the value of the 1 ton of iron and the 1000 metres of linen is expressible in a single third term. This third term, Marx argues, cannot be reducible to some physical characteristic of the commodity, such as its weight, hardness, length, chemical composition etc., all of which determine its use value, because it is not possible to directly compare the use value of one thing

with another, and, as stated above, exchange values change even when all of these physical characteristics remain the same.

What then is the common thing they all share? They are the products of free human labour. But, as exchange values, rather than use values, the form of the commodity is now immaterial. The owner of a commodity has no interest in it as a use value. It does not matter whether it is a house or a table, or a ton of iron. In fact, the owner of a commodity does not see it as a use value, or otherwise they would not want to exchange it. Its only use to them is as an exchange value, as something they can exchange for something else they want. All we are concerned with is that it is an exchange value, and so when we consider the free human labour that is the measure of this exchange value, it is not the labour of the builder, carpenter or ironworker that we are concerned with, but human labour in the abstract, i.e. general human labour, stripped of all its particular characteristics. In fact, we can no more compare the labour of a builder with that of a spinner than we can the use value of an apple to an orange, or a house to a length of linen.

It should be noted here that there is debate and controversy over the definition of this *abstract labour*. Marx uses different definitions for abstract labour. For example, on *page 46*, he describes it as total output divided by total labour used to produce it.

“The total labour power of society, which is embodied in the sum total of the values of all commodities produced by that society, counts here as one homogeneous mass of human labour power, composed though it be of

innumerable individual units. Each of these units is the same as any other, so far as it has the character of the average labour power of society, and takes effect as such..”

He uses different definitions later.

The common substance that all of these commodities share is that they are values, and the quantity of value each possesses is determined by the amount of abstract labour required for their production. Because changing conditions in relation to time and place, mean more or less abstract labour is required for the production of any commodity, so the value of the commodity rises or falls. The changes in the exchange value, of the commodity, are a consequence of these changes in its value. Later Marx shows that where the value of two commodities changes in the same direction, and in the same proportion, the exchange value of one with the other remains, therefore, unchanged. This is an indication of the difference between value and exchange value.

The amount of this abstract labour, contained in the commodity, is measured by time. Value is measured by *labour-time*, in hours, days, weeks etc. In fact, capitalists themselves use this measure. Productivity in car factories is measured in terms of man hours required to build a car.

Why then do not the least efficiently produced commodities have the highest exchange values? Competition! Although all commodities, indeed all products of human labour, have their own *individual value*, there is only one exchange value, for commodities

of the same type. If a producer is inefficient and requires more labour-time to produce a commodity than his competitors – the individual value of their commodity is still determined by the labour-time used for its production – but, they are only able to sell the product at the exchange value, which is the average amount of labour-time required by all producers. So, the inefficient producer would make less profit, or even a loss. Every producer, therefore, has an incentive to keep the labour-time required for production to a minimum.

The average amount of labour-time required for the production of a commodity Marx calls the *socially necessary labour-time*.

“The labour time socially necessary is that required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time. The introduction of power-looms into England probably reduced by one-half the labour required to weave a given quantity of yarn into cloth. The hand-loom weavers, as a matter of fact, continued to require the same time as before; but for all that, the product of one hour of their labour represented after the change only half an hour’s social labour, and consequently fell to one-half its former value.” (p 47)

Of course, whether something is a use value or not can only be confirmed if someone wants to buy it, when it has been produced. If no one does then it is not a use value, and the labour used in its production was also, therefore, not socially necessary. As a result, the commodity has no exchange value, and the labour used in its production was wasted. This is one of the differences of capitalism

with previous forms of production, and one of the problems with it. In previous forms of production, where production is for direct consumption, by the producer and their family, or is to meet the needs of a feudal lord, clergy etc., all production is immediately of use values, because only what is needed is produced.

Even where production of commodities occurs, on a small scale, to be exchanged by *barter*, this remains the case, because A asks B to produce X for them in exchange for A producing Y for B. For example, a blacksmith agrees to spend 2 hours shoeing a peasant's horse, in exchange for the peasant working on the blacksmith's land for 2 hours. *Production* and *consumption* are always in balance. Capitalism produces masses of commodities without knowing if anyone wants them. Production and consumption are no longer necessarily in balance, and so huge shortages or surpluses can arise, causing huge amounts of waste, and leading to economic crises.

NB. To avoid confusion, for those unfamiliar with Marx's economic theory, it should be pointed out here that, in speaking about labour-time required for production, he was not merely talking about the immediate labour, or as he calls it living labour. Marx was well aware that a part of the value of commodities is comprised, in part, by other inputs, for example, the raw materials, the machinery and so on. But, as stated at the beginning, all of these are commodities too, and their value is passed into the commodities they help produce, and is also, therefore, measurable as a certain amount of labour-time. Marx calls the labour, in those parts of capital, *dead labour*. When he talks about the labour-time required for

production, he means the sum of both this dead and living labour.

Section 2

The Two-fold Character of the Labour Embodied in Commodities

Different types of use values are produced by different types of useful or '*concrete*' labour. Coats are produced by tailors, whereas linen is produced by weavers. If it were not the case that there was the difference between different types of concrete labour, if they did not have different qualities there would be no different types of use values either. There would only be a single type of use value e.g. coats. In that case, as Marx points out, there could be no exchange because coats do not exchange for coats.

So, a precondition for commodity production is the *division of labour*. But, not vice versa. Primitive societies develop a division of labour without commodity production.

Whatever the form of society, every aspect of material wealth, not provided for by *Nature*, is the product of concrete useful labour. It is a nature imposed necessity, without which there is no material exchange between *Man and Nature*. Without it there is no life.

Material wealth is a combination of the products of nature and of labour. As *William Petty* puts it, Labour is the father and Nature the mother. Labour is only able to bring about changes in the products of Nature.

If a coat has the same value as 20 metres of linen, whilst both are the products of very different kinds of labour, then clearly, in order for them to be measured against each other, according to the labour-time required for their production, the labour measure cannot be the specific, concrete labour used, but only some abstract type of labour, to which all labour can be reduced.

Consider the measure we call the *foot*. Originally, measurements were taken using actual feet. Over time, as more accurate and consistent measures were required, an '*abstract*' foot was decided upon.

Marx describes abstract labour as concrete labour stripped of all its specific characteristics. He also describes it as the labour any ordinary human could undertake.

“It is the expenditure of simple labour power, i.e., of the labour power which, on an average, apart from any special development, exists in the organism of every ordinary individual. Simple average labour, it is true, varies in character in different countries and at different times, but in a particular society it is given.” (p 51)

There is debate, as stated earlier, over the definition of abstract labour, and I think there are problems with the formulation Marx adopts here. This is not the place to discuss it, however.

Various use values are the products not of '*Simple*' labour power, but of complex labour power. This '*complex*' labour merely counts as a multiple of an hour of simple labour. For example, an hour's labour of a brain surgeon might count as 10 hours of simple labour. Exactly what

this multiple is can only be determined, in practice, by looking at the rate of exchange of the products of these different types of labour, in the market.

As a consequence of anthropological studies, throughout the world, we know that this basis, of determining the rates at which different commodities exchanged, was not something simply assumed or deduced by Marx, in the same way that *neo-classical theory* assumes or deduces that consumers perform complex calculations, in their heads, of comparative amounts of *marginal utility*. The exchange of commodities, based on calculation of expended labour-time, is historical fact.

The emergence of exchange value is synonymous with the emergence of trade. In primitive societies, trade rarely took place, because there was usually little or no social surplus to trade, and these societies were run as co-operative societies, like large families, where land was owned and farmed collectively, so there was no concept of trade, within the society. Where trade did take place, it was between different tribes or villages, as a result of an unexpected surplus, or a crisis, requiring certain goods to be obtained from outside the tribe. It was under these circumstances that trade began and was commonly a trade of people as part of ceremonies. For example, the daughter of a tribal elder may be married to someone from another tribe. Even then, this trade had some element of labour content. If a woman from one tribe was married into another, the other tribe was considered to owe a woman back to the first tribe. The question then arose as to what the basis of exchange would be.

The idea of labour being the only measure by which commodities could be valued, relative to each other, goes back to *Plato* who referred to it in "*The Republic*". At around the same time, this concept of value was proposed by the Chinese philosopher, *Mang-Tsze*, and "*with other Chinese writers (e.g. Lu Chih, in the eighth century A.D.) soon came to the view that **Labour was the only source of value.***" (*Mandel, Marxist Economic Theory, p 694*)

Plato also identified the dual nature of commodities as having a use value and an exchange value. There is considerable documented evidence to show that labour time has been used from the beginning of trade as the measure of exchange value. References for this documentation are given below. The list is far from a complete one.

1. Ruth Bunzel, in Frank Boaz, "*General Anthropology*" (p 346) says primitive people consider only labour "scarce".
2. The economy of the Indonesian village community is based on calculation of hours of labour expended. (J.H. Boeke – '*De Theorie der Indische Economie*' p 39.)
3. The same was true of Japan. "*the principle of exchange is people and days. Thus if household A has two people at work on household B's field for two days, household B is expected to provide its*

equivalent on A's fields..." (John Embree – "*Mura, A Japanese Village*" p 100-1.)

4. In Africa, Ralph Piddington tells us that a peasant from the Heh tribe who orders a spear from the smith works on the smith's land while he is making the spear. ("*An Introduction to Social Anthropology*" p 275).
5. Kautilya's '*Arthashastra*' (p 147) says that in Ancient India during the Maurya epoch, "*labour and products of labour governed the rules of economic life.*"
6. Amongst the Incas "... *tribute was to consist of labour, time and skill as a workman, artisan or soldier.*" John Collier ("*The Indians of the Americas* p 61-2).
7. The same was true of Europe, in the early Middle Ages. Villagers were expected to work three days on the Lord's land and three on their own. (See *Polyptique of Saint Germain-des-Pres and the descriptio villarum of the Abbey of Lobbes*).
8. "*Should a Dadaga wish more of these utensils, he would have to work in the field of the Kota iron worker of whom he requested them while they were being forged.*" David Mandelbaum ("*Notes on Fieldwork in India*" in Herskovits "*Economic Life of Primitive Peoples*" p 136-7)

9. Moreover, since the dawn of petty commodity production, about 3000 B.C., all labour has been considered equivalent, regardless of its special character. On the tablets, inscribed in a Semitic language, found at Susa, the wages in the household of a prince are fixed uniformly at 60 qua of barley for the cook, the barber, the engraver of stones, the carpenter, the smith, the cobbler, the cultivator, the shepherd and the donkey man. Clement Huart and Louis Delaporte (*"L'Iran antique"* p 83).

10. *"He (the medieval artisan) has to produce, in accordance with fixed conditions, cloth which is 'not personal but official, municipal'; his labour, one might say is expressly objective not subjective."* Georges Espinas (*"Les Origines du Capitalisme"* Vol 1. p 40).

11. In a study of the Guatemala Indians of Panajachel, Professor Sol Tax tells us that exchanges and equivalences are strictly calculated and a woman who could not read or write was able to state within a penny the exact cost of production of a carpet on which she had worked the whole of one day. Sol Tax (*"Penny Capitalism"* pp 18, 15, 80.)

12. The corporations of Antiquity and in those of China and Byzantium and in the European and Arab Middle Ages fixed rules, known to all, laid down alike the labour time to be devoted to the making of each object, the length of apprenticeship, its cost and the equivalent normally to be asked for each commodity.

Georges Espinas (*“Les Origines du Capitalisme”* pp 118, 140-2.)

(Source: Ernest Mandel – *“Marxist Economic Theory”*)

Although initially all labour was valued equally, later with the division of labour, and increased specialisation, some highly skilled labour was recognised as more highly valuable, or complex labour and adjustments of equivalent labour time, to be exchanged with it, was made in calculation.

I have already mentioned Plato as one of the first to recognise labour as the measure of exchange value, but the fact that calculation of labour time was so embodied in the act of exchange is illustrated by its continued reference by philosophers down the ages. For example, the idea was later taken up by *Thomas Aquinas*, and *Albertus Magnus*. Others such as *Duns Scotus* and *Ibn-Khaldun* also used it. For example, *“Everything that constitutes acquisition and funds (of goods) and wealth proceeds only from man’s labour... Without labour, these occupations (crafts, agriculture, mining) would yield no profit or advantage.”* (Ibn-Khaldun – *‘Prolegomenes’* Vol 1, p 311).

Source: (*ibid*)

With the advantage of a wealth of empirical data demonstrating that labour was the measure of exchange value *Petty* gave the theory its more modern basis. It was also expounded by *Benjamin Franklin*.

Not surprisingly then *Adam Smith* also advocated the *Labour Theory of Value*.

“The real price of everything (Smith however confused value with price on occasion), what everything really costs to the man who wants to acquire it, is the toil and trouble of acquiring it. What everything is really worth to the man who has acquired it, and who wants to dispose of it, or exchange it for something else, is the toil and trouble which it can save to himself, and which it can impose on other people.... It is natural that what is usually the produce of two days’, or two hours’ labour, should be worth double of what is usually the produce of one day’s or one hour’s labour.”

(Adam Smith – The Wealth of Nations Book 1 Chapter 5)

Given that the value of all commodities is determined by the labour-time required for their production, all commodities can be equated with each other, provided a sufficient quantity of one is set against the other. In other words, the value of one commodity can always be expressed as a given quantity of some other use value, its exchange value. For example:

1 coat = 10 metres of linen

1 coat = 1 gram of gold

1 coat = 2 sheep

and so on.

Suppose the labour-time required for the production of the coat changes, so that twice as much labour-time is required to produce it.

Then:

1 coat = 20 metres of linen

1 coat = 2 grams of gold

1 coat = 4 sheep.

That is despite the fact that the utility provided by the coat has not changed.

Material wealth is measured by the quantity of use values. A society with 2 coats that can clothe 2 people is wealthier than a society with only 1 coat. But, an increase in material wealth can coincide with a reduction in value. For example, if 1 coat = 10 hours labour-time, and then due to improvement in productivity, it only takes 4 hours, then a society might produce 2 coats, but their value would only be equal to 8 hours! In general, this improvement in productivity establishes a fundamental contradiction whereby it creates the conditions for an increase in material wealth, at the same time as reducing the amount of value. Much later, we will see that it is this fundamental contradiction, which, under capitalism, makes crises of overproduction inevitable.

Section 3

The Form of Value or Exchange-Value

All commodities have a *value-form* common to them all. That is all commodities' values can be represented in the same way; their *money form*. In other words, any commodity can be represented as so many *Pounds, Euros, Dollars* or whatever the monetary unit happens to be.

Elementary or Accidental Form of Value

Marx then sets out to discover what its origin is. He says that in plotting the route to this origin we will also uncover the riddle of what *money* itself is. We can start by thinking about a situation where money doesn't exist, and so where one commodity exchanges for other commodities in varying proportions. That would exist in a barter system. Marx calls this the '*elementary*' or '*accidental*' *form of value*, where e.g. 20 metres of linen = 1 coat.

But, expressed in this equation are two different things. The first thing, the linen is having its value expressed, whereas the coat is acting as the unit of measure of that value. The linen is acting here as '*relative value*' whereas the coat acts as the '*equivalent*' *form of value*.

The exchange value of any commodity always takes this *value form* of being expressed as a certain quantity of some other use value. The *relative form* (the linen) and the *equivalent form* (the coat) are mutually dependent and yet exclusive. It is meaningless to say that 1 coat = 1 coat, or to say £1 = £1. It only makes sense if you say something like 1 kg. of apples = (is worth) £1.

Of course, you can reverse the equation, and say 1 coat = 20 metres of linen. But, then it is the coat whose value is being expressed, and the linen is acting as unit of measurement, the equivalent form against which it is being measured. You can only compare the actual relation between two things if you measure them in terms of the same unit. For example, I can measure the length of a table in metres, and the length of a room in metres. If the table is 6 metres, and the room 24 metres, I know that the latter is four times greater than the former.

You cannot measure linen against coats by any measure such as length, weight, hardness or even utility (because utility varies for each person, and even for the same person over time). You can only measure linen against coats as being representatives of value itself. Value, is an abstract concept like length, weight, or hardness are abstract concepts. The fact that a room is four times longer than a table does not in any sense imply that four tables equals one room, other than the sense that they represent the same degree of extension in space-time. 20 metres of linen = 1 coat only in the sense that both represent an equivalent amount of value. The only quality they have which makes this comparison possible is that of value.

So, both have the quality of value, and it is which allows them to be compared. But, if I state 20 metres of linen = 1 coat, then the unit of value is coats, and it is in these units that the exchange value of the linen is expressed. Just like, if I think that people's feet are a useful unit of measurement, I might say 1 table = 6 feet. I would not say 6 feet = 1 table, or 1 foot = 1/6 table.

Length is an abstraction. It is abstracted from the fact that all objects have extension, i.e. they occupy a certain quantity of space-time. But, this abstraction can take physical form in the shape of a foot rule, or a standard metre etc. In the same way, exchange value can take physical shape in the form of some standard unit of measurement. Here it is the coat.

Both the length of an object, and the value of a commodity, have a source. What is the source of the length of an an object besides the fact that some contain

more, or larger, or less densely packed atoms than others? It is a question better addressed to *Professor Brian Cox* than to me! But, the source of the value of the commodity we have already established; it is the fact that the particular commodity is the product of a certain type of concrete labour, and this labour is itself convertible into a given quantity of simple, abstract labour.

Consider light. There are many different kinds of light – sunlight, starlight, candle-light, lamplight, etc. All of these have different characteristics and intensities. Yet, they are all light. What is the substance of the light, what creates it? It is photons. The light from all these sources is made up of identical photons, just as value is made up of identical units of abstract labour-time. The intensity of the light is determined by the quantity of photons, just as the amount of value is determined by the quantity of labour-time. But, although the photon is the substance of the light, and creates the light, it is not its source. A thing cannot be the source of itself. The source is the Sun, or stars, or a candle or a lamp. Similarly, abstract labour is the essence of value, it creates value, but it is not the source of value. The source is the concrete labour which produces the use value in which the value is represented.

Just as the intensity of light is a function of the source of the photons, so the quantity of value is a function of the source of the abstract labour that is its substance. So, the product of 1 hour's labour by a brain surgeon, is the source of more abstract labour, and therefore value, than an hour's labour by an unskilled machine minder, just as 1 hour's sunlight, produces more photons, and therefore intensity of light than 1 hour's candlelight.

How is one type of concrete labour to be compared to another? Marx suggests only by comparison of their products.

“It is the expression of equivalence between different sorts of commodities that alone brings into relief the specific character of value-creating labour, and this it does by actually reducing the different varieties of labour embodied in the different kinds of commodities to their common quality of human labour in the abstract.” (p 57)

So, if we excluded the value of the cotton from the linen, and the linen from the coat, so that all we were comparing was the living labour expended in both (the value added) then, if it takes 1 hour to weave the 20 metres of linen, and 1 hour to make the coat, if 40 metres of linen exchanges for 1 coat, we know that 2 hour's of weaver's labour is equal to only 1 hour of tailor's labour.

In reality, although we think that what we are exchanging is commodities, what we are really exchanging is amounts of labour-time, just as was the case in the examples provided earlier from anthropological studies. For example, the peasant who works on the blacksmith's fields while the blacksmith shoes his horse. But, not all concrete labour is the same. Marx makes this clear in quoting Benjamin Franklin.

“The celebrated Franklin, one of the first economists, after Wm. Petty, who saw through the nature of value, says: “Trade in general being nothing else but the exchange of labour for labour, the value of all things is ... most justly measured by labour.” (“The works of B. Franklin, &c.,” edited by Sparks. Boston, 1836, Vol. II., p.

267.) *Franklin is unconscious that by estimating the value of everything in labour, he makes abstraction from any difference in the sorts of labour exchanged, and thus reduces them all to equal human labour. But although ignorant of this, yet he says it. He speaks first of “the one labour,” then of “the other labour,” and finally of “labour,” without further qualification, as the substance of the value of everything.” (Note 1 p. 57)*

The illusion that we are exchanging commodities, when, in fact, we are really exchanging amounts of our labour-time, Marx calls '*commodity fetishism*'.

Human labour itself has no value even though it creates value. Labour is value, and so asking what is the value of labour, is the same as asking what is the length of length, or what is the weight of weight. Rather like a candle is not light, but is the source of photons that are the substance of light. Labour only becomes value through its product, i.e. when it is expended in the creation of some product, use value. How much that value is is measured in labour-time, but its relative size, its exchange value, can only be expressed in terms of some other use value. In the same way that the light from the Sun can be expressed as so many candle power, or the power of an engine can be expressed as so many horse power, so the exchange value of 100 metres of linen can be expressed as so many coats. That is so even though the units of measurement may no longer bear any resemblance to their original form.

Two commodities, 20 metres of linen, 1 coat are equivalent exchange values because, in these quantities, they both contain the same amount of abstract labour-

time. But, changes in the productivity of weaving or tailoring mean that the amount of labour-time for each is continually changing. As a consequence, the exchange value of linen, expressed in coats, is continually changing. If the labour-time required to produce a coat remains constant, but the productivity of weaving doubles then the labour-time previously required to produce 20 metres, will now produce 40 metres. So, now 40 metres will equal 1 coat.

The same is true the other way around, if the time required for producing linen stays the same, but the time required for producing coats is halved, then 20 metres of linen will now equal 2 coats. If the labour-time required to produce both linen and coats doubled then 20 metres of linen would continue to equal 1 coat, because both would still contain the same amount of labour-time. The value of each, measured in labour-time, would have doubled, but their exchange value would remain the same. There would only be a change in their exchange value, if both were compared with some third commodity.

If the labour-time required for *all* commodities rises by the same proportion, then their exchange values remain constant, although the value of all of them will have risen. Its important to note that this is *NOT* the same as inflation, therefore, where all *prices* rise. If the labour-time required for production of all commodities rises in the same proportion, the result is not higher prices, but a reduction in the quantity of commodities that can be produced in a given time. In other words a reduction in real wealth.

The value form consists of this, the relative form of value (20 yards of linen) is expressed in a certain quantity not of exchange value, but in a definite quantity of use value, i.e. the equivalent form of value (1 coat). A quantity of exchange value cannot be expressed as an equivalent amount of exchange value. It is meaningless to say £1 = £1, just as it is meaningless to compare a certain amount of use value to the same use value, e.g. 1 apple = 1 apple.

“Such expressions of relations in general, called by Hegel reflex categories, form a very curious class. For instance, one man is king only because other men stand in the relation of subjects to him. They, on the contrary, imagine that they are subjects because he is king.” (note 1 p 63)

This relation, which, as Marx says, escapes bourgeois economists, unlocks the riddle of money, which we will come to later.

Importantly, the use value that serves as the equivalent form of value is also the materialisation of abstract labour-time, and at the same time the product of a specific type of concrete labour.

“This concrete labour becomes, therefore, the medium for expressing abstract human labour. If on the one hand the coat ranks as nothing but the embodiment of abstract human labour, so, on the other hand, the tailoring which is actually embodied in it, counts as nothing but the form under which that abstract labour is realised. In the expression of value of the linen, the utility of the tailoring consists, not in making clothes, but in making an object, which we at once recognise to be Value, and therefore to

be a congelation of labour, but of labour indistinguishable from that realised in the value of the linen. In order to act as such a mirror of value, the labour of tailoring must reflect nothing besides its own abstract quality of being human labour generally.

In tailoring, as well as in weaving, human labour power is expended. Both, therefore, possess the general property of being human labour, and may, therefore, in certain cases, such as in the production of value, have to be considered under this aspect alone. There is nothing mysterious in this. But in the expression of value there is a complete turn of the tables. For instance, how is the fact to be expressed that weaving creates the value of the linen, not by virtue of being weaving, as such, but by reason of its general property of being human labour? Simply by opposing to weaving that other particular form of concrete labour (in this instance tailoring), which produces the equivalent of the product of weaving. Just as the coat in its bodily form became a direct expression of value, so now does tailoring, a concrete form of labour, appear as the direct and palpable embodiment of human labour generally.

Hence, the second peculiarity of the equivalent form is, that concrete labour becomes the form under which its opposite, abstract human labour, manifests itself.” (p 64)

A commodity is both a use value and a value. That is it has utility (for someone) and it is the product of human labour. Its value is the amount of labour-time required for its production. Technically, however, as Marx points out, it only has exchange value, when this value takes an independent form. That is when the commodity is brought

into contact with, and expressed in relation to some other commodity. That is when this value ceases being individual and becomes social.

In every society throughout history the products of human labour are use values. But, it is only when the labour spent in producing such use values becomes expressed as a quality of that article, as its value, that it becomes a commodity, and simultaneously that when products take the form of commodities, value takes the form of exchange value.

Total Or Expanded Form of Value

So far, we have only shown how one commodity's value is expressed by a certain quantity of some other, but what we need is to show how any one commodity's value is related to all other commodities' value.

So, 20 metres of linen might = 1 coat, but 2 grams of gold, or 100 kg. of potatoes and so on. What, at first, seems an accidental relation of exchange, of all these commodities, is now, however, uncovered. The value of any commodity does not change, because it is exchanged against another, all that changes is the units in which it is expressed – coats, gold, potatoes. The values of commodities remain constant (provided there is no change in the labour-time required for their production), and it is these values which determine the proportions in which they exchange – their exchange values – not vice versa.

The General Form of Value

There is an easy solution to the fact that every commodity can be expressed as an inexhaustible list of other commodities. That is turn the expression around. In other words, make every commodity expressible in terms of one single commodity.

So:

1 coat = 20 metres of linen

10 kg tea = 20 metres of linen

1 kg. corn = 20 metres of linen

2 grams gold = 20 metres of linen

and so on.

Now every commodity can be expressed in terms of one single commodity that acts as a *general equivalent*.

As throughout *Capital*, Marx's analysis is set out not just in terms of a *logical progression*, but also as an *historical progression*. So, he describes the way in which the first form of expression of value is what occurs first in history, whereby commodity A exchanges for so much of B. C exchanges for so much of D and so on. He says,

“This form, it is plain occurs practically only in the first beginning, when the products of labour are converted into commodities by accidental and occasional exchanges.” (p 71)

What Marx has in mind here is his view based on the work done by the US anthropologist, *Lewis H. Morgan*, and used by Engels in *“The Origins Of The Family, Private Property and the State”*, that the first exchanges

were accidental or occasional exchanges between communities etc., not between individuals. They arose as part of rituals or ceremonies, for example, when members of one tribe married members of another. Marx's view here was somewhat speculative, but subsequent anthropological research has shown it to be correct.

The second form of expression of value corresponds to where trade has developed more, and some particular commodity, like cattle, is regularly traded for other commodities. It acts as relative form of value, not equivalent form. In other words, it is cattle that are being regularly traded, for other commodities, and whose value is being expressed not vice versa. So, 1 cow = 1 gram of gold, 1 cow = 20 metres of linen, 1 cow = 2 coats, and so on.

The final form of the expression of value only arises when many commodities are being regularly traded, and where one of their number is singled out to act as a measure of the rest. In other words, all commodities now express their values, not in relation to each other, but through their relation with this single commodity, whose role is, and had to be, socially recognised.

Each commodity being equated with this one single commodity, in turn, manifests its relation to all other commodities. If 1 coat = 20 metres of linen, and 2 grams of gold = 20 metres of linen, then clearly 1 coat also = 2 grams of gold, or 1 coat has twice as much value as 1 gram of gold. As made clear earlier, we don't know how much value that is, absolutely, from this expression, only its relative size compared to the value of the gold. We

can only know the actual value of the coat, and the gold by knowing how much labour-time is required for their production. Exchange value only measures relative value, not absolute value, which can only be measured by labour-time.

The same process, which makes this single commodity the general equivalent for all other commodities, means that the same is true for the specific concrete labour used to produce it, in relation to all of the other concrete labours, used to produce all other commodities. Linen becomes the representative of all human labour because it becomes the representative of exchange value – abstract labour-time. But, by the same token,

“Weaving, which is the labour of certain private individuals producing a particular article, linen, acquires in consequence a social character, the character of equality with all other kinds of labour. The innumerable equations of which the general form of value is composed, equate in turn the labour embodied in the linen to that embodied in every other commodity, and they thus convert weaving into the general form of manifestation of undifferentiated human labour.” (p 72)

In other words, the labour-time expended here by weavers can represent abstract labour-time against which all other concrete labour can be measured. If 20 metres of linen takes 10 hours of weavers' time to produce, (this now constitutes 10 hours of abstract labour-time) whereas 1 coat requires 5 hours of tailoring labour-time, then if 1 coat exchanges for 20 metres of linen, we can conclude that the 5 hours of tailoring labour is complex labour, which is equal to 10 hours of abstract

labour. (I've excluded the labour-time represented by the material of the coat, for ease of illustration).

As soon as one commodity is singled out to play the role of *general equivalent*, it automatically excludes all other commodities from that role. But, by the same token, it excludes itself from the other side of this relation. It can no longer appear as the relative form of value because it would be expressing itself against itself – 20 metres of linen = 20 metres of linen! Alternatively, its relative form could only be expressed against the infinite number of other commodities.

It should now be obvious that we have reached the point, both in history, and in logic, where this one single commodity, which has been singled out by society, to act as the general equivalent of all other commodities is the *money commodity*, and its role begins in history, for functioning as money in society.

The Money Form

Is merely the stage whereby *gold* (or occasionally some other precious metal) has become the general equivalent commodity, and therefore, the concrete labour required in gold production represents abstract labour. The price form is now 20 metres of linen = 2 grams of gold, and when gold is minted into a currency with a name such as *Pound*, we have 20 metres of linen = £2.

Section 4

Commodity Fetishism

The real relation is not the relation of one commodity to another. This relation – the value relation – is only possible because they are equally products of human labour in the abstract. It is the quantity of this abstract human labour in each that gives them value, and enables comparison. But, the actual concrete labour is clearly different in each case. How can it be reduced to abstract labour to enable comparison?

“...the measure of the expenditure of labour power by the duration of that expenditure, takes the form of the quantity of value of the products of labour; and finally the mutual relations of the producers, within which the social character of their labour affirms itself, take the form of a social relation between the products.” (p 77)

So, the real relation has become inverted. What Marx provides is not just a logical exposition, but an historical account of how real human relations become transformed, into an apparent relation between things. Initially, when Man produces for Man, the relation is overt, as some of the anthropological examples demonstrate. If I shoe your horse, you work on my field for the same amount of time.

The more the division of labour proceeds and labour is more specialised, the more different types of labour are seen as having more value than others. I value your labour as twice mine, so I agree to work for you, for twice as long as you work for me. The more commodity production increases, so that production and consumption are separated, so this connection becomes hidden, because what starts out as just, I provide you with 20 metres of linen (comprising 10 hours of my time),

in exchange for 1 coat (comprising 5 hours of your time), simply becomes 20 metres of linen = 1 coat.

We now have a relation between things rather than people. The only way of uncovering the actual relation of the labour employed in each is to look at the actual labour-time employed in each and compare it with the exchange rate between the commodities. But, that will not tell us how this labour compares with all other labour, used in producing all other commodities, i.e. against labour in the abstract. It is only when we have a money commodity that we have the ability to assign the labour used for its production to represent abstract labour.

The setting of each commodity against this single money commodity completes the process by which the real relation between Men is replaced by the relation between things. Now it appears that the value of a commodity is determined by its relation to money, whilst the value of money is manifest in the quantity of commodities it can command.

“Hence, when we bring the products of our labour into relation with each other as values, it is not because we see in these articles the material receptacles of homogeneous human labour. Quite the contrary: whenever, by an exchange, we equate as values our different products, by that very act, we also equate, as human labour, the different kinds of labour expended upon them.” (p 78)

The law of value – the law that the value of any use value is determined by the labour-time required for its production continually asserts itself as a *Law of Nature*.

But, this should not be read as meaning that commodities always automatically do exchange according to this law. As Marx sets out, even though the labour-time required is constantly changing, the actual exchange rates can remain stable for long periods. It is only when the two become qualitatively different that this manifests itself in a sharp break. He quotes Engels.

“What are we to think of a law that asserts itself only by periodical revolutions? It is just nothing but a law of Nature, founded on the want of knowledge of those whose action is the subject of it.” (Friedrich Engels: “Umriss zu einer Kritik der Nationalökonomie,” in the “Deutsch-Französische Jahrbücher,” edited by Arnold Ruge and Karl Marx. Paris. 1844.)” (Note 1 p 80)

Marx describes by various means this *Law of Nature*, the *Law of Value*, which repeatedly asserts itself through Man's history whatever *mode of production* is applied. He set it out succinctly in his *“Letter to Kugelman of 11th July 1866”*. In *Capital*, he provides more detail. He begins with Robinson Crusoe whose labour-time is limited and who, in order to maximise the benefit from its use, resorts to timing various activities. Marx concludes,

“All the relations between Robinson and the objects that form this wealth of his own creation, are here so simple and clear as to be intelligible without exertion, even to Sedley Taylor. And yet those relations contain all that is essential to the determination of value.” (p 81)

He moves on to the European Middle Ages. Here the *Law of Value* is manifest in a form determined by the relations between serfs and lords etc.

“... but every serf knows that what he expends in the service of his lord, is a definite quantity of his own personal labour power.” (p 82)

In the same way that Robinson produced his items, within the constraint of the time available to produce the different use values, so a community faces the same constraint. What changes with each type of society is not this *Law of Value*, but the form in which it is expressed, the specific means by which the total labour-time is allocated to produce the use values required by the society, and the specific means (which Marx later shows are a function of the way it goes about producing) by which the total product of this society is distributed amongst its members, including, therefore, the way in which any surplus is distributed.

For Robinson, everything produced by him belonged to him. Yet, even then, a proportion had to be set aside to replace what had been used. A proportion of corn produced had to be set aside for planting, if you want corn again next year. And, if you want to increase output, a proportion has to be set aside for that purpose too. Only what is left is available to be consumed.

The same is true for a society. A proportion of its output remains social because it is required to replace means of production. Another part is used for consumption – means of subsistence – by the members. Different societies will bring about this distribution in different ways, and as soon as a society is able to produce a surplus – to produce more than is required to meet these consumption needs, and to replace the means of production – the potential exists for a section of society to

receive the proceeds of this production without itself taking part in production.

On the other hand, it opens the possibility for the establishment of a society in which every individual receives back from society in value, a proportion of total output, equal to the labour-time they have contributed, i.e. proportional to their share of total social labour.

Chapter 2 - Exchange

Upon the basis of a real economic relationship develops a set of laws. Commodities exchange against each other in given proportions, as we've seen. But, commodities can only do this if the owners of these commodities agree to do so. This requires a legal framework, that establishes, in law, these exchange relations on the basis of freely entered into contracts, by the various parties involved in the exchange.

The extent to which Marx's analysis is an objective study of these economic relations, rather than a subjective study of the particular human beings that make up the society, can be gauged by his comment.

"In the course of our investigation we shall find, in general, that the characters who appear on the economic stage are but the personifications of the economic relations that exist between them."

(p 89)

The owner of a commodity does not see in it any use value for themselves. That's why they seek to exchange it. Its only use value to them is precisely that it has exchange value. The basic relation is that commodities exist as exchange values for sellers and use values for buyers. A commodity only realises its use value, having been bought, just as it only realises its exchange value having been sold.

The relative form of value is represented by barter where the owner of X amount of A, exchanges it directly for Y

amount of B. Both A and B only become commodities in the act of barter. At this early stage, something only becomes a commodity when it is not a use value for its owner. That is its superfluous to their immediate needs. That's why the first types of exchange often arise as the exchange of accidental surpluses.

These first exchanges then can be on the basis of chance, rather than any measurement of labour-time. But, once begun, they promote a development of trade and exchange that increasingly leads those who dispose of their goods to seek exchange on the basis of value. The more commodities are produced, by individuals, for exchange within communities, the more they seek to measure this value accurately.

It is this historical process that leads to the need for a general equivalent form of value (which goes through a succession of different physical forms specific to each society before eventually arriving at the money form). Different commodities have likewise acted as the money commodity – cattle, salt, gold, silver.

Nomads are the first to develop money, because all their possessions are in the form of movable wealth, which they can sell, and because they constantly come into contact with others, with whom they can exchange. Slaves have acted as money, but land never has, because it is not moveable.

“... although gold and silver are not by Nature money, money is by Nature gold and silver,” (p 92)

As an embodiment and manifestation of value, of abstract labour, - whose nature is that it is qualitatively homogeneous, and therefore only measured by its quantity – a money commodity must share the same nature. Gold and silver are such. They can both be divided, with each piece being qualitatively identical to any other.

As a money commodity they assume a dual use value. They continue to retain their use value as commodities, e.g. for jewellery, but now, its new social function gives it a special use value, acting as the universal equivalent of all other commodities. But, money is a commodity, as this history of its origin and development shows. Its value is not determined by its use value, but, like every other commodity, by the labour-time required for its production. It cannot express this value other than by how much of it exchanges for every other commodity.

On this basis, as Marx says, it can be seen that the view that money is merely a symbol, without real value is false. Of course, what does arise, as we shall see later, is the introduction of real symbols, that represent money in token form.

“These objects, gold and silver, just as they come out of the bowels of the earth, are forthwith the direct incarnation of all human labour.” (p 96)

Chapter 3 - Money or The Circulation Of Commodities

Section 1

The Measure of Values

Marx assumes gold to be the money commodity, throughout *Capital*, for simplicity. He writes,

*“The first chief function of money is to supply commodities with the material for the expression of their values, or to represent their values as magnitudes of the same denomination, qualitatively equal, and quantitatively comparable. It thus serves as a **universal measure of value**. And only by virtue of this function does gold, the equivalent commodity **par excellence**, become money.”* (p 97)

But, contrary to those who fetishise gold, and see in it the basis of measuring the value of commodities, he goes on,

“It is not money that renders commodities commensurable. Just the contrary. It is because all commodities, as values, are realised human labour, and therefore commensurable, that their values can be measured by one and the same special commodity, and the latter be converted into the common measure of their values, i.e., into money. Money as a measure of value, is the phenomenal form that must of necessity be assumed by that measure of value which is immanent in commodities, labour-time.” (p 97)

We have seen how exchange value goes through several historical and logical stages until it reaches the point whereby all commodities can be measured by one single universal equivalent – money.

“The expression of the value of a commodity in gold — x commodity $A = y$ money-commodity — is its money-form or price. A single equation, such as 1 ton of iron = 2 ounces of gold, now suffices to express the value of the iron in a socially valid manner.” (p 97)

Expressing the value of any commodity, in terms of a certain amount of gold, does not thereby require that amount of gold to be present for the purpose. For this purpose, imaginary money equally performs the function.

“When, therefore, money serves as a measure of value; it is employed only as imaginary or ideal money.” (p 99)

But, to serve the function of money, this ideal money must have the same attributes as the actual money commodity, i.e. it must be a representative of the same value, the same amount of labour-time.

During some periods, there have been two money commodities, operating side by side, e.g. gold and silver.

“If, therefore, two different commodities, such as gold and silver, are simultaneously measures of value, all commodities have two prices — one a gold-price, the other a silver-price. These exist quietly side by side, so long as the ratio of the value of silver to that of gold remains unchanged, say, at 15:1. Every change in their ratio disturbs the ratio which exists between the gold-prices and the silver-prices of commodities, and thus

proves, by facts, that a double standard of value is inconsistent with the functions of a standard.” (p 99)

As Marx points out, where attempts were made by law, to fix the relation between these two money commodities, it always failed, because the labour-time required for the production of each, and therefore, their value constantly changed. So, the commodity that was undervalued ended up being withdrawn from circulation, melted down and exported.

“The result of all experience and history with regard to this equation is simply that, where two commodities perform by law the functions of a measure of value, in practice one alone maintains that position.” (note 2 p 99-100)

Different amounts of different commodities can all be expressed as varying amounts of gold. For example, 1 coat = 1 gram of gold, 100 metres of linen = 2 grams of gold etc. These standard measures of weight, of gold and silver, then give their names to the standard units of money. For example, a *Pound Sterling* was originally 1 lb. of sterling silver. Over time, these units become divorced from their origins, as we shall see later.

There are two distinct functions of money that are in conflict. Money acts as a measure of value, only because it comes to represent labour-time. But, as a standard of price, for example, a *Pound*, it is preferable that, as far as possible, this standard, this unit of measurement, should be as fixed as possible – just as we want a *'foot ruler'* to be the same length as another, and not to vary over time or conditions. But, it is precisely because the money

commodity, as itself the product of labour, is able to represent labour-time, that means its own value is constantly changing.

As a standard of price, these changes do not affect its function, because however its value changes, 10 grams of gold are still worth 10 times what 1 gram is worth. Nor does the change in the value of the gold interfere with its function as measure of value, because the change affects its relation to all commodities in the same proportion. What, of course it does change, is the amount of gold that now exchanges for these commodities. So, if the value of gold falls, more gold will have to be exchanged for all commodities, i.e. money prices will rise.

“A general rise in the prices of commodities can result only, either from a rise in their values — the value of money remaining constant — or from a fall in the value of money, the values of commodities remaining constant.”
(p 101)

The same is true in reverse for a general fall in prices. If the value of money falls, but the value of commodities falls in the same proportion, money prices remain the same, and vice versa.

Later, in *Capital*, Marx describes one of the important consequences of this, in the development of capitalism in Britain. As a consequence of new gold discoveries, the value of gold fell, and the prices of agricultural products rose. This meant that capitalist farmers incomes rose. However, their rents had been fixed, with landlords, for leases running several years. Higher money incomes and constant money rents, meant that capitalist farmers were

able to accumulate capital, an important factor in what Marx calls "*Primary Accumulation*". In fact, because the landlords had to pay the higher money prices, for commodities, whilst their money rents remained constant, the fall in the value of gold money, resulted in a transfer of wealth from landlords to capitalist farmers.

Marx describes the process by which the names, originally given to the units of money, become separated from their actual weights. For example, foreign units of money are imported. Various rulers debase the currency, by clipping amounts of gold or silver from the coins, so that although it retains the same name, over time, it comes to represent an actual smaller weight. As societies become more wealthy, they move to more valuable metals. So, Britain originally used silver but moved to gold. The *Pound Sterling* was retained as the standard unit of money, but became equated with gold of a fifteenth the weight, because that was the exchange value of silver in gold. As the relative values of gold and silver diverged the more a *Pound* became separated from its origin as a pound of silver.

The various subdivisions of the standard of money, for example, "*Crown*", "*Half-Crown*", "*Florin*", "*Shilling*", "*Penny*", "*Farthing*", are defined by law, even though, initially, they may take the form of metal themselves, such as silver and copper, whose value continually changes. Now the prices of commodities become described, not as certain weights of gold and silver, but as a certain amount of these coins.

"Hence, instead of saying: A quarter of wheat is worth an ounce of gold; we say, it is worth £3 17s. 10 1/2d. In this

way commodities express by their prices how much they are worth, and money serves as money of account whenever it is a question of fixing the value of an article in its money-form.” (p 103)

NB. A few years ago, as copper prices rose sharply, due to the global economic boom, the value of the copper content of certain 2p coins rose to be higher than the face value of the coin. If my memory is correct, a ton of these coins would net you a £2,500 capital gain, when melted down, over their face value!

Through these money names, that have lost all connection to the commodities they originally represented, so the value relation between commodities and money becomes hidden.

Although, the value of a commodity is expressed as a certain amount of money, i.e. a money price, it does not follow that a money price necessarily reflects the value of a commodity. The value of a commodity, as we have seen, is determined by the labour-time required for its production, say ten hours. Ten hours may also represent 1 gram of gold, which may have the money name £1. However, prices can differ from values. Suppose the labour-time required for the production of the commodity remains ten hours. Its value remains unaltered. However, if there is a sudden rise in demand for the commodity, the law of supply and demand will cause the market price to rise to say £3. If demand falls then similarly the market price may fall to £1. All the money name measures is the market price, not the value of the commodity.

In fact, price can cease to represent value. Many things which have no value can acquire a price. For example, unimproved land has no value. Like air it is provided free by Nature. It has required no human labour to produce it – though human labour can be used to improve it. But, over time, land has been appropriated and monopolised. The owners of the land, thereby demand a price for its use in the form of rent, and place a price on the land for sale, based on a capitalisation of the rent. If annual rent is £1,000, and the rate of interest is 5%, then £1,000 is 5% of £20,000, so the price of the land is capitalised as £20,000.

We can imagine the exchange value of a commodity, such as 100 metres of linen, as a certain amount of gold, but for the linen to actually be such an exchange value, it must be sold – converted into real gold. I could not take the 100 metres of linen to someone and offer it for payment, saying its worth a gram of gold. They will want the actual money, so I have to convert the linen into money.

Section 2

The Medium of Circulation

The Metamorphosis of Commodities

In *Chapter 1*, Marx identified a contradiction within the value form of commodities. The relative form and the equivalent form of value are mutually dependent, but exclusive. The separation of commodities, into commodities and money, does not end this contradiction, but provides a '*modus vivendi*' as Marx puts it. It allows the process to continue.

The process of exchange is one in which commodities enter circulation. The sellers of commodities do not view them as use values. The only use value they have for them is as a representative of exchange value. As such, rather like a game of pass the parcel, they want to get them out of their hands as soon as possible. Of course, the buyers of these commodities may see them in a similar light. That is they may not wish to consume them, personally either. A merchant might want to buy a commodity to sell themselves, in some other market, at a higher price (*arbitrage*). Another producer may want the commodity to use in the production of some other commodity. Though, in this case, the producer still wants it for its use value in the productive process.

A commodity only ceases being an exchange value, and becomes just a use value, when it stops circulating and is consumed. What confuses many economists, Marx says, is the fact that commodities are exchanged for money, i.e. gold. But, he points out, gold, as gold, as a commodity, is not money. It is merely a commodity like any other. A society could have goats as its money commodity, and then gold, as a commodity, would be priced in goats, rather than goats priced in gold!

“When commodities express their prices in gold, this gold is but the money form of those commodities themselves.”
(p 106)

The relation of a commodity (use value) to money (exchange value incarnate) is merely an external reflection of that same contradictory unity of use value and value. This situation, of this opposition of money and commodity, has developed, logically and historically,

through the stages that Marx has previously described, of how commodities come into existence, exchange first against each other, then against some single most traded commodity, and finally against a money commodity – usually gold. But, beneath it all, both sides of this exchange remain commodities, and the only reason the gold can act as money is not because of any inherent property it has, but only because, like every other commodity, it possesses value, because it is the product of free human labour.

But, in this relation, between the commodity and gold (money), there has arisen a transformation. The gold money is exchange value, as such it expresses the value of the commodity against which it is being exchanged. But, its own use value has disappeared. As money, the exchange value of the gold as use value (for example to be used as jewellery) can now not be expressed in money terms. It makes no sense to say that the price of 1 gram of gold is 1 gram of gold. Its own price can now only be expressed in terms of that infinite series of exchange values in which gold exchanges for all other commodities!

Marx then explores the way in which this exchange takes place. He starts with the weaver who has produced an amount of linen. The weaver takes it to market and obtains the equivalent of its value in money. He then exchanges the money for a bible. For the weaver the linen has no use value, but it contained value to the amount of £2. The weaver was, therefore, glad to sell the linen, which was no use to him, and to obtain the £2 instead. But, the £2 itself has no use value, in and of itself. Its only use value, to him, is in order, at some point,

to exchange it for an item of real utility. He does so by exchanging the £2 for the bible.

So, the weaver has gone from a situation where he owned 20 metres of linen, which had no utility for him, to one where he owns a bible, which does. Orthodox economics describes an exchange which brings about such a situation as a gain in welfare, i.e. the weaver has increased his level of utility through the exchange without any equivalent loss of utility for anyone else.

Viewed from the weaver's perspective, he has gone through two separate processes. He has sold his linen, and he has bought a bible. In reality he has sold in order to buy.

“The result of the whole transaction, as regards the weaver, is this, that instead of being in possession of the linen, he now has the Bible; instead of his original commodity, he now possesses another of the same value but of different utility. In like manner he procures his other means of subsistence and means of production. From his point of view, the whole process effectuates nothing more than the exchange of the product of his labour for the product of some one else’s, nothing more than an exchange of products.” (p 107)

Marx summarises the process as follows C (Commodity) – M (Money) – C (Commodity). What was once the original form of exchange – one commodity for some other commodity, of equal value, remains the end result, here linen with a value of £2 exchanged for a bible with a value of £2. But, now money has interceded in the process of exchange.

Marx makes a point of separating the fate of the commodity from the fate of the owner.

“The leap taken by value from the body of the commodity, into the body of the gold, is, as I have elsewhere called it, the salto mortale of the commodity. If it falls short, then, although the commodity itself is not harmed, its owner decidedly is.” (p 108)

In other words, the value of the commodity is determined by objective laws. Whether the individual owner of the commodity is able to realise that value is another matter. Marx says the commodity may only fulfil its function of being able to provide for his many wants if its exchange value can be realised, i.e. if it can be sold. That depends on many things. It must be something somebody wants, i.e. it must represent useful labour. Its worth pointing out that, at this stage of his analysis, Marx has not just been talking about the logical processes by which money arises, and by which trade develops. He has been describing a particular historical development, and the examples he refers to here are still at the stage where production is being carried on by individual producers, owning their own means of production.

But, he describes here the problems faced by such producers as the division of labour itself develops.

“But division of labour is a system of production which has grown up spontaneously and continues to grow behind the backs of the producers. The commodity to be exchanged may possibly be the product of some new kind of labour, that pretends to satisfy newly arisen requirements, or even to give rise itself to new

requirements. A particular operation, though yesterday, perhaps, forming one out of the many operations conducted by one producer in creating a given commodity, may to-day separate itself from this connexion, may establish itself as an independent branch of labour and send its incomplete product to market as an independent commodity. The circumstances may or may not be ripe for such a separation. To-day the product satisfies a social want. Tomorrow the article may, either altogether or partially, be superseded by some other appropriate product. Moreover, although our weaver's labour may be a recognised branch of the social division of labour, yet that fact is by no means sufficient to guarantee the utility of his 20 yards of linen. If the community's want of linen, and such a want has a limit like every other want, should already be saturated by the products of rival weavers. our friend's product is superfluous, redundant, and consequently useless.” (pp 108-9)

If he does produce a use value then its price will be equivalent to its value. However, if some new technique arises which changes the method of weaving, reducing the time required to produce a given quantity of linen, the weaver will soon be made aware of this by the owners of money, and potential buyers of his linen, who will point out that his competitors are undercutting him. He will be forced to cut his prices, no matter how much labour-time (either of his own or dead labour) have been used in the production of his linen. In fact, he will have an incentive to adopt the same technique himself.

But, suppose he, and all other weavers, then adopt this new technique, each then produces with only the

minimum labour-time required. It may still be that, with this new more efficient method, the increased quantity of linen brought to market is in excess of the demand for it. In other words, the proportion of society's total labour-time, devoted to the production of linen, was too great. Some of the labour-time was not required, it was not *socially necessary* and, therefore, does not count as value creating. If all the linen was produced under the same conditions then, as Marx put it, in a later correction to his formulation in *Capital*,

*“And, as a matter of fact, the value of each single yard is but the materialised form of a part of the social labour expended on the whole number of yards.” (note * on p 109)*

Again, emphasising that what he is describing is an historical as well as logical development, Marx describes the way in which the division of labour, first of all, creates independent producers (breaking up communal production), as families begin to develop private property, which is inherited in the way Engels describes in *“The Origin of the Family, Private Property and the State”*. But, then, having created these individual producers, the further development of the division of labour brings them, once more, into a condition of dependence on each other, through the products of their labour. The division of labour creates the necessity, once more, for co-operative labour, in a number of ways. First of all, producers are dependent upon all other producers, to produce the range of commodities needed to meet their wants, now that they have themselves begun to specialise in a particular line of production. Each meets their needs by

exchange/selling their own production/commodities for those of others.

When the commodity is exchanged for money, money is, at the same time, exchanged for the commodity. The commodity becomes exchange value, but the money becomes use value. The linen goes out of the hands of its owner, and money comes in. But, likewise, the owner of the money gives it up in return for the use value of the linen. What appears as one exchange is, in reality, two, (C-M) and (M-C), if viewed from both standpoints.

But, the owner of the money only obtained it by themselves selling a commodity, so what here appears as M-C, is, in reality, just the last part of another series of transactions (C-M-C). The only exception to this is the gold producer, who exchanges gold (money) directly for other commodities.

So, the way commodities "*metamorphose*", to use Marx's term, in a money economy, comprises two stages. The first stage is that the owner of a commodity, C, sells it for money, M. The second stage is that they buy another commodity, C, using the money they have received from the sale. So, the two stages can be summed up as C-M and M-C.

In reality, the seller will sell a lot of a single commodity, C, and will use the money M to buy many different commodities, to meet their range of needs. But, while the first part of the transaction C-M, is the first stage for the seller, for the buyer, of the linen, it is the second stage. For them it appears as M-C. They have given up money (exchange value) to acquire the commodity linen whose

use value they wish to consume. Similarly, the seller of the linen, in the second stage, where they hand over the money they have received for the linen, in order to buy a bible, completes, for the seller of the bible, the first stage. The bible seller sees things as C-M. They, in turn, can use the £2, received for the bible, to buy a bottle of brandy for £2. To them, this is the second stage, M-C, whereas, for the brandy seller, it is the first stage C-M, and so on ad infinitum.

In other words, the market place is not made up of one group of sellers and one group of buyers. Everyone occupies the role of buyer and seller alternately. The owners of commodities "*metamorphose*" the commodities they own, into the commodities they desire, by continual acts of buying and selling. Money intervenes in this process as the "*transient equivalent form*".

If we put together these two stages by which one commodity is metamorphosed into another we get a circuit, C-M-M-C. The commodity begins in its commodity form (linen) which comprises its two contradictory elements (use value and exchange value). For the owner it has no use value (that is why they want to sell it). In the process of selling, the linen becomes money, i.e. its use value is stripped away, leaving only its quantity of exchange value, which then takes the physical form of money.

Because, it has no use value, for the owner, it only exists as exchange value. The example of light can again be useful here. Light can be considered either as a wave of energy, or as a particle. The exchange value can be thought of as a wave of energy, and the thing it takes

shape in as the particle. The wave is energy and the proton the particle. As energy, it is manifest through the other bodies it energises. As matter it is light incarnate. The same with the exchange value. It is manifest as it “*energises*” different commodities, as money it is materialised value incarnate. In the money, the exchange value simply takes a different shape to that it had in the linen. Or another non-scientific way of viewing it might be that the exchange value is like a spirit, which possesses a different body.

But, money stands in the opposite position. It is pure exchange value, with no use value of its own. Its use value is contained not in itself, but in all the commodities it can buy. When it is exchanged for the bible, therefore, the buyer realises that use value.

The totality of all these circuits constitutes the circulation of commodities. At first sight, it might appear that all that the introduction of money has done here is to make the process of exchange easier than it would have been by direct barter. But, Marx shows that a much more significant change than that has occurred. Under barter, the linen seller could only have exchanged it with the bible seller, if the latter wanted linen rather than brandy! In fact, a whole series of exchanges have been made possible that otherwise could not have occurred. At the same time, a new set of dependent relations are established. The brandy seller can only sell it, if the bible seller sells his bible to the linen seller, who can only buy the bible if they sell their linen and so on.

But, these new relations mean that the constraints on exchange and the circulation of commodities are lifted.

Barter meant exchange was necessarily limited by individual and personal relations, which meant such exchanges would be geographically confined, i.e. limited to local trades. Now, money means buyers can be found far and wide, and money can be used to source purchases in a similar manner. A whole new series of social relations are developed, as a result of the introduction of money.

Under barter, the exchange completes the circuit of the commodities. With money, the completion of one circuit merely opens another. Each time a commodity disappears, from the circuit (when it is consumed), its place is taken by money, which never disappears from the circuit.

However, this fact, that every sale is at the same time a purchase, is not an acceptance of "Say's Law". Supply does not create its own demand. As Marx says,

"Nothing can be more childish than the dogma, that because every sale is a purchase, and every purchase a sale, therefore the circulation of commodities necessarily implies an equilibrium of sales and purchases. If this means that the number of actual sales is equal to the number of purchases, it is mere tautology. But its real purport is to prove that every seller brings his buyer to market with him. Nothing of the kind. The sale and the purchase constitute one identical act, an exchange between a commodity-owner and an owner of money.. Hence the identity of sale and purchase implies that the commodity is useless, if, on being thrown into the alchemical retort of circulation, it does not come out again in the shape of money; if, in other words, it cannot

be sold ... No one can sell unless some one else purchases. But no one is forthwith bound to purchase, because he has just sold. Circulation bursts through all restrictions as to time, place, and individuals, imposed by direct barter, and this it effects by splitting up, into the antithesis of a sale and a purchase, the direct identity that in barter does exist between the alienation of one's own and the acquisition of some other man's product... If the interval in time between the two complementary phases of the complete metamorphosis of a commodity become too great, if the split between the sale and the purchase become too pronounced, the intimate connexion between them, their oneness, asserts itself by producing — a crisis. The antithesis, use-value and value; the contradictions that private labour is bound to manifest itself as direct social labour, that a particularised concrete kind of labour has to pass for abstract human labour; the contradiction between the personification of objects and the representation of persons by things; all these antitheses and contradictions, which are immanent in commodities, assert themselves, and develop their modes of motion, in the antithetical phases of the metamorphosis of a commodity. These modes therefore imply the possibility, and no more than the possibility, of crises. The conversion of this mere possibility into a reality is the result of a long series of relations, that, from our present standpoint of simple circulation, have as yet no existence.” (pp 114-5)

The Currency Of Money

Whereas, commodities complete this circuit via their metamorphosis from one commodity into another C-M-M-C, that is not true of the money. It continually moves

away from its possessor. The linen seller receives money, but the money moves away as they buy the bible, it moves away from the bible seller as they buy the brandy and so on. Each can obtain more money, but only by opening a new circuit, by selling more commodities. This passage of money into ever new hands, Marx describes as its “*currency*”, referring to its original usage - “*cours de la monnaie*”, or course of money.

Just as “*commodity fetishism*” turns things on their heads, so that what is, in reality, a relation between human beings (an exchange of the labour-time of one for that of another), appears as a relation between things (20 yards of linen = 1 coat), so the same here. What, is really a process of circulation of commodities, appears as being a movement of money.

“Again, money functions as a means of circulation only because in it the values of commodities have independent reality. Hence its movement, as the medium of circulation, is, in fact, merely the movement of commodities while changing their forms.” (p 117)

Although commodities take part in this circulation, they continually fall out of it, as they are consumed. Money, on the other hand, remains within the sphere of circulation, which begs the question of how much money is absorbed by it. Marx once again elaborates this, not just as a logical, but also as an historical process.

We are still at the stage, he says, where we are considering commodity exchange in its initial stages –

petty commodity production. The process is described like this.

The money commodity (gold) acts as the general equivalent form of value. So, it is the unit of measurement of the value of commodities, which takes the form of their money price. In other words, the value of say 20 metres of linen can be considered in a purely imaginary way (i.e. I do not have to actually exchange it to put a price on it, I do not have to physically set an amount of gold against it) as being equal to 2 grams gold, now given the name £2.

Now, at this stage of history (before the development of banking, credit etc.), in order to sell the 20 metres of linen, will require that this imaginary price of £2, brings forth an actual amount of gold, i.e. £2 equal to it. The gold money has acted first as a measure of value in determining the price, and secondly as currency. The gold money has acted as means of circulation, so that the linen could be sold by one person and bought by another. So, the amount of gold money in circulation must be equal to the gold money prices of the commodities to be sold.

But, we have seen that the value of the gold, as with every other commodity, is determined by the labour-time required for its production. And, the prices of commodities are a function, not just of their own values, but also the value of the gold. Exchange value, or price, is a relative not an absolute measure.

So, if the value of commodities remains constant, but the value of gold falls (because, say the California Gold Rush

means less labour-time is required, to produce a given amount of gold) then the exchange value and prices of commodities will rise. If a gram of gold can now be produced in half the time, then 20 metres of linen will equal 4 grams gold, its price will be doubled to £4, and vice versa.

But, things do not end there. If the fall in the value of gold, by half, causes prices to double then by the same token, the amount of currency in circulation will also need to double in order that there is enough to buy all the commodities at their new higher prices.

To stress once more, the *value* of these commodities has not changed. Only their *exchange value* vis a vis gold has changed. If previously 1000 metres of linen were in the market, with an exchange value of £100 = 100 grams gold, now this 1000 metres of linen will have an exchange value of £200, requiring 200 grams gold money. In other words, the fall in the value of the gold money has caused an inflation of all commodity prices except gold.

The same is true, as Marx sets out, if silver is replaced by gold as the money commodity, as it was in Britain. If exchange values are measured against silver, they will be higher than measured against gold (because silver has a lower value than gold). Prices will be higher, measured in units of silver. But, if gold pushes out silver, then its higher value means that prices will fall, even though the actual values of the commodities have remained constant. For example, if 20 metres of linen are priced at £30, where £30 = 30 grams of silver, then if gold pushes out silver, and 1 gram of gold equals 15 grams of

silver, then if £1 = 1 gram of gold, now not 1 gram of silver, then 20 metres of linen = 2 grams of gold, which equals £2. You can see the significance for this in relation to the Eurozone. Suppose Spain leaves the Euro, and restores the Peseta. A Peseta might be really only worth a tenth of a Euro. If the Pesetas in your bank account, however, were redeemed at par, i.e. 1 Peseta per Euro, then essentially you would have lost 90% of your savings! That is why, during the Eurozone crisis people rushed to take their Euros out of Greek, Spanish, Portuguese and other Eurozone banks!

Marx also sets out how this process plays out historically. At this stage, of petty commodity production, barter continues, as far as the gold producers are concerned, because their commodity is money itself! They exchange their gold directly for the commodities they require.

If, the value of gold falls, because less labour-time is required for its production, then competition, amongst gold producers, means they will have to hand over more gold, to obtain those commodities, than they did previously. In the rest of the economy, where commodity producers are not exchanging directly with the gold producers, this change may not be seen or known about. As a consequence, prices, for these other commodities, may remain unaltered.

However, because those commodity producers, who exchange directly with the gold producers, will obtain more gold, competition, between them, for the commodities they buy, will gradually push up these prices, until such time as all commodity prices reflect the new exchange relation to gold. In orthodox economic

theory, the *Austrian School* have adopted a version of this argument to suggest that, those closest to the source of an inflated money supply, i.e. the banks and finance houses, together with very large businesses, are able to obtain an advantage, compared to other market participants, further down the chain.

It is not the increased supply of gold which causes its value to fall, and prices of other commodities to rise. It is the fall in its value which causes the supply of it, as money, to rise.

“If now its value fall, this fact is first evidenced by a change in the prices of those commodities that are directly bartered for the precious metals at the sources of their production. The greater part of all other commodities, especially in the imperfectly developed stages of civil society, will continue for a long time to be estimated by the former antiquated and illusory value of the measure of value. Nevertheless, one commodity infects another through their common value-relation, so that their prices, expressed in gold or in silver, gradually settle down into the proportions determined by their comparative values, until finally the values of all commodities are estimated in terms of the new value of the metal that constitutes money. This process is accompanied by the continued increase in the quantity of the precious metals, an increase caused by their streaming in to replace the articles directly bartered for them at their sources of production. In proportion therefore as commodities in general acquire their true prices, in proportion as their values become estimated according to the fallen value of the precious metal, in the same proportion the quantity of that metal necessary for

realising those new prices is provided beforehand.” (p 119)

For the ease of argument, Marx assumes a constant value of gold. In that case, the amount of money needed, for circulation, is determined by the sum of all prices. If the values of other commodities remain constant, then an increase in the number to be sold will require more money. If the number sold remains constant, an increase in their prices will require more money, and vice versa. Similarly, if only some commodities increase in price, it will require more money. And, if some prices fall and others rise, it will depend on whether the sum of the rises is greater or lesser than the sum of the falls.

Marx then takes this analysis on both logically and historically. The more trade advances, so that these exchanges are more numerous and more frequent, the more it is clear that these transactions occur sequentially. So, over a given time period, the same piece of money can perform several operations. The same £2 can be used to purchase 20 metres of linen, then to buy a bible, then 4 gallons of brandy. So, the £2 has been enough to facilitate £6 of exchanges. The number of times a given amount of money moves in a given period of time is called the *velocity of circulation*.

“... the quantity of money functioning as the circulating medium is equal to the sum of the prices of the commodities divided by the number of moves made by coins of the same denomination. This law holds generally.” (p 121)

The different types of transactions increase or decrease this velocity. Some transactions consist of just a sale and a purchase, the money then standing idle. Others result in a whole series of transactions. The higher the velocity, the less money actually needed in circulation, and vice versa.

With money based on precious metals, circulation can only tolerate as much money as is required. If more money is put into circulation than is required, its velocity slows down, and ultimately the metal is withdrawn. In *“A Contribution to The Critique of Political Economy”*, Marx refers to the historical facts, in this regard. Where coins were simply accumulating, so that the value of the coins fell below the value of the metal, the metal was melted down, and sold.

The velocity of circulation is a reflection of the speed with which commodities are themselves being exchanged, and, therefore, of the state of economic activity. But, Marx also elaborates,

“Herrenschwand’s fanciful notions amount merely to this, that the antagonism, which has its origin in the nature of commodities, and is reproduced in their circulation, can be removed by increasing the circulating medium. But if, on the one hand, it is a popular delusion to ascribe stagnation in production and circulation to insufficiency of the circulating medium, it by no means follows, on the other hand, that an actual paucity of the medium in consequence, e.g., of bungling legislative interference

with the regulation of currency, may not give rise to such stagnation.” (Note 1 p 122)

Marx here is levelling his criticism at the *1844 Bank Acts* which were based on an incorrect view of money held by Ricardo. As Marx says,

“The erroneous opinion that it is, on the contrary, prices that are determined by the quantity of the circulating medium, and that the latter depends on the quantity of the precious metals in a country; this opinion was based by those who first held it, on the absurd hypothesis that commodities are without a price, and money without a value, when they first enter into circulation, and that, once in the circulation, an aliquot part of the medley of commodities is exchanged for an aliquot part of the heap of precious metals.” (p 125-5)

Coin and Symbols Of Value

The development of money, as coin, derives from its function as currency. The function of minting coins, as with the legal establishment of a standard of prices, e.g. *Pound, Dollar* and so on, is appropriated by the state. The fact that gold and silver coins have different names, weights etc., in different countries, is a reflection of the fact of the separation of the circulation of commodities into a national and an international sphere.

In international trade, payment is made in gold bullion rather than coin. This illustrates that the only difference between bullion and coin, as money, is the shape. The moment gold is minted into coin, it has already begun its journey back to be melted into bullion. As part of normal circulation, all coins are subject to wear and tear. Coins

made of precious metals are also subject to clipping, i.e. slithers of gold are cut from coins, accumulated and then sold as gold. This means that the coins continue to circulate, at their face value, although their actual value has been diminished. To try to prevent this, the process of milling the edges of coins was introduced.

But, coins still got worn down, so the actual value of the coin, determined by the amount of gold it contained, inevitably and increasingly diverged from its nominal value, based on how much gold it was supposed to contain. In other words, even gold coins became just symbols of the gold money they represented.

Marx points out that this caused considerable confusion over the centuries about the real nature of money. Laws were introduced to set the minimum weight of gold or silver that coins had to contain, below which they ceased to be legal tender, and had to be withdrawn from circulation. Even so, periodically the weight of gold in coins was officially reduced, reflecting the fact that this was the case, in reality, of the coins actually circulating. Marx gives extensive details on the extent to which the actual value of coins had fallen, compared to their original value, so that they were often now just a small fraction of their original value.

The fact, however, that even gold coins only ever acted as mere symbols or tokens of the money they represented, meant that it became obvious that other tokens could be used as coins. There were other reasons for that. Firstly, minting very small amounts of gold, to represent tiny monetary amounts, was not practical. Secondly, less precious metals, such as silver and

copper, had been used earlier. As trade increases, and more money is required in circulation, the more precious metal pushes out the lesser, for bigger transactions. This leaves the less precious metal to act as a fraction of the monetary standard, to be used for smaller payments. Thirdly, it is cheaper to use other metals, as tokens, and there is less reason for clipping of these coins.

However, because these coins are used for the much larger number of small transactions, they are subject to greater wear and tear. Their nominal value has no relation to the physical value, which is set by law, as a given fraction of the standard monetary unit, e.g. a *Penny* is 1/240 of a *Pound*, a *Shilling* is 1/20 of a *Pound* and so on. The weight and value of the metal, in the coin, is again arbitrarily determined by law, so that it bears no resemblance to the money it represents. Replacing gold coins with paper money tokens is just an extension of this process.

However, Marx makes clear that he is speaking here of that stage of history when this paper money is that issued and backed by the state, not *credit money*, which is established later.

“But we may affirm this much, that just as true paper money takes its rise in the function of money as the circulating medium, so money based upon credit takes root spontaneously in the function of money as the means of payment.” (p 127)

The laws relating to this paper money are quite straightforward. As the requirements of circulation can only absorb a certain amount of gold money, so the

paper money tokens, put in circulation, to represent it, cannot exceed that total either. Where an excess of gold, in circulation, is automatically withdrawn (hoarded or melted into bullion etc.), the same cannot occur with paper money tokens, because they have no real value of their own, as gold does. If more paper tokens are in circulation than is required (because an excess has been printed, or because economic activity has declined etc.), then these money tokens represent a smaller amount of money. Marx refers in many notes to his earlier analysis of money undertaken in *“A Contribution To The Critique Of Political Economy”*.

“If the quantity of paper money issued be double what it ought to be, then, as a matter of fact, £1 would be the money-name not of 1/4 of an ounce, but of 1/8 of an ounce of gold. The effect would be the same as if an alteration had taken place in the function of gold as a standard of prices. Those values that were previously expressed by the price of £1 would now be expressed by the price of £2.

Paper money is a token representing gold or money. The relation between it and the values of commodities is this, that the latter are ideally expressed in the same quantities of gold that are symbolically represented by the paper. Only in so far as paper money represents gold, which like all other commodities has value, is it a symbol of value.” (p 128-9)

Paper money tokens can perform this function of currency, in place of money, because all that is occurring is the intercession of money in the exchange of commodities, C-M-C. But, money has other functions

besides currency. Paper cannot replace gold as universal equivalent of value, and, therefore, measure of value. Even as currency, paper can only act as a symbol of money, with the power of the state behind it, which restricts its circulation within the realm of the state. Even then, as we have seen in the *Weimar Republic*, if the printing of money tokens exceeds certain limits, relative to the gold it represents, not even the state can enforce its function. As Marx puts it,

“If the paper money exceed its proper limit, which is the amount in gold coins of the like denomination that can actually be current, it would, apart from the danger of falling into general disrepute, represent only that quantity of gold, which, in accordance with the laws of the circulation of commodities, is required, and is alone capable of being represented by paper.” (p 128)

Section 3

Money

a) Hoarding

The circulation of commodities is reflected in the continual currency of money. But, when the circuit of commodities ceases, when sale is not followed by purchase, then this mobilisation of money ceases. It stops being coin or currency, and becomes money. From the beginning of commodity circulation, the desire arises to hold on to money. Money becomes hoarded, and sellers become hoarders.

The first commodities arise as accidental surpluses, and are converted into gold and silver, and so arises the view

of gold and silver as themselves expressions of “*superfluity or wealth*”. Where production continues to be based on the supply of a restricted range of wares, this kind of hoarding of gold and silver continues. Marx refers to that tradition in Asia, and even today, a large quantity of gold demand comes from India.

As the production of commodities develops, and every producer becomes more dependent, both on selling their own output, and on being able to buy the output of others, so the production and consumption can become more separated, so that it becomes necessary to be able to buy without selling. In other words, a certain hoard of money is required. But, this implies that previously you have sold without buying. This seems to represent a contradiction when looked at as a whole.

But, the gold producers have money (gold), not from having previously sold, but by virtue of producing the money commodity itself. Their money is in the form of a hoard immediately. When they acquire commodities, in direct exchange, it is not on the basis of C-M-C (i.e. a sale of a commodity to acquire money), but directly of M-C. All down the line then it becomes possible to acquire money without the need to immediately make a purchase, resulting in the formation of hoards. The gold producer sees M-C. But, the seller of C to them sees C-M. M for them can then become a hoard, which can be used to make a purchase not immediately, but some time in the future, i.e. M-C, and so on.

The possibility of storing exchange value, in this commodity form, also sees the development of the greed for gold.

Everything is convertible into gold, commodity or not, and with its possession, everything is possible. Everything can be bought and sold. Money is able to sweep away all distinctions, and in the possession of individuals, it also, therefore, brings social power.

In pre-capitalist formations, the accumulation of hoards is seen as equivalent to an increase in value, and even though, in reality, the value of the money varies, according to differences of its own value, or that of other commodities. But, for the hoarder, 200 grams gold is still more than 100 grams, and the gold is still *“the immediate incarnation of all human labour.”* So, the desire to increase these hoards is insatiable. Money can buy anything, but to buy more of it you need more money, a larger hoard.

“In order that gold may be held as money, and made to form a hoard, it must be prevented from circulating, or from transforming itself into a means of enjoyment. The hoarder, therefore, makes a sacrifice of the lusts of the flesh to his gold fetish. He acts in earnest up to the Gospel of abstention. On the other hand, he can withdraw from circulation no more than what he has thrown into it in the shape of commodities. The more he produces, the more he is able to sell. Hard work, saving, and avarice are, therefore, his three cardinal virtues, and to sell much and buy little the sum of his political economy.” (p 133)

Alongside this form of hoard, as the wealth of society increases, we see gold and silver hoarded in the form of jewellery and other such objects. So, the market for them grows separate from their use as money, and particularly

in times of crisis, this also forms a latent source of supply. At the same time, these hoards also help in the process of regulating the money supply, because it is always necessary that there is more gold and silver in the country than is, at any time, needed for coins, so that more can be minted, if required, and, when not required, can return to the hoards.

b) Means of Payment

Marx describes a number of situations where sale and purchase can be separated.

“One sort of article requires a longer, another a shorter time for its production. Again, the production of different commodities depends on different seasons of the year. One sort of commodity may be born on its own market place, another has to make a long journey to market. Commodity-owner No. 1, may therefore be ready to sell, before No. 2 is ready to buy. When the same transactions are continually repeated between the same persons, the conditions of sale are regulated in accordance with the conditions of production. On the other hand, the use of a given commodity, of a house, for instance, is sold (in common parlance, let) for a definite period. Here, it is only at the end of the term that the buyer has actually received the use-value of the commodity. He therefore buys it before he pays for it. The vendor sells an existing commodity, the purchaser buys as the mere representative of money, or rather of future money. The vendor becomes a creditor, the purchaser becomes a debtor. Since the metamorphosis of commodities, or the development of their value-form, appears here under a

new aspect, money also acquires a fresh function; it becomes the means of payment.” (p 135)

This in itself creates a new social relation. Marx writes,

“The following shows the debtor and creditor relations existing between English traders at the beginning of the 18th century. ‘Such a spirit of cruelty reigns here in England among the men of trade, that is not to be met with in any other society of men, nor in any other kingdom of the world.’ {“An Essay on Credit and the Bankrupt Act,” Lond., 1707 p2} (Note 1 P 135)

Marx relates it to the class struggles of the past between creditors and debtors, for example, in Ancient Rome and in the Middle Ages, both of which ended in the ruin of the debtors. However, Marx points out that these relations, in both periods, *“reflected only the deeper-lying antagonism between the general economic conditions of existence of the classes in question.”*

The same can be seen in the relation between creditors and debtors today, particularly within European states, and the end result of the destruction of the debtors (particularly within the middle class who have taken on huge amounts of mortgage debt, credit card and other personal debt, student loan debt etc., and within the small business class who have taken on this, and other debt to keep their businesses afloat) is likely to be the same.

Now, money acts as a measure of value in determining the price of commodities to be sold. The commodity can change hands without payment, merely on the basis of a promise to pay. So, the money has acted only as an ideal

means of purchase, not yet as a real payment. Only when the agreed payment date arrives does the money itself enter into circulation. In the intervening period, the currency was turned into a hoard. Now, the means of payment only enters circulation after the commodity has left it.

Money's functions have so far been identified as a unit of measurement, and of currency, i.e. means of circulation. Now, money has been identified as having another function that of means of payment, which here can be payment at a later date, for goods already purchased, or else a pre-payment for goods to be received.

Just as with determining the quantity of money, required to ensure the circulation of commodities, so a similar calculation is required, to determine the amount of money needed to facilitate all of these payments.

Within a given period, that is made up of the sum of the prices of all those commodities to be paid for. Once again, to determine how much money is required, we need to know the velocity of money. The more quickly payments are made, the less money is required in circulation. It can be seen why capital has an incentive in developing more efficient, faster methods of ensuring such payments, through the development of banking and financial services, because this reduces the amount of money that needs to be put into circulation.

“The fact that a number of sales take place simultaneously, and side by side, limits the extent to which coin can be replaced by the rapidity of currency. On the other hand, this fact is a new lever in economising

*the means of payment. In proportion as payments are concentrated at one spot, special institutions and methods are developed for their liquidation. Such in the middle ages were the **virements** at Lyons. The debts due to A from B, to B from C, to C from A, and so on, have only to be confronted with each other, in order to annul each other to a certain extent like positive and negative quantities. There thus remains only a single balance to pay. The greater the amount of the payments concentrated, the less is this balance relatively to that amount, and the less is the mass of the means of payment in circulation.” (p 137)*

Marx highlights the difference between a *monetary crisis*, arising as a stage of an economic crisis, and *financial crises*, rooted in the realm of banking and the stock market.

“The monetary crisis referred to in the text, being a phase of every crisis, must be clearly distinguished from that particular form of crisis, which also is called a monetary crisis, but which may be produced by itself as an independent phenomenon in such a way as to react only indirectly on industry and commerce. The pivot of these crises is to be found in moneyed capital, and their sphere of direct action is therefore the sphere of that capital, viz., banking, the stock exchange, and finance.” (note 1 p 137)

Marx is making the distinction between the kind of *financial crisis* that broke out in the 1929 *Wall Street Crash*, the 1987 *Stock Market Crash*, the *Tech Wreck of 2000*, the 2008 *Financial Meltdown*, or the *Eurozone Debt Crisis*, in contrast with the manifestation of a real

economic crisis, in what appears to be a *shortage of money*. What precisely he is referring to is the crisis of 1847, which resulted not from an economic crisis, but from the application of the *1844 Bank Act*, which created a *credit crunch*.

All of the former *financial crises* are premised on the blowing up of *financial asset bubbles*, of one sort or another – stock markets, bond markets, property markets – which invariably collapse. The extent to which these financial crises affect the real economy depends on the actions of the monetary and fiscal authorities, and the condition of the real economy at the time of the crisis.

The latter crises that Marx is describing, however, i.e. real economic crises, arise from within the real economy itself. It is manifest as a shortage of money, simply because it erupts as a breakdown in the series of payments. If A owes B, owes C, owes D, owes E, owes A. Then, if, at any point in this sequence, for example, C fails to pay D, then the further series of payments may fail too. Why they fail, at any point, may be due to a number of causes. It may be a reflection of a real crisis of overproduction, or it may be a breakdown in the mechanism of commercial credit, here described, or it may even be simply a case of over trading, inadequate cash flow provisioning etc., by a large or several firms.

The result is that the demand for money, as real money (including bank notes and coin), increases even more. In other words, it creates a liquidity crisis, and credit crunch.

“Such a crisis occurs only where the ever-lengthening chain of payments, and an artificial system of settling

them, has been fully developed. Whenever there is a general and extensive disturbance of this mechanism, no matter what its cause, money becomes suddenly and immediately transformed, from its merely ideal shape of money of account, into hard cash. Profane commodities can no longer replace it. The use-value of commodities becomes valueless, and their value vanishes in the presence of its own independent form. On the eve of the crisis, the bourgeois, with the self-sufficiency that springs from intoxicating prosperity, declares money to be a vain imagination. Commodities alone are money. But now the cry is everywhere: money alone is a commodity! As the heart pants after fresh water, so pants his soul after money, the only wealth. In a crisis, the antithesis between commodities and their value-form, money, becomes heightened into an absolute contradiction. Hence, in such events, the form under which money appears is of no importance. The money famine continues, whether payments have to be made in gold or in credit money such as bank-notes.” (p 138)

As a consequence of these changes,

“... even when prices, rapidity of currency, and the extent of the economy in payments, are given, the quantity of money current and the mass of commodities circulating during a given period, such as a day, no longer correspond. Money that represents commodities long withdrawn from circulation, continues to be current. Commodities circulate, whose equivalent in money will not appear on the scene till some future day.” (p 138)

It is on this basis that *credit-money* develops.

“Credit-money springs directly out of the function of money as a means of payment. Certificates of the debts owing for the purchased commodities circulate for the purpose of transferring those debts to others. On the other hand, to the same extent as the system of credit is extended, so is the function of money as a means of payment. In that character it takes various forms peculiar to itself under which it makes itself at home in the sphere of great commercial transactions. Gold and silver coin, on the other hand, are mostly relegated to the sphere of retail trade.” (p 139)

Once commodity production has become generalised and extended, money begins to act, not just to circulate commodities, or as payment for commodities, but as the basis of all payments, e.g. of rents, taxes etc. Originally, rents, taxes, tithes etc. were paid in kind. The peasant worked on the Lord of the manor's land for three days a week. Tithes were a tenth of the peasant's produce, handed over to the church and so on. The more money inserts itself into economic life, the more these payments are instead made in cash.

Certain dates in the calendar are established as payment dates, and that continues today. Around these dates there can arise an increase in the demand for money. Large increases in the money put into ATM's occurs around Christmas, as a modern day equivalent. Although, hoarding tends to decline, with the development of economic activity, the growing significance of the need for money, as a means of payment, brings about an increase in the formation of money reserves.

c) Universal Money

Outside the remit of the state, i.e. on the world stage, money is stripped of all its national peculiarities. The *Pound* or *Dollar*, as standards of prices, have no meaning at an international level. Coins and notes are equally meaningless, in so far as they represent mere symbols or tokens of real value. Consequently, money, at an international level, has to revert to its original form, that of bullion, universal money.

“It is only in the markets of the world that money acquires to the full extent the character of the commodity whose bodily form is also the immediate social incarnation of human labour in the abstract. Its real mode of existence in this sphere adequately corresponds to its ideal concept.” (p 141)

Unlike the home market, where one commodity acts as measure of value, and becomes money, at an international level, both gold and silver bullion operate. Marx sets out what is wrong with a *Gold Standard*.

“Hence the absurdity of every law prescribing that the banks of a country shall form reserves of that precious metal alone which circulates at home. The “pleasant difficulties” thus self-created by the Bank of England, are well known. On the subject of the great epochs in the history of the changes in the relative value of gold and silver, see Karl Marx, l.c., p. 136 sq. Sir Robert Peel, by his Bank Act of 1844, sought to tide over the difficulty, by allowing the Bank of England to issue notes against silver bullion, on condition that the reserve of silver should never exceed more than one-fourth of the reserve of

gold. The value of silver being for that purpose estimated at its price in the London market.” (note 3 p 141)

However, Engels in a further note for the 4th German edition of *Capital Vol. I*, set out the way changes in the method of producing gold and silver was raising the exchange value of the former against the latter. The consequence was that, as in the national sphere, silver would be pushed out by gold as the money commodity.

World money acts mainly as a means of payment, because the trade between nations can be netted off, leaving only the difference between exports and imports (the balance of trade) to be made up. In addition it acts as *“the universally recognised embodiment of all wealth.”*

This *universal money* is also vital when it comes to transferring wealth, rather than just in respect of payments. That is where *capital transfers* are being made, such as loans to foreign governments.

Similar to the way reserves have to be established, in the home market, to facilitate the flow of payments, so reserves are needed to maintain the flow of international payments. In the national sphere, reserves can be in the form of notes and coins, acting as the symbols of money. However, at the time Marx was writing, of a period prior even to the role of the *Pound* as international reserve currency, only gold and silver themselves could fulfil this function, as reserves for international payments.

It is why Marx says,

“On that account, Sir James Steuart, in order to distinguish them from their purely local substitutes, calls

gold and silver 'money of the world.'" (p 143)

This flow of gold is two-fold. Firstly, commodity producing nations sell their commodities to the gold and silver producing nations. Commodities flow into the latter and gold world money flows out of the latter into the former. There it is transformed into articles of luxury etc., (use values) as well as to replace and supplement the existing coinage. In addition, it is stored in hoards and reserves.

But, secondly, having entered circulation, in the commodity producing countries, and having been formed into hoards and reserves, it enters into a further international circulation, moving back and forth between these countries, as the balance of trade between them changes. Capital seeks to keep these reserves to a minimum.

"What money is more than of absolute necessity for a Home Trade, is dead stock ... and brings no profit to that country it's kept in, but as it is transported in trade, as well as imported." (John Bellers, "Essays," p. 13.) "What if we have too much coin? We may melt down the heaviest and turn it into the splendour of plate, vessels or utensils of gold or silver, or send it out as a commodity, where the same is wanted or desired; or let it out at interest, where interest is high." (W. Petty: "Quantulumcunque," p. 39.) "Money is but the fat of the Body Politick, whereof too much doth as often hinder its agility, as too little makes it sick ... as fat lubricates the motion of the muscles, feeds in want of victuals, fills up the uneven cavities, and beautifies the body; so doth money in the state quicken its action, feeds from abroad in time of dearth at home, evens accounts ... and

beautifies the whole; altho more especially the particular persons that have it in plenty.” (W. Petty, “Political Anatomy of Ireland,” p. 14.)” (note 4 p144)

Part II

The Transformation Of Money Into Capital

Chapter 4 - General Formula For Capital

Capital arises out of the circulation of commodities, and particularly from the 16th century, when this circulation takes place, in the context of a “*world embracing market.*” (p 145)

From the point of view of economic analysis, it does not matter what these commodities are, in terms of use values (i.e. apples, guns, jewellery). All that is significant is the economic forms this takes, and, as Marx has described, the result of these processes is the development of money as the embodiment of exchange value. Money is the first form also in which capital appears.

Under feudalism, and previous modes of production, wealth takes forms other than money, e.g. land, slaves etc. By contrast, capital invariably takes first the money form, in the hands of the merchant and usurer.

NB. Its important to understand Marx's dialectical method here. For Marx, categories are not fixed and frozen. Categories are historically determined. As Lenin puts it, “*The truth is always concrete.*” This is true of all categories used by Marx, such as his definition of class, for example. Categories can only be understood in their process of development. So, to pre-empt, Marx's further analysis, the use of the term “*capital*” here does not conform with his later definition. In that later definition, he defines capital as a social relation. This social relation is a necessary one between *capital and wage labour.*

Neither can exist without the other. They form a contradictory whole. On the basis of this relation, capital constitutes self-expanding value, which is accumulated, and becomes capital itself, which results in more wage labour being employed, which produces more surplus value and so on.

But, neither merchant nor usurer's capital are capital on this definition. Both expand not from the extraction of surplus value from wage labour, but from a process of unequal exchange that can have the opposite effect to creating a self-expanding value. Indeed, in the Mediterranean city states, where this form of “*Capitalism*” first developed, it eventually collapsed, precisely because it pauperised the actual peasant producers!

Marx is trying to present an historical, as well as logical, development of capitalism, and so he is describing capital here in its pro-genesis. This is like the way he describes exchange value in the *Grundrisse*. There he argues that exchange value can only take its mature form when wage labour has developed to the stage where workers form the dominant consumers.

But, capital logically adopts the form of money first, because it is only in the form of money that it can purchase means of production and labour power.

Marx begins by distinguishing between the circuit of commodities and the circuit of capital. Commodities circulate, C-M-C. That is selling in order to buy. But, another circuit can be established, M-C-M¹. That is buying in order to sell. Here, the owner of money buys commodities for no other purpose than to sell them. We

encountered this earlier, in relation to the merchant, who buys commodities in the expectation of being able to sell them, at some other time and place, at a higher price (arbitrage). Clearly, there would be no purpose in laying out money, for commodities, if their sale only returned the same amount of money. It implies that the money that is returned is more than is laid out, and its in this sense, of its expansion, that Marx describes it as capital.

The difference between the circuit of commodities, C-M-C, and that of capital is that the former seeks only to exchange a commodity that has no use value, for its owner, for one of the same exchange value, that does. Money merely facilitates this metamorphosis. But, in the circuit M-C-M, the only point is to end up with a larger amount of exchange value (M), at the end, than you had at the beginning – whether you do or not is another matter. In other words, what look like the same economic processes, but with different starting and finishing points, are, in fact, completely different processes, reflecting different motivations, and economic relations built upon them.

Quoting Steuart, Marx describes this use of money as an advance rather than an expenditure, because the intention is not to spend the money, never to see it again, but to advance it in the hope of seeing it again soon after, with an addition to it.

“When a thing is bought in order to be sold again, the sum employed is called money advanced; when it is bought not to be sold, it may be said to be expended.” — (James Steuart: “Works,” &c. Edited by Gen. Sir James

Steuart, his son. Lond., 1805, V. I., p. 274.)” (note 1, p 147)

In the circuit of commodities, C-M-C, the process begins and ends with commodities whose exchange value is the same (*quantity*), but whose *quality* (use value) is different. In the circuit of capital, the opposite is true. The *quality* (use value) of the money, at the beginning and end, is the same, but it is the *quantity* of exchange value that is different.

In reality then, the circuit of capital is more correctly defined as, M-C-M¹, where M¹ is M + ΔM. Here Marx writes,

“This increment or excess over the original value I call “surplus-value.” The value originally advanced, therefore, not only remains intact while in circulation, but adds to itself a surplus-value or expands itself. It is this movement that converts it into capital.” (p 149)

But, as pointed out earlier, at this stage of his analysis, Marx has only detailed the movement of commodities and money in the realm of circulation. He is about to go on to demonstrate why, in fact, surplus value cannot arise within the realm of circulation. Resolving, this contradiction, and demonstrating where surplus value does come from, is perhaps his greatest revelation.

In fact, the contradiction in Marx's presentation in this section is apparent. He writes,

“Of course, it is also possible, that in C-M-C, the two extremes C-C, say corn and clothes, may represent different quantities of value. The farmer may sell his corn above its value, or may buy

the clothes at less than their value. He may, on the other hand, "be done" by the clothes merchant. Yet, in the form of circulation now under consideration, such differences in value are purely accidental." (p 149)

But, the only basis, at this stage of his analysis, by which M-C-M¹ can arise is precisely on this same basis of mis-pricing, sharp practice or accident that allows the merchant to either buy the commodity, C, below its value or else to sell it above its value! In other words, it assumes a breakdown of the very equivalence that Marx has set as the cornerstone of his analysis of commodities, which is the foundation of his analysis of capital!

At this stage of his analysis then, Marx is wrong when he states,

"The circulation of capital has therefore no limits." (p 150), because he has not yet shown how real surplus value is created by wage labour. He has only described the historical reality of the way merchants were able to to make profits, through buying low and selling high. But, in fact, as he describes elsewhere, this *'Profit on Alienation'*, as Steuart calls it, must, from the perspective of the economy as a whole, be self-cancelling. If profits are essentially made from swindling, by A selling commodities to B above their value, then A's profit is cancelled by B's loss, just as is the case if A sells to B, at its value, a commodity, they bought from C, below its value, in which case A's Profit is cancelled by C's loss.

It was precisely this fact that demonstrated that there were very real limits to the accumulation of this kind of capital in relation to the *City States*. There the peasant producers were so

squeezed by the merchants that they could not even ensure their own reproduction, and that of their means of production. Production collapsed killing the goose that laid the golden eggs, appropriated by the merchants.

For the same reason, I would take issue with Marx's statement.

“As the conscious representative of this movement, the possessor of money becomes a capitalist.” (p 151)

At this stage of his analysis, I would argue that all we have is the existence of *merchants and money lenders*, and a system arising not of *Capitalism*, but of *Mercantilism*, as a *transitional phase* between *Feudalism* and *Capitalism*. In it, the merchants and money lenders co-exist, in a symbiotic relation, with landlords. Its true that, as capitalism does develop all of these forms of property, and economic activity takes on the characteristics of capital, for example, land becomes capitalistically owned land, rent becomes capitalist rent, and so on, but that is a consequence of the dominance of capital, a situation which has not yet arisen within Marx's analysis.

Chapter 5 - Contradictions In The General Formula Of Capital

Some of the contradictions, alluded to in the previous chapter, are drawn out here by Marx, as part of his dialectical exposition. He starts by pointing out that for two out of the three people, involved in the transactions, things do not look differently to what they were previously. If a capitalist buys commodities, from A, and sells them, to B, then, from A's perspective, things still appear as they were before, for him as a seller, i.e. C-M. And, for B, as a buyer, they still appear as M-C. For both, as commodity producers, these stages still seem to be within the process, C-M-C.

But, herein lies the contradiction referred to previously. If things really do appear the same, to A and B, it is impossible for C to derive a profit, because such a profit, here, can only be derived as a result of buying the commodity below its value, or selling it above its value or both. Yet, its clear that merchants did and do make profits. What Marx is doing here, again, is taking us through an historical and logical process, to demonstrate how this contradiction is rooted in reality, and how it is resolved.

So, for example, he writes,

“The inversion, therefore, of the order of succession, does not take us outside the sphere of the simple circulation of commodities, and we must rather look, whether there is in this simple circulation anything permitting an expansion of the value that enters into

circulation, and, consequently, a creation of surplus-value.” (p 155)

To answer this question, Marx goes back a stage to a barter arrangement, where one commodity (use value) is exchanged for another. Marx introduces here also the concept of *Absolute Comparative Advantage*. Both parties have gained, from the exchange, because they have exchanged a use value they did not want for one they did (what orthodox economics calls a *gain in welfare*), but also,

“.. there may also be a further gain. A, who sells wine and buys corn, possibly produces more wine, with given labour-time, than farmer B could, and B on the other hand, more corn than wine-grower A could. A, therefore, may get, for the same exchange-value, more corn, and B more wine, than each would respectively get without any exchange by producing his own corn and wine.” (p 155)

But, this increase in welfare or real wealth (i.e. use value) does not at all mean that there is any increase in value resulting from this exchange. On the contrary, as was seen in *Chapter 1*, it is usually the case that an increase in real wealth, in the number of use values, goes hand in hand with a fall in value, because the cause of the rise in the quantity of use values (a rise in productivity) is, at the same time, a cause of a fall in the labour-time required for the production of those use values, and, therefore, of their value!

Marx quotes Mercier de la Rivière

““A man who has plenty of wine and no corn treats with a man who has plenty of corn and no wine; an exchange

takes place between them of corn to the value of 50, for wine of the same value. This act produces no increase of exchange-value either for the one or the other; for each of them already possessed, before the exchange, a value equal to that which he acquired by means of that operation.”” (p 155)

As Marx states,

“The result is not altered by introducing money, as a medium of circulation, between the commodities, and making the sale and the purchase two distinct acts. The value of a commodity is expressed in its price before it goes into circulation, and is therefore a precedent condition of circulation, not its result.” (p 155-6)

“It is true, commodities may be sold at prices deviating from their values, but these deviations are to be considered as infractions of the laws of the exchange of commodities, which in its normal state is an exchange of equivalents, consequently, no method for increasing value.” (p 156)

This is the opposite of the position of orthodox economics, particularly of the Austrian School, which sees precisely in this gain in welfare the basis of profit. As Marx points out, this is to confuse use value with exchange value. Orthodox economics resorts to this device, because it is unable to account for the existence of profit. It can provide all sorts of justifications for capitalists receiving profit, such as abstinence, risk-taking and so on, but none of these explain where the profit they receive for these virtues actually comes from! Its like a physician settling for an explanation of syphilis by

claiming that the *“Wages of Sin Is Death”*. In fact, according to orthodox economic theory, profit should *not* exist at all, because competition should eliminate it!

Marx quotes an early example of this argument by Condillac.

“For instance, Condillac says: “It is not true that on an exchange of commodities we give value for value. On the contrary, each of the two contracting parties in every case, gives a less for a greater value. ... If we really exchanged equal values, neither party could make a profit. And yet, they both gain, or ought to gain. Why? The value of a thing consists solely in its relation to our wants. What is more to the one is less to the other, and vice versa. ... It is not to be assumed that we offer for sale articles required for our own consumption. ... We wish to part with a useless thing, in order to get one that we need; we want to give less for more. ... It was natural to think that, in an exchange, value was given for value, whenever each of the articles exchanged was of equal value with the same quantity of gold. ... But there is another point to be considered in our calculation. The question is, whether we both exchange something superfluous for something necessary.”” (p 157)

As Marx says, the modern economists, of his day, frequently used Condillac's argument, yet a simple response to it was provided by Le Trosne, who wrote,

“If both the persons who exchange receive more to an equal amount, and part with less to an equal amount, they both get the same.” (Note 2, p 157)

Marx continues,

“If commodities, or commodities and money, of equal exchange-value, and consequently equivalents, are exchanged, it is plain that no one abstracts more value from, than he throws into, circulation. There is no creation of surplus-value. And, in its normal form, the circulation of commodities demands the exchange of equivalents. But in actual practice, the process does not retain its normal form. Let us, therefore, assume an exchange of non-equivalents.” (p 158)

and,

“Suppose then, that by some inexplicable privilege, the seller is enabled to sell his commodities above their value, what is worth 100 for 110, in which case the price is nominally raised 10%. The seller therefore pockets a surplus-value of 10. But after he has sold he becomes a buyer. A third owner of commodities comes to him now as seller, who in this capacity also enjoys the privilege of selling his commodities 10% too dear. Our friend gained 10 as a seller only to lose it again as a buyer. The net result is, that all owners of commodities sell their goods to one another at 10% above their value, which comes precisely to the same as if they sold them at their true value. Such a general and nominal rise of prices has the same effect as if the values had been expressed in weight of silver instead of in weight of gold. The nominal prices of commodities would rise, but the real relation between their values would remain unchanged.” (p 158)

The same is true if buyers are able to buy at 10% below value.

“The creation of surplus-value, and therefore the conversion of money into capital, can consequently be explained neither on the assumption that commodities are sold above their value, nor that they are bought below their value.” (p 158)

In similar terms, Marx dismisses the argument put forward by Torrens, who writes,

““Effectual demand consists in the power and inclination (!), on the part of consumers, to give for commodities, either by immediate or circuitous barter, some greater portion of ... capital than their production costs.”” (p 159)

Marx comments,

“The fact that the owner of the commodities, under the designation of producer, sells them over their value, and under the designation of consumer, pays too much for them, does not carry us a single step further.” (p 159)

and he quotes Ramsay to the same effect,

“The idea of profits being paid by the consumers, is, assuredly, very absurd. Who are the consumers?” {G. Ramsay: “An Essay on the Distribution of Wealth.” Edinburgh, 1836, p. 183.} (Note 4 p 159)

The only basis on which this could result in profit is if there were a class of people that,

“... only buys and does not sell, i.e., only consumes and does not produce. The existence of such a class is inexplicable from the standpoint we have so far reached, viz., that of simple circulation. But let us anticipate. The money with which such a class is constantly making

purchases, must constantly flow into their pockets, without any exchange, gratis, by might or right, from the pockets of the commodity-owners themselves. To sell commodities above their value to such a class, is only to crib back again a part of the money previously given to it. The towns of Asia Minor thus paid a yearly money tribute to ancient Rome. With this money Rome purchased from them commodities, and purchased them too dear. The provincials cheated the Romans, and thus got back from their conquerors, in the course of trade, a portion of the tribute. Yet, for all that, the conquered were the really cheated. Their goods were still paid for with their own money. That is not the way to get rich or to create surplus-value.” (p 159-60)

Marx also shows what is wrong with trying to find a solution by reducing matters to a subjective level of the individuals involved in the exchange.

“A may be clever enough to get the advantage of B or C without their being able to retaliate. A sells wine worth £40 to B, and obtains from him in exchange corn to the value of £50. A has converted his £40 into £50, has made more money out of less, and has converted his commodities into capital. Let us examine this a little more closely. Before the exchange we had £40 worth of wine in the hands of A, and £50 worth of corn in those of B, a total value of £90. After the exchange we have still the same total value of £90. The value in circulation has not increased by one iota, it is only distributed differently between A and B. What is a loss of value to B is surplus-value to A; what is “minus” to one is “plus” to the other. The same change would have taken place, if A, without the formality of an exchange, had directly stolen the £10

from B. The sum of the values in circulation can clearly not be augmented by any change in their distribution, any more than the quantity of the precious metals in a country by a Jew selling a Queen Anne's farthing for a guinea. The capitalist class, as a whole, in any country, cannot over-reach themselves." (p 160)

As Marx puts it,

"Turn and twist then as we may, the fact remains unaltered. If equivalents are exchanged, no surplus-value results, and if non-equivalents are exchanged, still no surplus-value. Circulation, or the exchange of commodities, begets no value." (p 160-1)

In other words, Marx has set out the contradiction referred to in the previous chapter, and is in the process of resolving it, in his normal manner, of an historical and logical explication.

"The reason is now therefore plain why, in analysing the standard form of capital, the form under which it determines the economic organisation of modern society, we entirely left out of consideration its most popular, and, so to say, antediluvian forms, merchants' capital and money-lenders' capital." (p 160)

"If the transformation of merchants' money into capital is to be explained otherwise than by the producers being simply cheated, a long series of intermediate steps would be necessary, which, at present, when the simple circulation of commodities forms our only assumption, are entirely wanting." (p 160)

Marx then explains that what is true of *merchants' capital* is even more true of *usurers' capital*, which appears to derive a profit even without any exchange taking place.

“In the course of our investigation, we shall find that both merchants' capital and interest-bearing capital are derivative forms, and at the same time it will become clear, why these two forms appear in the course of history before the modern standard form of capital.” (p 162)

Marx sets out one of the reasons why it is not possible to create surplus value so long as the producers own the means of production. That is that the value of their output is equivalent to the labour-time expended on its production, and this is also its price. But, the cost to the producer is also the labour-time required for its production, and so if the cost is equal to the price there can be no surplus value!

“Apart from circulation, the commodity-owner is in relation only with his own commodity. So far as regards value, that relation is limited to this, that the commodity contains a quantity of his own labour, that quantity being measured by a definite social standard. This quantity is expressed by the value of the commodity, and since the value is reckoned in money of account, this quantity is also expressed by the price, which we will suppose to be £10. But his labour is not represented both by the value of the commodity, and by a surplus over that value, not by a price of 10 that is also a price of 11, not by a value that is greater than itself. The commodity owner can, by his labour, create value, but not self-expanding value. He can increase the value of his commodity, by adding fresh

labour, and therefore more value to the value in hand, by making, for instance, leather into boots. The same material has now more value, because it contains a greater quantity of labour. The boots have therefore more value than the leather, but the value of the leather remains what it was; it has not expanded itself, has not, during the making of the boots, annexed surplus-value.”
(p 162-3)

“The conversion of money into capital has to be explained on the basis of the laws that regulate the exchange of commodities, in such a way that the starting-point is the exchange of equivalents. Our friend, Moneybags, who as yet is only an embryo capitalist, must buy his commodities at their value, must sell them at their value, and yet at the end of the process must withdraw more value from circulation than he threw into it at starting. His development into a full-grown capitalist must take place, both within the sphere of circulation and without it. These are the conditions of the problem.” (p 163)

Marx is under no misapprehension that prices and values deviate on several grounds. He knows that Smith and Ricardo were wrong, in believing that market prices oscillated around exchange value, for instance. He is also aware that prices can diverge due to fluctuations in demand and supply, cheating by individual capitalists, and so on. But, these are a distraction from the analysis of the real basis of the formation of capital, which must proceed on the basis of ignoring these variations, and explain it on the basis of value and the exchange of equivalents.

“From the foregoing investigation, the reader will see that this statement only means that the formation of capital must be possible even though the price and value of a commodity be the same; for its formation cannot be attributed to any deviation of the one from the other. If prices actually differ from values, we must, first of all, reduce the former to the latter, in other words, treat the difference as accidental in order that the phenomena may be observed in their purity, and our observations not interfered with by disturbing circumstances that have nothing to do with the process in question. We know, moreover, that this reduction is no mere scientific process. The continual oscillations in prices, their rising and falling, compensate each other, and reduce themselves to an average price, which is their hidden regulator. It forms the guiding star of the merchant or the manufacturer in every undertaking that requires time. He knows that when a long period of time is taken, commodities are sold neither over nor under, but at their average price. If therefore he thought about the matter at all, he would formulate the problem of the formation of capital as follows: How can we account for the origin of capital on the supposition that prices are regulated by the average price, i. e., ultimately by the value of the commodities? I say “ultimately,” because average prices do not directly coincide with the values of commodities, as Adam Smith, Ricardo, and others believe.” (Note 1, p 163)

Chapter 6 - The Buying and Selling Of Labour Power

In this chapter, Marx demonstrates, historically and logically, how the contradiction, identified in the last chapter, is resolved. How is surplus value possible, if all commodities exchange at their values? How can capital arise and accumulate?

Marx begins by once more emphasising this point that profit cannot be created in the realm of circulation, neither in stage one of that process, where money buys commodities, nor in stage two, where those commodities are once more sold.

“The change of value that occurs in the case of money intended to be converted into capital, cannot take place in the money itself, since in its function of means of purchase and of payment, it does no more than realise the price of the commodity it buys or pays for; and, as hard cash, it is value petrified, never varying. Just as little can it originate in the second act of circulation, the re-sale of the commodity, which does no more than transform the article from its bodily form back again into its money-form.” (p 164)

He quotes Ricardo,

““In the form of money ... capital is productive of no profit.” {Ricardo: “Princ. of Pol. Econ.,” p. 267.}” (Note 1, P 164),

The solution to the dilemma, Marx demonstrates, resides in the nature of labour-power, which he distinguishes

from labour. Labour-Power, the ability to perform labour, is a commodity, indeed the only commodity possessed by workers, the only thing they have to sell. The use value of labour-power that the capitalist wants, the quality it possesses, like the quality of an apple to provide nutrition, is labour. The reason the capitalist desires this use value, labour, is precisely because, as Marx has demonstrated, in all the foregoing chapters, it is labour which is the essence of value.

“...Moneybags, must be so lucky as to find, within the sphere of circulation, in the market, a commodity, whose use-value possesses the peculiar property of being a source of value, whose actual consumption, therefore, is itself an embodiment of labour, and, consequently, a creation of value. The possessor of money does find on the market such a special commodity in capacity for labour or labour-power.” (p 164)

Marx describes the condition necessary for labour-power to be sold as a commodity. Firstly, the possessor of the labour-power must also be its owner, and able to freely sell it. A slave is the possessor of labour-power, it cannot be physically separated from his being, but he is not the owner of that labour-power. The slave owner, by definition of owning the slave, also owns his labour-power, and the right to use it, lease it, or sell it, alongside the slave, to whoever they choose. That right does not belong to the slave, and so their labour-power is not a commodity. Only the slave exists as a commodity to be bought and sold by the slave owner.

Because capital is a social relation, consisting of a contradictory unity of capital and wage labour (labour-

power sold as a commodity whose price is the wage), it is clear that, under slave owning societies, capital does not exist, and nor does surplus value. In the *Grundrisse*, Marx explains clearly why slave labour does not produce surplus value.

Marx writes in the *Grundrisse*,

“In production based on slavery, as well as in patriarchal agriculture.....the slave does not come into consideration as engaged in exchange at all.” (p 419)

and,

“... in the relations of slavery and serfdom....The slave stands in no relation whatsoever to the objective conditions of his labour; rather, labour itself, both in the form of the slave and in that of the serf, is classified as an inorganic condition of production along with other natural beings, such as cattle, as an accessory of the earth.” (p 489)

In other words, slaves do not form a subjective factor in production, but an objective factor, like an animal or a machine, or other means of production. They form constant rather than variable capital, to use the distinction that Marx derives later in his analysis.

Marx notes,

“In encyclopaedias of classical antiquities we find such nonsense as this — that in the ancient world capital was fully developed, 'except that the free labourer and a system of credit was wanting.' Mommsen also, in his

“History of Rome,” commits, in this respect, one blunder after another.” (note 1, p 165)

The same applies if the worker essentially turns themselves into a slave, by offering themselves for sale rather than their labour-power for a given period of time.

“He must constantly look upon his labour-power as his own property, his own commodity, and this he can only do by placing it at the disposal of the buyer temporarily, for a definite period of time. By this means alone can he avoid renouncing his rights of ownership over it.” (p 165)

Marx notes that laws exist, in various countries, therefore, which set maximum terms for labour contracts and regulations for their termination. But, by the same token, the absence of such laws have often provided the basis for hidden slavery, for example, in the form of peonage. He quotes Hegel from the *“Philosophy of Right”*.

““I may make over to another the use, for a limited time, of my particular bodily and mental aptitudes and capabilities; because in consequence of this restriction, they are impressed with a character of alienation with regard to me as a whole. But by the alienation of all my labour-time and the whole of my work, I should be converting the substance itself, in other words, my general activity and reality, my person, into the property of another.” {Hegel, “Philosophie des Rechts.” Berlin, 1840, p. 104, § 67.}”(Note 2, p 165)

The second condition required, for labour-power to appear as a commodity, for sale, is that the owner of that labour-power is obliged to sell it, rather than the

commodities in which his labour is incorporated. In other words, the owner of labour-power, as a producer, must be separated from the means of production, which would otherwise enable them to produce, and sell, commodities on their own account; a situation that existed under peasant production.

Throughout Man's history, it has always been the case that he needed to consume, both before and during the time he was producing. In an economy based on commodity production, it is also necessary to be able to consume before the commodities you produce have been sold, and provide the money to buy further commodities to consume. So, in addition to the means of production, the owner of labour-power must own the means of consumption, if they wish to avoid having to sell their own labour-power.

As a consequence of a variety of historical circumstances (which Marx details later in *Capital* in respect of Britain), a situation is arrived at whereby the owner of money does meet in the market place such owners of labour-power, who are free to sell their labour-power, and who now being freed of the ownership of the means of production and of consumption, have no choice but to sell their labour-power as a commodity.

But, as Marx points out,

“One thing, however, is clear — Nature does not produce on the one side owners of money or commodities, and on the other men possessing nothing but their own labour-power. This relation has no natural basis, neither is its social basis one that is common to all historical periods. It

is clearly the result of a past historical development, the product of many economic revolutions, of the extinction of a whole series of older forms of social production.” (p 166)

Marx emphasises just what a sharp break capitalist production is with everything that has gone before. He summarises the historical development he has previously described.

“Definite historical conditions are necessary that a product may become a commodity. It must not be produced as the immediate means of subsistence of the producer himself.” (p 166)

It is only with capitalist production that the majority of products can take on the form of commodities. As a result, prior to capitalist production, most things are produced for their use value, and exchange value is undeveloped. Only when the division of labour separates use value and exchange value, which first appears as barter, do commodities begin to be produced on a larger scale. Yet, such development is still common to many different types of society.

Money only arises when the exchange of commodities has itself reached a more developed stage, and the preponderance of its use for its different functions of *“equivalent of commodities, or as means of circulation, or means of payment, as hoard or as universal money, point, according to the extent and relative preponderance of the one function or the other, to very different stages in the process of social production.” (p 167)*

But, Marx points out that all these forms are compatible with a relatively primitive circulation of commodities.

“Otherwise with capital. The historical conditions of its existence are by no means given with the mere circulation of money and commodities. It can spring into life, only when the owner of the means of production and subsistence meets in the market with the free labourer selling his labour-power. And this one historical condition comprises a world’s history. Capital, therefore, announces from its first appearance a new epoch in the process of social production.” (p 167)

Marx then begins his crucial analysis of labour-power.

“The value of labour-power is determined, as in the case of every other commodity, by the labour-time necessary for the production, and consequently also the reproduction, of this special article. So far as it has value, it represents no more than a definite quantity of the average labour of society incorporated in it. Labour-power exists only as a capacity, or power of the living individual. Its production consequently pre-supposes his existence. Given the individual, the production of labour-power consists in his reproduction of himself or his maintenance. For his maintenance he requires a given quantity of the means of subsistence. Therefore the labour-time requisite for the production of labour-power reduces itself to that necessary for the production of those means of subsistence; in other words, the value of labour-power is the value of the means of subsistence necessary for the maintenance of the labourer.” (p 167)

In the process of working, the vessel in which this labour-power is contained, i.e. the human body, undergoes wear and tear of “*muscle, nerve and brain*”, which need to be restored. The more the worker works – either longer hours or more intense activity – the more this wear and tear, and the more it needs to be restored, meaning a higher price must be paid for it.

“If the owner of labour-power works to-day, to-morrow he must again be able to repeat the same process in the same conditions as regards health and strength. His means of subsistence must therefore be sufficient to maintain him in his normal state as a labouring individual. His natural wants, such as food, clothing, fuel, and housing, vary according to the climatic and other physical conditions of his country. On the other hand, the number and extent of his so-called necessary wants, as also the modes of satisfying them, are themselves the product of historical development, and depend therefore to a great extent on the degree of civilisation of a country, more particularly on the conditions under which, and consequently on the habits and degree of comfort in which, the class of free labourers has been formed.” (p 168)

“The labour-power withdrawn from the market by wear and tear and death, must be continually replaced by, at the very least, an equal amount of fresh labour-power. Hence the sum of the means of subsistence necessary for the production of labour-power must include the means necessary for the labourer’s substitutes, i.e., his children, in order that this race of peculiar commodity-owners may perpetuate its appearance in the market.” (p 168)

But, in addition,

“In order to modify the human organism, so that it may acquire skill and handiness in a given branch of industry, and become labour-power of a special kind, a special education or training is requisite, and this, on its part, costs an equivalent in commodities of a greater or less amount. This amount varies according to the more or less complicated character of the labour-power. The expenses of this education (excessively small in the case of ordinary labour-power), enter pro tanto into the total value spent in its production.” (p 168)

It is obvious, from these statements, why these particular commodities, of health and education, play a vital role for capital in ensuring the reproduction of labour-power, and why capital has developed the *Welfare State*, in order to facilitate the reproduction of labour-power, at the lowest possible cost.

Because these means of subsistence have to be bought over varying durations (daily, weekly, monthly etc.), the daily wage must cover the daily average of the annual total cost of subsistence. That can be assessed in money terms, sufficient to cover the costs of buying those means of subsistence, or it can be viewed in physical terms that workers require a certain number of calories, a certain amount of shelter, clothing, education and so on.

If we take this average bundle of wage goods, then, Marx says that we might suppose that it requires say 6 hours of social labour-time to produce. In other words, 6 hours labour-time is enough to produce 1 day's labour-power., which then also equals the value of 1 day's labour-power.

In a money economy, 6 hours labour-time might be equal to three shillings (£0.15). In other words, the value of 1 day's labour power is £0.15. Put another way, as we are assuming that all commodities exchange at their values, the price of 1 day's labour-power, i.e. the daily wage, is £0.15.

At this price/wage, the worker has not been cheated. They have sold their commodity, at its value, in exactly the same way that every other commodity owner sells theirs, i.e. at its value, determined by the labour-time required for its production.

And, as Marx emphasises,

“The minimum limit of the value of labour-power is determined by the value of the commodities, without the daily supply of which the labourer cannot renew his vital energy, consequently by the value of those means of subsistence that are physically indispensable. If the price of labour-power fall to this minimum, it falls below its value, since under such circumstances it can be maintained and developed only in a crippled state. But the value of every commodity is determined by the labour-time requisite to turn it out so as to be of normal quality.” (p 169)

If capitalists then try to reduce wages (including what today we term the social wage) they will end up with sub-standard labour-power, as useless to them as buying a defective machine, or sub-standard materials. Similarly, if the prices of the commodities the workers require rise, then the *value of labour-power* also rises. Capital has to pay this higher value or else, again, it will only be able to

buy sub-standard labour-power. It can be seen why capital has an incentive in trying to produce the commodities workers need more efficiently. By doing so it reduces the value of labour power.

The capitalist buys labour-power from the worker at its value, £0.15. The worker then works for the capitalist for the time stipulated in the contract. The capitalist has bought the labour-power for its use value, in the labour performed, whose value is now represented by the product of that labour. The product of the labour does not now belong to the worker even though they have produced it. The worker does not sell this product to the capitalist. It already belongs to the capitalist, because the capitalist had already bought the labour-power that created it.

In fact, it is usual that the worker performs this labour prior to even being paid for it, by the capitalist, a fact, as Marx points out, made clear by the number of workers who fail to be paid for the labour-power they have provided, as a consequence of the capitalist going bust.

Marx describes the other consequence of the time of this credit, given by the worker to the capitalists, in advancing their labour-power, especially where they were not paid for up to a month in arrears. Having to live in the meantime, they were reduced to buying cheap food, such as bread adulterated with *“alum, soap, pearl ashes, chalk, Derbyshire stone-dust, and such like agreeable nourishing and wholesome ingredients”* (Note 2, p 171) The Co-op identified, as late as the 1940's, that tea was being adulterated with lead filings, and it was only the

work of the Co-op, after WWII, that resulted in legislation to ensure safe milk, to prevent brucellosis etc.

But, there is an element of contradiction in Marx's argument here. He has set out the objective laws, which mean that capital has to pay the value of labour-power, or else, it either does not ensure the quantity of labour-power required, or else receives labour-power of sub-standard quality. A considerable amount of the explanation, for the things described, lies with the ability of employers to foist sub-standard products on workers, via the *Truck System*. As with the overworking of workers, which Marx also describes later, it is an example of the immediate interests of individual capitals conflicting with the interest of *capital in general*. It is a situation that capital collectively resolves, later, in its own interests. Also, when workers began to develop their own *Co-operative* stores, the potential for these kinds of practices was undermined – one reason the Co-op grew so rapidly, and dominated the retail space, by the end of the 19th Century.

The *Truck System* was not in the interests of capital in general, particularly the bigger capitals, and as Engels sets out, in his later *Prefaces to "The Condition of the Working-Class in England"*, by the second half of the 19th century, the bigger capitalists had concluded that these kinds of penny-pinching methods were counter-productive.

The consumption of the labour-power, bought by the capitalist, takes place, like the consumption of all commodities, outside the sphere of circulation. *Consumption* is at the same time *production*. The

consumption of necessities, by the workers, is at the same time an act of production of the worker, and his labour-power. The consumption of the workers' labour-power, by capital, is, at the same time, an act of production of new commodities.

It is in this sphere Marx says,

“...we shall see, not only how capital produces, but how capital is produced. We shall at last force the secret of profit making.” (p 172)

But, we shall have to wait until the next chapter for that secret to be revealed.

Part III

The Production Of Absolute Surplus Value

Chapter 7 - The Production Of Absolute Surplus Value

1. The Labour Process or The Production Of Use Values

The capitalist buys labour-power from the worker as a commodity. As with every other commodity, it is bought at its full exchange value, i.e. the labour-time required for its production. In this case, the labour-time required to produce all of the food, clothing, shelter, health, education, entertainment etc. required to produce a sufficient quantity, and quality of workers to meet the needs of capital. That is sufficiently healthy, strong, skilled, educated and so on.

The capitalist buys this commodity, labour-power, from the worker for the same reason they buy any other commodity. In other words, for its use value. The use value of labour-power is labour itself, the ability to produce other use values, that themselves have value.

Labour-power is consumed productively by being set to work. As set out previously, in order for this work to actually produce value, it must be in the production of a use value, i.e. an article of utility for someone. Marx says, the fact that this is carried on under the control of the capitalist, “*does not alter the general character of their production*”, and so he begins by examining the labour process outside any particular social form it might take.

The labour process is one in which both *Man* and *Nature* participate. Indeed, Man is himself “*one of her own*

forces”, but opposes himself to it, in order “*to appropriate Nature’s productions in a form adapted to his own wants.*” He does this by using his own forces, be they of mind or body, to “*regulate and control the material reactions between himself and Nature.*” That means manipulating Nature to bring about material changes in the world about him.

“By thus acting on the external world and changing it, he at the same time changes his own nature.” (p 173)

As a result of this process, Man also develops his own intellectual and productive powers. What distinguishes this kind of human labour from most instinctive animal labour is the fact that the human labourer has created an image of the object of his activity prior to undertaking it. We know that although humans have existed for around 5 million years, it is only from around 100,000 years ago that the first modern humans, or thinking humans, have existed, demonstrated in their production of artwork containing patterns.

“He not only effects a change of form in the material on which he works, but he also realises a purpose of his own that gives the law to his modus operandi, and to which he must subordinate his will. And this subordination is no mere momentary act. Besides the exertion of the bodily organs, the process demands that, during the whole operation, the workman’s will be steadily in consonance with his purpose. This means close attention. The less he is attracted by the nature of the work, and the mode in which it is carried on, and the less, therefore, he enjoys it as something which gives

play to his bodily and mental powers, the more close his attention is forced to be.” (p 174)

“The elementary factors of the labour-process are 1, the personal activity of man, i.e., work itself, 2, the subject of that work, and 3, its instruments.” (p 174)

Nature provides, in the first instance, the “*universal subject of human labour.*” It can take two forms. Firstly, it can take the form of virgin soil (and water) and all those things that are on or in it (plants, animals, fish etc.), or which can be simply extracted from it such as ores. All of these things require human labour before they can be consumed, but they require nothing more than this. For example, fish can be eaten once caught. However, Marx says raw material is, on the other hand, any of these products which has gone through a further process of labour upon it.

“All raw material is the subject of labour, but not every subject of labour is raw material: it can only become so, after it has undergone some alteration by means of labour.”

So, an ore extracted may not constitute raw material if, after extraction it is used, e.g. a flint, whereas ore extracted, and being prepared for smelting, would be raw material.

“An instrument of labour is a thing, or a complex of things, which the labourer interposes between himself and the subject of his labour, and which serves as the conductor of his activity. He makes use of the

mechanical, physical, and chemical properties of some substances in order to make other substances subservient to his aims. Leaving out of consideration such ready-made means of subsistence as fruits, in gathering which a man's own limbs serve as the instruments of his labour, the first thing of which the labourer possesses himself is not the subject of labour but its instrument...

As the earth is his original larder, so too it is his original tool house. It supplies him, for instance, with stones for throwing, grinding, pressing, cutting, &c. The earth itself is an instrument of labour, but when used as such in agriculture implies a whole series of other instruments and a comparatively high development of labour.” (p 175)

This development of instruments, including things such as domesticated animals, arises quickly, once human labour itself develops. From early on we see the special development of stone tools, weapons for hunting etc. As Marx says,

“Relics of bygone instruments of labour possess the same importance for the investigation of extinct economic forms of society, as do fossil bones for the determination of extinct species of animals. It is not the articles made, but how they are made, and by what instruments, that enables us to distinguish different economic epochs.” (p 175)

So, we have the Stone, Bronze and Iron Ages, for example. But, the instruments of labour are also

“indicators of the social conditions under which that labour is carried on.”

Of these, Marx distinguishes two types. First, there are those he describes as the *“bone and muscle of production.”* That is the things of a mechanical nature used for digging, crushing, grinding, cutting etc. Second, is what he calls the *“vascular system of production.”* That is those things like pipes, tubs, baskets, jars etc., which contain and help transport the materials of production. This comparison is reminiscent of the way *Thomas Hobbes*, also identified the nature of reality as being based on movement rather than inertia, in *'Leviathan'* , and compared the human body to the movement of a machine, and the body politic to the human body.

In addition to those instruments of production that take part in this process, there are those which are needed for the process to take place. The earth itself is one of these, because, without something to stand on, no process is possible. But, also things such as *“workshops, canals, roads”* and so on come under this heading. Mostly, they are things we would refer to as *infrastructure* or *fixed capital*.

“In the labour-process, therefore, man’s activity, with the help of the instruments of labour, effects an alteration, designed from the commencement, in the material worked upon. The process disappears in the product, the latter is a use-value, Nature’s material adapted by a change of form to the wants of man. Labour has incorporated itself with its subject: the former is materialised, the latter transformed. That which in the labourer appeared as movement, now appears in the

product as a fixed quality without motion. The blacksmith forges and the product is a forging.” (p 176)

Both the instrument and the subject of labour constitute the means of production, and the labour itself is productive labour, i.e. it creates new value. However, Marx is quick to point out,

“This method of determining, from the standpoint of the labour-process alone, what is productive labour, is by no means directly applicable to the case of the capitalist process of production.” (Note 2, p 176)

That is because his definition of productive labour, under capitalism, is quite different and specific, being defined in terms of productive not of value, but of surplus value.

“Though a use-value, in the form of a product, issues from the labour-process, yet other use-values, products of previous labour, enter into it as means of production. The same-use-value is both the product of a previous process, and a means of production in a later process. Products are therefore not only results, but also essential conditions of labour.” (p 176-7)

Apart from the extractive industries, all industry is involved in the manipulation of raw material, i.e. products of Nature that have already been the subject of labour, to extract it. Even with agriculture, this is the case. Current domesticated livestock is the product of millennia of purposeful human labour to breed into it specific characteristics. Today, with the introduction of even greater scientific advances, in genetics and bio-engineering, that is even more the case. The same is true with seed and plant selection, in arable farming. Of

course, the products derived from this raw material may themselves form raw material, for some further products. For example, wool can be spun into yarn, which is then weaved into cloth, which is made into a coat.

Raw material may be the main component or substance of a product, or it may be just an accessory to a process. For example, oil may be required to lubricate the workings of a machine, that is itself part of the productive process. Coal may be required to fuel a boiler that provides a steam engine with its power, to keep other machines working; or it might be mixed with the main substance to bring about some chemical change, e.g. *“chlorine into unbleached linen”*; or it could simply assist in enabling work to take place, e.g. providing heating and lighting in a workshop. As Marx says,

“The distinction between principal substance and accessory vanishes in the true chemical industries, because there none of the raw material re-appears, in its original composition, in the substance of the product.” (p 177)

As described in *Chapter 1*, products have a range of use values. Corn can be an end product, or it can be raw material *“for millers, starch manufacturers, distillers and cattle breeders. It also enters as raw material into its own production in the shape of seed; coal, too, is at the same time the product of, and a means of production in, coal-mining.”*

Cattle are both raw material and a provider of manure. Other products may only be usable as raw material, i.e.

they only have any use value as substance of some other product. Marx cites *“cotton, thread and yarn”*.

“Hence we see, that whether a use-value is to be regarded as raw material, as instrument of labour, or as product, this is determined entirely by its function in the labour-process, by the position it there occupies: as this varies, so does its character.” (p 178)

What is a product for one labour process and producer appears as substance or instrument of labour for another. The more division of labour develops, the more this is the case.

“In the finished product the labour by means of which it has acquired its useful qualities is not palpable, has apparently vanished.” (p 178)

All of the means of production are useless unless they are acted upon by living labour, and will in fact deteriorate without it.

“Iron rusts and wood rots. Yarn with which we neither weave nor knit, is cotton wasted. Living labour must seize upon these things and rouse them from their death-sleep, change them from mere possible use-values into real and effective ones. Bathed in the fire of labour, appropriated as part and parcel of labour’s organism, and, as it were, made alive for the performance of their functions in the process, they are in truth consumed, but consumed with a purpose, as elementary constituents of new use-values, of new products, ever ready as means of subsistence for individual consumption, or as means of production for some new labour-process.” (p 178)

Marx adopts a slightly different emphasis in *Capital* to that he took in the *Grundrisse*. In the *Grundrisse* he describes production as consumption, and consumption as production. So, for example, the worker in consuming food, shelter, etc., at the same time, produces his own labour-power. Labour in consuming the means of production, produces new use values. Whereas in *Capital*, he writes,

“Labour uses up its material factors, its subject and its instruments, consumes them, and is therefore a process of consumption. Such productive consumption is distinguished from individual consumption by this, that the latter uses up products, as means of subsistence for the living individual; the former, as means whereby alone, labour, the labour-power of the living individual, is enabled to act. The product, therefore, of individual consumption, is the consumer himself; the result of productive consumption, is a product distinct from the consumer...”

The labour-process, resolved as above into its simple elementary factors, is human action with a view to the production of use-values, appropriation of natural substances to human requirements; it is the necessary condition for effecting exchange of matter between man and Nature; it is the everlasting Nature-imposed condition of human existence, and therefore is independent of every social phase of that existence, or rather, is common to every such phase. It was, therefore, not necessary to represent our labourer in connexion with other labourers; man and his labour on one side, Nature and its materials on the other, sufficed. As the taste of the porridge does not tell you who grew the oats, no more

does this simple process tell you of itself what are the social conditions under which it is taking place, whether under the slave-owner's brutal lash, or the anxious eye of the capitalist, whether Cincinnatus carries it on in tilling his modest farm or a savage in killing wild animals with stones." (p 179)

There are two characteristics of the labour process now, under the capitalist, that can be observed. Firstly, the worker works, under the control of the capitalist, not himself. The control of the capitalist ensures the work is done properly, that the means of production are used intelligently, that there is no waste and undue wear and tear, etc. Of course, such control and supervision is not necessary, where the worker directly owns the means of production themselves.

Secondly, although the worker is the producer of the product, he is not its owner. It belongs to the capitalist. The capitalist has bought the commodity labour-power, for a day, and has the right, thereby, to use it for a day, just as if they had hired a horse for a day. For the capitalist, the labour process is *"nothing more than the consumption of the commodity purchased, i. e., of labour-power; but this consumption cannot be effected except by supplying the labour-power with the means of production. The labour-process is a process between things that the capitalist has purchased, things that have become his property. The product of this process belongs, therefore, to him, just as much as does the wine which is the product of a process of fermentation completed in his cellar."* (p 180)

2) The Production Of Surplus Value

The product of the consumption, by labour, of the means of production, i.e. of the labour process, is a use value. But, under capitalism, the aim is not the production of use values, as it is under all previous modes of production. Where the petty commodity producer produced a commodity, sold it for money, and then bought some other commodity they desired (C-M-C), the capitalist only lays out money, to buy commodities, if they can be subsequently sold for an additional sum of money, M-C-M¹. But, money cannot simply expand itself via exchange. Capitalists only produce use values because they are also exchange values, and because, through the process of production, the capitalist can extract surplus value. To do that, he must produce a commodity whose exchange value is greater than the sum of the exchange values he has laid out for its production, or more precisely, than it would cost him to reproduce it.

The value of a commodity is determined by the labour-time socially necessary for its production. That is true of the product now appropriated by the capitalist. If this is 10 kgs. of yarn, the labour-time required for its production can be calculated. Given that this is now a capitalist economy, and, therefore, a money economy, in which money represents the value of commodities we can use money amounts to represent this labour-time, and assume that the capitalist pays the full value of all he buys.

So, the yarn may comprise 10 kgs of cotton worth £0.50; wear and tear of machinery £0.10. That is a total of £0.60 in means of production. Put another way, as Marx describes it, if it takes 24 hrs or 2 days to produce the

gold that is equivalent to £0.60, then the labour-time incorporated in the yarn so far = 2 days.

It doesn't matter that all of the cotton is used up, and can be seen in the yarn, whereas only a portion of the spindle and other equipment is used up, and its material cannot be seen in the end product. Both contained value, i.e. labour-time, and that value was transferred to the final product in proportion to how much of it was used up.

It is important to distinguish here this transfer of value from the means of production due to wear and tear, which increases in proportion to how much they are used, and depreciation, which, in contrast, is a function of time and obsolescence.

A machine, used 24 hours a day, will transfer value, to the final product, at twice the rate of one used 12 hours a day, and will, likewise, be used up twice as fast. Depreciation proceeds, whether a machine is used or not. In fact, Marx sets out that depreciation occurs even more as a result of non-use than of use. Equipment left unused rots and rusts, material rots and deteriorates.

Moral depreciation arises, where a machine is made obsolete, as a result of some new better machine being introduced, or as a result of a new method of producing an existing machine, so that its current value is reduced. The same is true in respect of other means of production. The value of machines, and means of production, is transferred to final production in proportion to their wear and tear, i.e. in proportion to their participation in the production process. But, depreciation occurs outside the production process; it proceeds whether production is

occurring or not. As such, it is not value transferred to the final product.

Any changes in the value of means of production, that occur outside the production process, cannot be attributed to the production process, and the process, therefore, of valorisation. They constitute merely capital gains or losses for the individual capitalist not for capital.

Depreciation has the same effect as though, someone stole a part of the machine, or stole an amount of raw material. Or put another way, it is as if someone picked the capitalist's pocket, burgled his house, or as if he lost money at the gaming table. It has nothing to do with the formation of value or surplus value, because it occurs outside the labour process outside the valorisation process. In fact, not only is it not a consequence of the labour process, it is, as Marx sets out, a consequence of a *NON-LABOUR* process, a consequence of not being consumed by labour. Could it have been consumed immediately by labour, there could have been no depreciation.

All of the labour-time, used in the production of these means of production, may have occurred a long time ago. This does not matter, and it is measured according to current standards. As Marx says,

“If a definite quantity of labour, say thirty days, is requisite to build a house, the total amount of labour incorporated in it is not altered by the fact that the work of the last day is done twenty-nine days later than that of the first. Therefore the labour contained in the raw material and the instruments of labour can be treated just as if it were

labour expended in an earlier stage of the spinning process, before the labour of actual spinning commenced.” (p 182-3)

In order that the cotton and spindle do become part of the value of the final product, both the cotton and spindle must come together and be needed in the production of some use value. In addition, no more of either than is socially necessary must be used to that end.

“Though the capitalist have a hobby, and use a gold instead of a steel spindle, yet the only labour that counts for anything in the value of the yarn is that which would be required to produce a steel spindle, because no more is necessary under the given social conditions.” (p 183)

When we consider the living labour, and come to measure its value, things are different. We saw earlier that although, as use value, as the source of abstract labour, and, therefore, value, each concrete labour is different and specific, in being the essence of value, it is only the nature of labour in the abstract that is significant, and so in this sense, it only differs quantitatively.

“It is solely by reason of this identity, that cotton planting, spindle making and spinning, are capable of forming the component parts differing only quantitatively from each other, of one whole, namely, the value of the yarn. Here, we have nothing more to do with the quality, the nature and the specific character of the labour, but merely with its quantity. And this simply requires to be calculated. We proceed upon the assumption that spinning is simple, unskilled labour, the average labour of a given state of society.” (p 184)

If it is assumed that this labour works under the average conditions, then it may be that 10 kgs. of yarn will require 6 hours of living labour to produce.

“Not only the labour, but also the raw material and the product now appear in quite a new light, very different from that in which we viewed them in the labour-process pure and simple. The raw material serves now merely as an absorbent of a definite quantity of labour. By this absorption it is in fact changed into yarn, because it is spun, because labour-power in the form of spinning is added to it; but the product, the yarn, is now nothing more than a measure of the labour absorbed by the cotton. If in one hour $1 \frac{2}{3}$ lbs. of cotton can be spun into $1 \frac{2}{3}$ lbs. of yarn, then 10 lbs. of yarn indicate the absorption of 6 hours’ labour. Definite quantities of product, these quantities being determined by experience, now represent nothing but definite quantities of labour, definite masses of crystallised labour-time. They are nothing more than the materialisation of so many hours or so many days of social labour.” (p 184-5)

Above, we assumed that £0.60 = 24 hours labour-time. In that case, the 6 hours now expended is equal to £0.15, bringing the total value of the yarn to £0.75. But, we also assumed earlier that the value of a day's labour power was also equal to £0.15 or 6 hours labour-time. In that case, the total value of the yarn is £0.75 and the amount laid out by the capitalist is also £0.75. No surplus value has been created, and no new capital has been formed.

“There is in reality nothing very strange in this result. The value of one pound of yarn being eighteenpence, if our capitalist buys 10 lbs. of yarn in the market, he must pay

fifteen shillings for them. It is clear that, whether a man buys his house ready built, or gets it built for him, in neither case will the mode of acquisition increase the amount of money laid out on the house.” (p 186)

Marx then goes through all the traditional arguments, put forward by the apologists of capital, to explain profit, in order to dismiss them. The capitalist bemoans that he had risked his capital to make profit. *“The road to hell is paved with good intentions.”* He could have bought the commodity rather than produced it. But, if all capitalists did that who would produce them? He had been abstinent in order to acquire profit. But, in return for that abstinence he is *“now in possession of good yarn instead of a bad conscience.”* Had he not provided the worker with the means of producing and thereby done society a service? *“Well, but has not the labourer rendered him the equivalent service of changing his cotton and spindle into yarn?”* Have I not performed labour myself? The capitalist asks, in overlooking and superintendence? *“His overlooker and his manager try to hide their smiles.”*

But, then Marx says, having gone through all the arguments for the source of profit, the capitalist smiles.

“He himself is a practical man; and though he does not always consider what he says outside his business, yet in his business he knows what he is about.” (p 187)

What the capitalist realises is that the value of the labour power he has bought, and the value that the worker can create, during the day he has bought that labour power, are two different things. The value of the labour power was £0.15 = 6 hours labour-time or the amount required

to produce that labour-power for a day. But, there is no reason that the capitalist should then limit himself to only demanding 6 hours work from the worker. He has bought a day's labour power, and is entitled to receive it, be that day, 6 hours, 12 hours, or even 24 hours.

It is this capacity of labour that the capitalist is interested in, its ability to create value over and above the value of labour power, not whether that labour can produce boots rather than boats, or any other kind of commodity. All the capitalist is interested in is the capacity to produce surplus value.

NB. Its important to pick up a point here, in reference to the comment Marx made earlier, in reference to buying a day's labour power being no different to hiring a horse for a day. His point was that, having hired it, the capitalist is entitled to use it for the day. However, as pointed out previously, there is a difference between hiring a horse for a day, and hiring a wage labourer for a day. The former does not produce surplus value, the latter does. The horse like a slave is merely an instrument of labour. It does not produce surplus value.

A horse could be doing exactly the same work as a wage labourer, for example turning a mill stone grinding oats. If it grinds 10 bags of oats in a day, but only consumes 1, it has produced a surplus product = 9 bags, just the same as a wage worker might do. But, this is a surplus product not a surplus value.

Yet, it is not the fact that it is a horse rather than a human that accounts for the fact that surplus value is not created. The same would be true if it had been a slave

rather than a horse. The reason no surplus value is created is because, in the case of the slave and the horse, neither appear in the market to buy the oats. The oats are bought by the owner of the horse or the slave, who will only pay for them what they cost him to produce, i.e. the equivalent of 1 bag of oats.

But, the wage worker does appear in the market to buy their own means of subsistence. They have to pay for them at the rate, not of what it costs the capitalist to produce them, but at the rate determined by the amount of labour-time required for their production. That is why Marx sets out in the *Grundrisse*, that it is only when wage labour becomes widespread, and indeed only when wage workers form the bulk of consumers, that exchange value can take its fully developed form.

“The circumstance, that on the one hand the daily sustenance of labour-power costs only half a day’s labour, while on the other hand the very same labour-power can work during a whole day, that consequently the value which its use during one day creates, is double what he pays for that use, this circumstance is, without doubt, a piece of good luck for the buyer, but by no means an injury to the seller.” (p 188)

The capitalist provides the worker with sufficient means of production, therefore, to work for not 6 hours, but 12 hours. In this 12 hours, 20 kgs of cotton will be consumed.

“There is now materialised in this 20 lbs. of yarn the labour of five days, of which four days are due to the cotton and the lost steel of the spindle, the remaining day

having been absorbed by the cotton during the spinning process. Expressed in gold, the labour of five days is thirty shillings. This is therefore the price of the 20 lbs. of yarn, giving, as before, eighteenpence as the price of a pound. But the sum of the values of the commodities that entered into the process amounts to 27 shillings. The value of the yarn is 30 shillings. Therefore the value of the product is 1/9 greater than the value advanced for its production; 27 shillings have been transformed into 30 shillings; a surplus-value of 3 shillings has been created. The trick has at last succeeded; money has been converted into capital.” (p 188-9)

The capitalist has bought all of the commodities at their full value, including labour-power, and has only sold the final product at its value, and yet a surplus value has been produced.

“This metamorphosis, this conversion of money into capital, takes place both within the sphere of circulation and also outside it; within the circulation, because conditioned by the purchase of the labour-power in the market; outside the circulation, because what is done within it is only a stepping-stone to the production of surplus-value, a process which is entirely confined to the sphere of production.” (p 189)

Comparing the production of value and surplus value, the latter is essentially the continuation of the labour process beyond the point where the cost of replacing the labour power has been met. In the labour process pure and simple the aim is the production of use values, and means of production are employed to assist labour to that end. In capitalist production, however, the aim is to

produce exchange values, and the utility of the means of production utilised is secondary to the fact that they are representatives of value, of labour-time, whose only measurement is quantity not quality.

Having said that, the necessity, arising from competition, determines that the quantity of the means of production, and of labour-power must be of the average for production of that type.

“If a self-acting mule is the implement in general use for spinning, it would be absurd to supply the spinner with a distaff and spinning wheel.” (p 190)

This is why capital is not free to simply *“Make The Workers Pay”* for its crises, because that impacts the quantity and quality of the labour-power available, a consequence of the fact that capital is a social relation, with capital and wage labour forming a contradictory unity.

“The process of production, considered on the one hand as the unity of the labour-process and the process of creating value, is production of commodities; considered on the other hand as the unity of the labour-process and the process of producing surplus-value, it is the capitalist process of production, or capitalist production of commodities.” (p 191)

Marx concludes by demonstrating that the employment of skilled *complex labour* at higher wages does not change things. Complex labour simply counts as a multiple of simple labour. So, if the worker worked for the same 12 hours, but was paid £0.30, rather than £0.15, they would still create surplus value, if 1 hour of their complex labour

= 2 hours of simple, abstract labour, and their 12 hours of complex labour is equal to 24 hours of simple labour. They would thereby have created 24 hours of new value = £0.60. The capitalist has then paid out £0.30 for the labour power, creating a surplus value of £0.30. Its as though they employed 2 workers and extracted surplus value from both.

“Whatever difference in skill there may be between the labour of a spinner and that of a jeweller, the portion of his labour by which the jeweller merely replaces the value of his own labour-power, does not in any way differ in quality from the additional portion by which he creates surplus-value. In the making of jewellery, just as in spinning, the surplus-value results only from a quantitative excess of labour, from a lengthening-out of one and the same labour-process, in the one case, of the process of making jewels, in the other of the process of making yarn.” (p 192)

Chapter 8 - Constant Capital And Variable Capital

The labour process involves both means of production and labour power. The latter creates new value as a consequence of the expenditure of additional labour, the value of the former is transferred to the new product.

“..the values of the means of production used up in the process are preserved, and present themselves afresh as constituent parts of the value of the product; the values of the cotton and the spindle, for instance, re-appear again in the value of the yarn.” (p 193)

Labour itself preserves the value of the means of production, by converting them into the new product, and by adding its own new value. The two-fold result of this labour – preserving the value of means of production and adding new value – is explained by the two-fold nature of this labour. It is the particular nature of the labour, as use value, as concrete labour, which transfers the value of the means of production, to the new product. It is only the labour of the spinner which can transfer the value of the cotton, and of the spindle to the yarn. The labour of a joiner, for example, cannot do that!

“Hence, the labourer preserves the values of the consumed means of production, or transfers them as portions of its value to the product, not by virtue of his additional labour, abstractedly considered, but by virtue of the particular useful character of that labour, by virtue of its special productive form. In so far then as labour is such specific productive activity, in so far as it is spinning,

weaving, or forging, it raises, by mere contact, the means of production from the dead, makes them living factors of the labour-process, and combines with them to form the new products.” (p 194)

It is only the second aspect of labour as abstract labour, value creating substance, which enables it to add new value as opposed to preserving old value. It is the time it spends, engaged in this labour, which then determines how much new value is added – with all the provisos previously made about complex labour, socially necessary and so on.

These two aspects are clearly different and opposite.

“On the one hand, then, it is by virtue of its general character, as being expenditure of human labour-power in the abstract, that spinning adds new value to the values of the cotton and the spindle; and on the other hand, it is by virtue of its special character, as being a concrete, useful process, that the same labour of spinning both transfers the values of the means of production to the product, and preserves them in the product. Hence at one and the same time there is produced a two-fold result.

By the simple addition of a certain quantity of labour, new value is added, and by the quality of this added labour, the original values of the means of production are preserved in the product. This two-fold effect, resulting from the two-fold character of labour, may be traced in various phenomena.

Let us assume, that some invention enables the spinner to spin as much cotton in 6 hours as he was able to spin

before in 36 hours. His labour is now six times as effective as it was, for the purposes of useful production. The product of 6 hours' work has increased six-fold, from 6 lbs. to 36 lbs. But now the 36 lbs. of cotton absorb only the same amount of labour as formerly did the 6 lbs. One-sixth as much new labour is absorbed by each pound of cotton, and consequently, the value added by the labour to each pound is only one-sixth of what it formerly was. On the other hand, in the product, in the 36 lbs. of yarn, the value transferred from the cotton is six times as great as before. By the 6 hours' spinning, the value of the raw material preserved and transferred to the product is six times as great as before, although the new value added by the labour of the spinner to each pound of the very same raw material is one-sixth what it was formerly. This shows that the two properties of labour, by virtue of which it is enabled in one case to preserve value, and in the other to create value, are essentially different. On the one hand, the longer the time necessary to spin a given weight of cotton into yarn, the greater is the new value added to the material; on the other hand, the greater the weight of the cotton spun in a given time, the greater is the value preserved, by being transferred from it to the product." (p 195)

In other words, the more productivity rises, the less labour-time is taken to process a given amount of material, so, in a given period, more material is processed, more wear and tear on machines occurs, more ancillary materials are consumed, and so more of the value is transferred into the new product. But, by the same token, the higher productivity means that, in this given period of time, only the same amount of new value

is created, because it is its duration that counts. Because this new value is now spread over a much larger quantity of the new product, the amount of new value contained in the new product has fallen proportionately.

If 6 kgs of cotton are spun in 6 hours, and a pound of cotton equals £1, and 1 hour of labour equals £0.25: then, in the yarn, we have $£6 + £1.50 = £7.50$. The new value comprises 20%. If, however, 6 kgs is spun in 3 hours, then in 6 hours: 12 kgs cotton is consumed = £12, plus £1.50 of new value = £13.50. Now, the new value equals just 11%.

Suppose that the productivity of this labour remains the same as it was, but the exchange value of the cotton changes. So:-

6 kgs Cotton @ £1 = £6 + 6 hours labour = £1.50. Yarn = £7.50, new value = 20%.

6 kgs Cotton @ £2 = £12 + 6 hours labour = £1.50. Yarn = £13.50, new value = 11%.

6 kgs Cotton @ £0.50 = £3 + 6 hours labour = £1.50. Yarn = £4.50, new value = 33.3%

The same is true if there are changes in the exchange value of the other means of production such as the machines, buildings or ancillary materials.

By the same token, if everything remains constant, the worker transfers twice as much value in two weeks as he does in one week, just as he creates twice as much new value in two weeks as in one week.

Although it is labour-time that gives products their value, value only resides in use values, articles of utility. If an article loses its utility it also loses its value. But, when a use value is consumed in production, they only lose the form of their use value, assuming a new form in the product. Marx makes this point, in *Theories of Surplus Value*, against Colonel Torrens. Marx shows that 100 quarters of corn, when planted, does not magically become transformed into 120 quarters of corn. A use value of 1 does not magically become a use value of 1.2! The additional use value already exists in the soil, in the water absorbed by the growing plants, in the sunlight which provides energy for the plants, in the fertiliser absorbed by the original seed corn in the production (growing) process. All of these additional use values merely change their form in order to become a part of the end product (use value) of 120 quarters of corn.

“120 quarters of corn are most certainly more than 100 quarters. But—if one merely considers the use-value and the process it goes through, that is, in reality, the vegetative or physiological process, as is the case here—it would be wrong to say, not indeed, with regard to the 20 quarters, but with regard to the elements which go to make them up, that they do not enter into the production process. If this were so, they could never emerge from it. In addition to the 100 quarters of corn—the seeds—various chemical ingredients supplied by the manure, salts contained in the soil, water, air, light, are all involved in the process which transforms 100 quarters of corn into 120. The transformation and absorption of the elements, the ingredients, the conditions—the expenditure of nature, which transforms 100 quarters into 120—takes

place in the production process itself and the elements of these 20 quarters enter into this process itself as physiological “expenditure”, the result of which is the transformation of 100 quarters into 120.

Regarded merely from the standpoint of use-value, these 20 quarters are not mere profit. The inorganic components have been merely assimilated by the organic components and transformed into organic material. Without the addition of matter—and this is the physiological expenditure—the 100 qrs. would never become 120. Thus it can in fact be said even from the point of view of mere use-value, that is, regarding corn as corn—what enters into corn in inorganic form, as expenditure, appears in organic form, as the actual result, the 20 quarters, i.e., as the surplus of the corn harvested over the corn sown.”

(Theories of Surplus Value Vol III, Chapter 20)

In the process of transferring their use value to the product, the means of production also transfer their exchange value. That is not changed by the fact that this takes various forms.

“The coal burnt under the boiler vanishes without leaving a trace; so, too, the tallow with which the axles of wheels are greased. Dye stuffs and other auxiliary substances also vanish but re-appear as properties of the product. Raw material forms the substance of the product, but only after it has changed its form. Hence raw material and auxiliary substances lose the characteristic form with which they are clothed on entering the labour-process.”
(p 196-7)

But, tools and machines although subject to wear and tear, have to basically keep their original shape, in order to continue fulfilling their function.

“The corpses of machines, tools, workshops, &c., are always separate and distinct from the product they helped to turn out.” (p 197)

Its clear that the lifetime of a tool or machine is a function of its use. The more it is used, the quicker it is worn out, the quicker it transfers its value to the end product, though by the same token, the amount transferred to each unit of production remains the same.

If we know the average usage of a machine, then we can calculate how long, on average it will last. If, on this basis, we calculate that it will last 100 days, then each day it will lose 1% of its value to the product. If it is used at twice the average rate – producing 2000 widgets a day instead of 1000 – it will give up 2% per day, the amount per widget remaining constant. If it is used to produce only 500 widgets a day, it will lose only 0.5% of its value per day, and so on. This transfer of use value and exchange value, arising from usage and wear and tear, is not the same as depreciation, which is a function of time itself, or *moral depreciation*, arising from changes in the way it is produced, or the development of some new replacement. I set that out in *Chapter 7*.

“It is thus strikingly clear, that means of production never transfer more value to the product than they themselves lose during the labour-process by the destruction of their own use-value. If such an instrument has no value to lose, if, in other words, it is not the product of human

labour, it transfers no value to the product. It helps to create use-value without contributing to the formation of exchange-value. In this class are included all means of production supplied by Nature without human assistance, such as land, wind, water, metals in situ, and timber in virgin forests.” (p 197)

Moreover, as Marx made clear earlier, if a use value loses its utility (which it does bit by bit through depreciation) it also loses its value, but this process occurs not as part of the labour-process, but outside it. The more a piece of constant capital – be it a machine, a building, a piece of material etc. – suffers depreciation, the less value it has to transfer to the product. A machine that is worth £1,000 transfers 10% of its value each year to the widgets it produces, i.e. £100. If, as a result of moral depreciation, its value falls to £500, it does not transfer this £500 reduction to the product. That occurs outside the labour process. In fact, now it only transfers 10% of its new value to the widgets, i.e. £50 per year.

By contrast, the whole of the exchange value of some products may be transferred to the product whilst a portion of their use value is destroyed. Such is the case of all those products where a certain amount of waste is unavoidable, and where that waste cannot itself be utilised. The exchange value of all these means of production which can be transferred to the new product is then limited by their own exchange value.

“In the labour-process it only serves as a mere use-value, a thing with useful properties, and could not, therefore, transfer any value to the product, unless it possessed such value previously.” (p 199)

“The property therefore which labour-power in action, living labour, possesses of preserving value, at the same time that it adds it, is a gift of Nature which costs the labourer nothing, but which is very advantageous to the capitalist inasmuch as it preserves the existing value of his capital. So long as trade is good, the capitalist is too much absorbed in money-grubbing to take notice of this gratuitous gift of labour. A violent interruption of the labour-process by a crisis, makes him sensitively aware of it.” (p 200)

Marx quotes an article in the *Times*, which shows the consequences of not having workers employed.

*“In **The Times of 26th November, 1862**, a manufacturer, whose mill employed 800 hands, and consumed, on the average, 150 bales of East Indian, or 130 bales of American cotton, complains, in doleful manner, of the standing expenses of his factory when not working. He estimates them at £6,000 a year. Among them are a number of items that do not concern us here, such as rent, rates, and taxes, insurance, salaries of the manager, book-keeper, engineer, and others. Then he reckons £150 for coal used to heat the mill occasionally, and run the engine now and then. Besides this, he includes the wages of the people employed at odd times to keep the machinery in working order. Lastly, he puts down £1,200 for depreciation of machinery, because “the weather and the natural principle of decay do not suspend their operations because the steam-engine ceases to revolve.” He says, emphatically, he does not estimate his depreciation at more than the small sum of £1,200, because his machinery is already nearly worn out.” (Note 2, p 200)*

This quote, provided by Marx, highlights the difference between wear and tear of the means of production, whose value is transferred to the product, of which they become a part, i.e. their participation in the labour process, and process of valorisation, and depreciation, which occurs outside it. In the former, the means of production are reduced in value in proportion to how much is transferred to the product. How does this affect the rate of profit? The fact that it is a portion of the value of constant capital does not change it. In setting out the basis for calculating the rate of profit, much later, Marx makes the point that the rate of profit is calculated on the whole capital advanced, not just that which is transferred to the product. The constant capital advanced to the final product does not, and cannot, as Marx has just demonstrated, affect the quantity of surplus value produced, which is solely a function of the exploitation of the living labour. So, assume a capital made up:

$$c \ 900 + v \ 100 + s \ 100 = e \ 1100, r' = 10\%.$$

Now, assume that there is a similar capital, but which, purely for the sake of illustration uses no circulating constant capital, and where 10% of the value of its fixed capital is transferred into the final product in any one year. So:

K the total fixed capital = 900, but d, the wear and tear = 90.

$$K \ 900, d \ 90 + v \ 100 + s \ 100 = e \ 290, r' = 10\%.$$

Although, the total exchange value (e) of the output has fallen dramatically, the rate of surplus value s/v , s' , remains at 100%, and because the rate of profit, r' , is

calculated on the total capital advanced $K + v$, it remains at 10%. However, in year 2, because a portion of K , i.e. the 90 of d , has been used up we will have:

$$K \ 810, \ d \ 90 + v \ 100 + s \ 100 = e \ 290, \ r' = s/K+v = 100/810 = 10.99\%.$$

The increase in the rate of profit is due to the fact that the value of the constant capital has fallen, as a consequence of a portion being consumed in the final product. However, this apparent good fortune of the capitalist does not really help him. Assuming everything else remains constant, at the end of Year 10, all of the value of K will have been used up in wear and tear, and transferred to the final product. The £90 of d transferred into the end product, and thereby recovered, by the capital, in the price of the end product, will have been accumulated, to an amount of £900, which is just enough to replace the now worn out K . Moreover, this amortisation fund, as it accumulates, is really advanced capital value, stored in the form of a money hoard. If this value of capital is included, the rate of profit remains the same. Its one reason that capital seeks to use this money hoard, for other productive purposes, in the intervening period.

Depreciation, however, occurs outside the labour process, outside the valorisation process, as Marx described in the quote above. In fact, it appears to occur not because of wear and tear, or because the means of production take part in that process, but because they do not! Yet, as Marx says, no use value can transfer more value to the final product than it possesses. The loss of value of constant capital due to depreciation, therefore,

does not reappear, is not recovered in the value of the final product, in the way that wear and tear is. In fact, quite the opposite. Because, the value of the constant capital declines as a result of depreciation, the value it is able to transfer to the final product is likewise reduced! So:

If we have this capital with $K = 900$, of which 10% is transferred as d each year, i.e. it is worn out after ten years, then:-

$K 900, d 90 + v 100 + s 100 = e 290, r' = 10\%$. However, if K loses 20% of its value due to depreciation then in year 2:

K has been reduced to 720 by depreciation. If it loses 10% of this as a consequence of wear and tear, during the next year, the amount lost to wear and tear, i.e. transferred to the final product is now only 72, rather than 90. That has to be the case, or else it would, after ten years have transferred more value to the final product than it possessed. If, in Year 3 K has been depreciated by a further 50%, possibly due to moral depreciation, as a new machine is introduced, its value falls to 360, meaning only 36 is transferred in wear and tear and so on.

The rate of profit would then be:

$K 360, d 36 + v 100 + s 100 = e 236, r' = 100/460 = 21.74\%$.

The rate of profit is rising faster than where there was no depreciation, because the value of the capital is being reduced. However, where the capitalist reproduces the

value of d transferred to the final product, due to wear and tear, they cannot recover the value of K , lost by depreciation, in the same way. It represents a capital loss, outside the process of production, just as would be the case if a machine was broken, or material stolen. If the depreciation is due to natural factors such as age, rusting, or other natural deterioration, it represents a capital loss to the capitalist, and is indeed a loss to the whole capital stock. Capitalists simply have to suck it up, and introduce additional capital to cover it, or accept that their capital has shrunk. On the other hand, if another capitalist bought the firm, they would do so on the basis of these current valuations, and would make the higher rate of profit on it accordingly. In that respect it represents a capital loss to the particular capitalist, not to capital as a whole.

If, the depreciation is what Marx terms *moral depreciation*, that is it is a result of a rise in productivity, that makes producing the particular machines, or material cheaper, or else is a result of an existing machine becoming obsolete, because of the introduction of some new, better machine, the situation is somewhat different. In the case, of the first type of depreciation, when the capitalist comes to replace their machine or material, they have to pay its original undepreciated price, for which they have not been compensated, in the price of the final product. However, in the latter case, their loss, due to moral depreciation, is offset precisely by the fact that they now buy the replacement machine at the now lower price. So, assume that all of the constant capital is consumed in one year.

$$c\ 900 + v\ 100 + s\ 100 = e\ 1100, r' = 10\%.$$

Now, c is morally depreciated by 50%, due to a rise in productivity in its production.

Although, the capitalist paid £900 for it, it now becomes worth £450, so

$$c\ 450 + v\ 100 + s\ 100 = e\ 650, r' = 18.18\%.$$

This seems like wonderful news to the capitalist, in fact, as Marx says, in discussing this later in *Vol. III*, the capital loss that he suffers, in the fall in value of his capital, is compensated for by the rise in his rate of profit, and vice versa. If the capitalist invests his surplus value, it is good news, because the surplus value will now buy twice as much c , but, if they consume all their surplus value, the situation does not seem so good. In that case, when they come to reproduce the capital, used up, they will find that they only have enough to buy as much as they had before. That is because the fall in the value of c was passed through into the price of the final product, which fell from 1100 to 650. They still only have enough to buy $c\ 450$ and $v\ 100$.

Value can only be transferred, to the final product, from means of production to the extent that their use value is transferred. That can only happen as a consequence of it being consumed by labour in the production process. That does not happen with depreciation. No use value is transferred as a result of depreciation. Nor is it like the case of necessary waste referred to earlier. There waste, sawdust, metal shavings, "*Devil's Dust*", increases in proportion to the amount of material consumed, the amount of time machines are run etc. But, as Marx describes, depreciation occurs whether material is

consumed, machines are run or not. In fact, as Marx describes later in *Vol. III*, where capitals face moral depreciation, they try to mitigate it by using existing machines more intensively. This is one reason that capital has sought to introduce things such as “*Just In Time*”, which means that they do not suffer from depreciation, because necessary material is only brought in to be used, as and when it is required. It takes part in the labour process without any delay, during which it could be depreciated. The main reason for JIT, however, is so that money capital is not tied up unproductively in holding stock.

Marx, however, makes clear that this is a consequence that affects individual capitalists not capital itself. He says that where one capitalist loses out another gains. The capital is bought up at its current value by some other capitalist. An indication of the difference between capital gains/losses and profits/losses, from production, can be given by the different treatment for tax. Individuals and companies pay some form of Income Tax on their earnings, from selling their commodities (workers wages, companies profits). But, they pay Capital Gains Tax on any gain they make as a result of the revaluation of their assets.

Things are different with labour power compared to constant capital. The means of production can only, at most, transfer their own use value to the product, and as has been described, as a consequence of depreciation, not even all of that can be transferred. But, every minute that labour-power is working, it is creating a new use value, and with it new value.

NB. We should insert the proviso here that Marx set out in the previous chapter, which is that the worker is actually creating new use values, and is working to the average standard. If the worker produces faulty products then these are not use values, and are not values either. Rather than creating new value, the worker has destroyed existing value embodied in the means of production. This is why the employer has supervisors, quality control, and penalties for poor workmanship. It is why, also, as Marx describes, slave labour is so inefficient.

“This is one of the circumstances that makes production by slave labour such a costly process. The labourer here is, to use a striking expression of the ancients, distinguishable only as instrumentum vocale, from an animal as instrumentum semi-vocale, and from an implement as instrumentum mutum. But he himself takes care to let both beast and implement feel that he is none of them, but is a man. He convinces himself with immense satisfaction, that he is a different being, by treating the one unmercifully and damaging the other con amore. Hence the principle, universally applied in this method of production, only to employ the rudest and heaviest implements and such as are difficult to damage owing to their sheer clumsiness. In the slave-states bordering on the Gulf of Mexico, down to the date of the civil war, ploughs constructed on old Chinese models, which turned up the soil like a hog or a mole, instead of making furrows, were alone to be found. Conf. J. E. Cairnes. “The Slave Power,” London, 1862, p. 46 sqq. In his “Sea Board Slave States,” Olmsted tells us: “I am here shown tools that no man in his senses, with us,

would allow a labourer, for whom he was paying wages, to be encumbered with; and the excessive weight and clumsiness of which, I would judge, would make work at least ten per cent greater than with those ordinarily used with us. And I am assured that, in the careless and clumsy way they must be used by the slaves, anything lighter or less rude could not be furnished them with good economy, and that such tools as we constantly give our labourers and find our profit in giving them, would not last out a day in a Virginia cornfield – much lighter and more free from stones though it be than ours. So, too, when I ask why mules are so universally substituted for horses on the farm, the first reason given, and confessedly the most conclusive one, is that horses cannot bear the treatment that they always must get from negroes; horses are always soon foundered or crippled by them, while mules will bear cudgelling, or lose a meal or two now and then, and not be materially injured, and they do not take cold or get sick, if neglected or overworked. But I do not need to go further than to the window of the room in which I am writing, to see at almost any time, treatment of cattle that would ensure the immediate discharge of the driver by almost any farmer owning them in the North.” (Note 1, p 191)

If the worker produces products that are not wanted these are also not use values and have no value.

However, setting all of the provisos aside, the worker can work and continue producing new value beyond the point at which the cost of reproducing their labour power has been met and this new value over and above that constitutes surplus value.

“The surplus of the total value of the product, over the sum of the values of its constituent factors, is the surplus of the expanded capital over the capital originally advanced. The means of production on the one hand, labour-power on the other, are merely the different modes of existence which the value of the original capital assumed when from being money it was transformed into the various factors of the labour-process. That part of capital then, which is represented by the means of production, by the raw material, auxiliary material and the instruments of labour does not, in the process of production, undergo any quantitative alteration of value. I therefore call it the constant part of capital, or, more shortly, constant capital.

On the other hand, that part of capital, represented by labour-power, does, in the process of production, undergo an alteration of value. It both reproduces the equivalent of its own value, and also produces an excess, a surplus-value, which may itself vary, may be more or less according to circumstances. This part of capital is continually being transformed from a constant into a variable magnitude. I therefore call it the variable part of capital, or, shortly, variable capital. The same elements of capital which, from the point of view of the labour-process, present themselves respectively as the objective and subjective factors, as means of production and labour-power, present themselves, from the point of view of the process of creating surplus-value, as constant and variable capital.” (p 202)

“The definition of constant capital given above by no means excludes the possibility of a change of value in its elements. Suppose the price of cotton to be one day

sixpence a pound, and the next day, in consequence of a failure of the cotton crop, a shilling a pound. Each pound of the cotton bought at sixpence, and worked up after the rise in value, transfers to the product a value of one shilling; and the cotton already spun before the rise, and perhaps circulating in the market as yarn, likewise transfers to the product twice its, original value. It is plain, however, that these changes of value are independent of the increment or surplus-value added to the value of the cotton by the spinning itself. If the old cotton had never been spun, it could, after the rise, be resold at a shilling a pound instead of at sixpence. Further, the fewer the processes the cotton has gone through, the more certain is this result. We therefore find that speculators make it a rule when such sudden changes in value occur, to speculate in that material on which the least possible quantity of labour has been spent: to speculate, therefore, in yarn rather than in cloth, in cotton itself, rather than in yarn. The change of value in the case we have been considering, originates, not in the process in which the cotton plays the part of a means of production, and in which it therefore functions as constant capital, but in the process in which the cotton itself is produced. The value of a commodity, it is true, is determined by the quantity of labour contained in it, but this quantity is itself limited by social conditions. If the time socially necessary for the production of any commodity alters — and a given weight of cotton represents, after a bad harvest, more labour than after a good one — all previously existing commodities of the same class are affected, because they are, as it were, only individuals of the species, and their value at any given time is measured by the labour socially necessary, i.e., by the labour necessary for their

production under the then existing social conditions.” (p 202-3)

Marx then goes on to demonstrate that not only does the raw material have to be revalued according to its current reproduction costs, but the same applies to the machinery and other equipment costs, buildings and so on.

“If in consequence of a new invention, machinery of a particular kind can be produced by a diminished expenditure of labour, the old machinery becomes depreciated more or less, and consequently transfers so much less value to the product. But here again, the change in value originates outside the process in which the machine is acting as a means of production. Once engaged in this process, the machine cannot transfer more value than it possesses apart from the process.” (p 203)

That reaffirms the point I made earlier in respect of moral depreciation. In other words, the point that Marx is making here, in respect of these changes in capital values, is that these changes occur outside the labour process – though they may well occur within some other labour process – and consequently have nothing to do with the process of creation of surplus value. They are in truth to be analysed as capital gains or losses.

These kinds of “*profits*” are the stock in trade of *Neo-Classical* economics, which, as Ernest Mandel said, often bases its examples on the bond and stock markets, where changes in capital values are frequently described as a profit or loss.

Changes in the proportion of constant to variable capital does not affect their functions only the quantitative relation is altered.

Chapter 9 - The Rate Of Surplus Value

1. The Degree of Exploitation of Labour Power

Surplus value presents itself as a surplus of the value of the product over the value of its components. These components divided into two. Firstly, 'c' being what has become the means of production, secondly 'v', being what has become variable capital, labour-power. Marx says "*what has become*", because the whole circuit of capital is here $M - C - (MP-LP) - C^1 - M^1$. The capital advanced is a sum of money, M, which becomes MP and LP.

If a capital of £500 is advanced, it may be divided into £410 (c) and £90 (v). It may generate a surplus value of £90 (s). We now have £500 (M) - £500 (C) - (£410 MP + £90 LP) £590 (C^1). The difference between the £500 capital advanced, and the £590, the commodity is now worth, is the £90 surplus value. In calculating 'c', Marx only includes that which is actually transferred to the commodity. So, suppose the machinery employed is worth £1,054, but the wear and tear amounts to just £54, then 'c' is only £54, not £1,054. He quotes Malthus,

“If we reckon the value of the fixed capital employed as a part of the advances, we must reckon the remaining value of such capital at the end of the year as a part of the annual returns.” (Malthus, “Princ. of Pol. Econ.” 2nd. ed., Lond., 1836, p. 269.)” (Note 1, p 205)

Actually, I believe Malthus' formulation is wrong, because the end of year value would include depreciation, which represents a capital loss rather than a transfer of value to the product. As stated earlier, depreciation occurs whether production takes place or not. Indeed, for the reasons Marx describes, depreciation will be more where production does not take place, where equipment, therefore, rusts and material deteriorates. It makes no sense to say that more value is transferred to the product the less it is used in the productive process!

The new value created is not $c+v+s$, as at first appears, because the 'c' has only transferred existing value to the product. The new value created is only $v+s$, i.e. £90 (v) and £90 (s). If it were possible for a capitalist to simply employ a worker, without the need for any constant capital, the surplus value would still exist, being the difference between the new value created by the worker, here £180, and the £90 the capitalist pays the worker, that being the value of their labour-power. By contrast, the capitalist might employ £1 million of constant capital, and yet the surplus value created would still only be £90, again the difference between the new value created by the worker, and their wages. The £1 million would only have transferred its value to the new commodity.

If the worker only produces new value equal to the value of their labour-power, their wage, then no surplus value is created, and capital cannot expand itself.

It is only 'v' which varies. So, $v+s$ is no different than $v+v^1$. If the value of labour-power rises, 's' declines, and vice versa. The relation is obscured because looking at the value of the commodity we see not $v+s$, but $c+v+s$.

However, Marx says, consistent with the usual mathematical rule, in dealing with constant and variable quantities, it is necessary to set the constant magnitude = 0, so as to see the real effects of changes in the variable magnitude.

There appears a further contradiction, as Marx points out. The £90 laid out for variable capital is not itself variable. It is a fixed amount, £90. So too is the value of the labour-power it has purchased. (subject to the provisos set out previously in relation to real values based on current reproduction costs as opposed to nominal money values). What is variable is the amount of new value this labour power creates, and consequently the amount of surplus value generated (being the difference between this constant value of labour-power, and the new value created).

“If, therefore, such expressions as “£90 variable capital,” or “so much self-expanding value,” appear contradictory, this is only because they bring to the surface a contradiction immanent in capitalist production.” (p 206)

As Marx says, the relation of the surplus value to the whole of the capital (the rate of profit) is very important, but its consideration is left to *Volume III*. For now, its important to examine the process of production of surplus value itself.

“The circumstance, however, that retorts and other vessels, are necessary to a chemical process, does not compel the chemist to notice them in the result of his analysis. If we look at the means of production, in their relation to the creation of value, and to the variation in the

quantity of value, apart from anything else, they appear simply as the material in which labour-power, the value-creator, incorporates itself.” (p 207)

Looking at just the new value created, then, we have £180. Deducting the £90 paid out from 'v', this leaves £90 's', which constitutes the total amount, the absolute quantity of surplus value. But, this absolute quantity can also be expressed as a relative quantity. That is relative to the other component of new value 'v'. So, s/v gives this relative value of 's'. Marx calls this relative value, this ratio of s to v, “*The rate of surplus value*”. It is also called the “*rate of exploitation*”, which can cause some confusion, because the word “*exploitation*” has connotations of the necessity of driving workers ever harder. As Marx demonstrates, capital is, in fact, capable of raising s/v , whilst also lightening the physical burden, and even duration of work, and indeed of increasing workers real living standards. The real exploitation is the amount that workers hand over gratis in 's', even whilst these improvements in workers conditions take place.

As he says, in criticising Lassalle's Iron Law of Wages, in the *Critique of the Gotha Programme*,

“... consequently, the system of wage labour is a system of slavery, and indeed of a slavery which becomes more severe in proportion as the social productive forces of labour develop, whether the worker receives better or worse payment...”

It is as if, among slaves who have at last got behind the secret of slavery and broken out in rebellion, a slave still in thrall to obsolete notions were to inscribe on the program of the rebellion: Slavery must be abolished because the feeding of

slaves in the system of slavery cannot exceed a certain low maximum!”

Marx points out that once the source of surplus value is understood, and once the rate of surplus value is understood, it is a simple matter to understand the source of profit, and rate of profit. But, it is impossible to work backwards, to begin with the rate of profit, and get to an understanding of surplus value.

As a consequence of the division of labour, the worker does not produce their own means of subsistence. This is different to the slave, who worked for the slave owner for so many hours a day, a proportion of which went to produce their own food and so on, and is different to the peasant, who worked half the week on their own land, to produce their own requirements, and half the week on the Lord of the Manor's land for free. The wage worker instead works so many hours producing a commodity, say linen, whose value is equal to the value of the commodities required for the reproduction of their labour-power, i.e. equal to the value of labour-power, equals the wage. This portion of the day, week, or year is *necessary labour*. Necessary because its needed to reproduce their labour-power. This is true whether its a slave, peasant or wage worker. The work done over and above this is surplus labour. The surplus labour done by the slave or peasant produces a surplus product. The surplus labour done by the wage worker, however, produces a surplus exchange value, or surplus value for short, an amount of exchange value more than is required to cover their wages/value of labour-power/labour-time required to produce their means of subsistence.

In other words, during this period of necessary labour, the worker produces a quantity of linen. Its exchange value is £0.15. The capitalist, in selling it, recovers the wages he has paid to the worker for producing it. The worker with the £0.15 they have been paid, is then able to buy enough food, shelter, clothing etc. to reproduce a day's labour-power.

If we assume our worker is just a supplier of simple, abstract labour-power, the number of hours they have to work to produce enough value to cover the cost of reproducing their labour-power will depend upon the cost/value of the necessaries they need to consume.

“If the value of those necessaries represent on an average the expenditure of six hours’ labour, the workman must on an average work for six hours to produce that value. If instead of working for the capitalist, he worked independently on his own account, he would, other things being equal, still be obliged to labour for the same number of hours, in order to produce the value of his labour-power, and thereby to gain the means of subsistence necessary for his conservation or continued reproduction.” (p 208)

But, as we have seen the worker does not just work for this amount of necessary labour-time, but for several hours more per day. During these additional hours he continues not only producing additional use values, commodities, but more importantly, for the capitalist, continues producing additional exchange values in those commodities, i.e. surplus value. This is additional value over and above what he has been paid in wages and is, therefore, additional value for which the capitalist has

paid out no equivalent. They have received something for nothing. Marx calls this period “*surplus labour-time*”, and the labour expended “*surplus labour*”.

“It is every bit as important, for a correct understanding of surplus-value, to conceive it as a mere congelation of surplus labour-time, as nothing but materialised surplus-labour, as it is, for a proper comprehension of value, to conceive it as a mere congelation of so many hours of labour, as nothing but materialised labour. The essential difference between the various economic forms of society, between, for instance, a society based on slave-labour, and one based on wage-labour, lies only in the mode in which this surplus-labour is in each case extracted from the actual producer, the labourer.” (p 209)

Because the value of variable capital is the same as the value of the labour power it buys, and the latter is determined by the value of the commodities the worker needs to reproduce their labour-power, which in turn determines how much of the day is required for “*necessary labour*”, s/v is the same proportion as the ratio of surplus labour-time to necessary labour-time. They are the same thing expressed in different ways, the first expressed in value terms, the second in terms of time.

Marx writes,

“Although the rate of surplus-value is an exact expression for the degree of exploitation of labour-power, it is, in no sense, an expression for the absolute amount of exploitation. For example, if the necessary labour 5 hours and the surplus-labour = 5 hours, the degree of

exploitation is 100%. The amount of exploitation is here measured by 5 hours. If, on the other hand, the necessary labour = 6 hours and the surplus-labour = 6 hours, the degree of exploitation remains, as before, 100%, while the actual amount of exploitation has increased 20%, namely from five hours to six.” (Note 2, p 209)

The method of calculating the rate of surplus value is then straightforward. If we take the value of the output and deduct from it the value of the constant capital (c) used in its production, i.e. we set $c = 0$, we will then have the amount of new value created. If we know the value of (v) then deducting this from the amount of new value will also give us (s), or if we know (s) deducting it from the total new value will give us (v). We can then calculate s/v .

Marx then provides a number of actual examples of such calculations.

The first example involves a spinning mill. I have converted Marx's measurements and currency to more modern equivalents. The mill has 10,000 spindles spinning cotton, with each spindle producing 1 kg. of yarn per week. 10,600 kgs of cotton is consumed per week, with 600 kgs being lost as wastage in the production process. Marx uses the actual price of cotton in April 1871 for his example, which was $7\frac{3}{4}$ d. per lb. (about £0.032 per lb. or £0.07 per kg). The cost of raw material was £340, and I will then use this same figure giving a cost per kg of £0.032 per kg.

The cost of the machinery Marx determines as £1 per spindle, or £10,000, which with 10% wear and tear means a value of

£1,000 or £20 per week. Rent amounts to a further £6 per week, coal £4.50 per week, gas £1 per week, oil etc. £4.50 per week.

The total constant capital per week then comes to £378. Wages are £52 per week. The price of yarn is £0.125 per kg, giving a total value of the 10,000 kgs of yarn as £510. The profit is then $£510 - £378 \text{ constant capital} - £52 \text{ wages} = £80$.

The rate of surplus value is then $80/52 = 153.85\%$. In a working day of 10 hours, the necessary labour would constitute 3.94 hours, and the surplus labour 6.06 hours.

In the second example, again taken from actual data, Marx provides the following table. I have decimalised the currency.

Here, the variable capital is £3.50, and the surplus value is £3.55, so that the rate of surplus value is $355/350 = 101.43\%$.

2) The Representation Of The Components Of The Value Of The Product By Corresponding Proportional Parts Of The Product Itself

Marx sets out the way each of the components of the final product can be represented as a proportion of the total physical output. This might seem a bit of a waste of time or a diversion. Because Marx uses *Imperial* measures for his example, it can be a bit cumbersome nowadays to follow. His reason for using this breakdown is to illustrate the falsity of some capitalist arguments relating to profits, which he deals with later. In order to hopefully make it easier to follow, I will try to use different numbers and metric measurements.

Suppose we have 20 kilos of yarn produced. It requires:

20 kilos of cotton

10% of a spindle

10 hours of abstract labour-time

The 20 kilos of cotton require 10 hours of abstract labour-time to produce.

A spindle requires 10 hours of abstract labour-time to produce.

1 gram of gold requires 10 hours of labour-time to produce.

1 gram of gold = £10.

So, the 20 kilos of yarn =

20 kilos of cotton = 10 hours = £10

10% of a spindle = 1 hour = £1

Spinning = 10 hours = £10.

The total value of the yarn = 21 hours = £21.

If we assume that the spinner requires 5 hours labour-time as necessary labour to cover the cost of reproducing their labour-power, then we also have:

Labour-power = 5 hours = £5

Surplus value = 5 hours = £5.

All of these amounts can be expressed as a certain physical quantity of yarn. If we express each as a decimal of the total, the calculation becomes clear. So:

Cotton = $\text{£}10/\text{£}21 = 0.476$

Spindle = $\text{£}1/\text{£}21 = 0.048$

Labour-power = $\text{£}5/\text{£}21 = 0.238$

Surplus value = $\text{£}5/\text{£}21 = 0.238$

As a proportion of the yarn:

Cotton = 9.52 kilos

Spindle = 0.96 kilos

Labour-power = 4.76 kilos

Surplus value = 4.76 kilos

Marx says, looked at this way, its as though 9.52 kilos of yarn was made up of the whole 20 kilos of cotton, but no labour and no spindle. The same for all the other components, i.e. its as though 9.52 kilos of yarn had been spun by the spinner in his 10 hours out of thin air, half of it covering his wages, the other half going to the capitalist as surplus value.

Similarly, this physical breakdown can be represented as portions of the time taken to spin the yarn, i.e. of the working day. We have taken that to be 10 hours. In that case:

the,

9.52 kilos of yarn representing cotton = 4.76 hours

0.96 kilos of yarn representing spindle = 0.48 hours

4.76 kilos of yarn representing labour-power =
2.38 hours

4.76 kilos of yarn representing surplus value =
2.38 hours

Total = 10 hours

This way of presenting matters, as Marx says, is correct. The first method operated at a spatial level. It was as though different amounts of the yarn were laid down side by side, and labelled, *“this much to cover the cotton, this much to cover wear and tear of spindle, this much to cover wages, this much left over for profit.”* Builders often look at things like this. They calculate that on an estate, or block of flats, they have to sell a given number to break even, and then every house/flat sold over that they count as profit.

The second form is the same as the first except, instead of being spatial, its temporal, apportioning each part of the working day as covering the respective costs. However, this latter way of presenting matters was also beneficial to capitalists, because it was open to being misrepresented and abused. In the struggle over the working day, the capitalists used this presentation to argue that the working day could not be cut, because it was only in the last hour or so of the working day that profits were made.

This argument known as *“Senior's Last Hour”*, after the economist *Nassau Senior*, is dealt with next by Marx.

3) Senior's Last Hour

Nassau W. Senior was an Oxford economist. He was chosen by the Manchester textile manufacturers to present their case that the provisions of the *Factories Acts* and the *Ten Hours Act* would destroy profits, whereas a relaxation that allowed factories to work their employees for 13 hours a day rather than the normal 11.5 hours, would double profits! However, to be fair to Senior, as Marx points out, in later years, he was to admit that he had been wrong, and was to become a supporter of those regulations. It may well be a reflection of the change amongst the bigger capitalists, that Engels refers to in his later *Prefaces* to the “*Condition of the Working Class*”.

We hear the same kinds of nonsense from penny-pinching, usually small capitalists, and their representatives amongst right-wing politicians and journalists today. It takes the form of proposals to relax health & safety laws, despite the fact that large numbers of workers continue to die from industrial accidents, and thousands more die, or are disabled, as a result of industrial diseases. It takes the form of calls for bosses to be able to sack people at will. It takes the form of ridiculous arguments that because some workers are living a few years beyond retirement age, and actually managing to collect on the payments they have made, over a lifetime, into pension schemes, that all workers have to work longer. It was nonsense when Senior made the case back then, and its still nonsense today.

As Marx points out, and as one of the Government Factory Inspectors of the time, *Leonard Horner*, spelled out, Senior's presentation of the figures themselves, was

muddled, but even correcting for that, his argument is false. Senior's argument was this:

A capitalist invests £80,000 in a mill, and machinery, and £20,000 in material and labour-power. It produces a 15% profit, giving a total annual value of output of £115,000.

The workers are employed for 11.5 hours per day. Senior then broke this down into half hour periods. So, in 0.5 hours = $\frac{£115,000}{23} = £5,000$. On this basis, in 10 hours, £100,000 is produced, which is only enough to replace the original capital employed. Of the 1.5 hours remaining, Senior argued that 0.5 hours = £5,000, was required to cover the wear and tear of machines, leaving just 1 hour during which profits were made.

Reduce the working day from 11.5 hours to 10, Senior argued, and not only would net profits (i.e. after wear and tear of machines) disappear, but so would the gross profit. Increase the working day by 1 hour, on the other hand, and net profit could be doubled!

Marx then demolishes this argument.

Suppose, Senior accepted the argument put to him by the manufacturers that the workers spent so many hours first reproducing the value of the buildings, materials and so on. Then, if so, if the workers worked for 10 hours, rather than 11.5, they would use less material, wear out the machines and buildings less. So, in order to reproduce this smaller quantity of constant capital, they would require less time out of the working day!

In response to the manufacturer's claim that the workers only reproduced the value of their wages in the last hour

but one, he should have responded, the time the worker spends reproducing his wages according to you is equal to the time he spends creating your profit – 1 hour in each case. But, the worker works for 11.5 hours not 2. If the worker works equal amounts of time to produce the value of his wages, and to produce surplus value, then out of that 11.5 hours, he works 5.75 hours producing his wages, and 5.75 hours producing surplus value.

But, then the value of the yarn produced in the last 2 hours is equal to the value of the wages and the profit. That is, its equal to 11.5 hours. In the last but one hour it is equal to 5.75 hours. We have then reached a ridiculous conclusion. The value produced by the worker in this last hour, on the basis of the manufacturers assumptions, is equal to 5.75 hours. But, how is it possible that a value, created by the worker, equal to 5.75 hours, can be created in just 1 hour!!!

Obviously, it can't. What Senior and the manufacturers have done is to fail to take into account the value of the constant capital transferred into the yarn. They have made the new value, created by the worker, bear all the cost of reproducing the value of the constant capital!

In reality, in 1 hour, the worker produces a quantity of yarn. It has a value of 5.75 hours. But, 4.75 hours of this value was not created by the worker. It was value that already existed in the form of material, of the wear and tear of machinery, buildings etc.

In 2 hours, the worker will create a quantity of yarn that has a value twice as great as in 1 hour, but that is because it will have transferred twice as much value from

the constant capital, as well as twice as much value being created by his own labour-time. It doesn't matter if those 2 hours are the last of the day or the first. The yarn produced in them will have a value equal to 11.5 hours. That will be 2 hours of value created by the worker's labour, and 9.5 hours created by the labour of other workers, who produced the cotton, machinery and so on.

In the first 5.75 hours, of the day, the worker creates new value equal to his wages, and in the other 5.75 hours creates new value for which he is not paid, and which goes to make the profit. If the working day was increased to 13 hours, then the surplus labour would increase from 5.75 hours to 7.25 hours. The previous rate of surplus value of 100%, would rise to 126.09%; far less than the doubling of profit that Senior believed.

At the same time, if the working day were reduced to 10 hours, the amount of surplus labour would fall to 4.75 hours, still giving a rate of surplus value of 82.6%.

Marx points out the invaluable work, done by the Factory Inspectors, like Horner. Given that, in the second half of the century, as Engels sets out, the big manufacturers became advocates of the *Factory Acts*, and other such regulations, this activity by the inspectors should perhaps be seen as an indication of the way that the capitalist state (that is the permanent bureaucracy, not the political power in parliament) acted in the interests of capital as a whole – the distinction that Marx makes between capital in general and many capitals. As Marx later describes, some employers like Wedgwood, who at the time was one of the big capitalists – his Etruria factory was one of the biggest in the country, and already used large

amounts of steam and other mechanical power – already understood the damage that was being done, to their long-term interests, by overworking the workers.

By contrast, the politicians, dependent on the votes of the manufacturers – at a time when workers had no vote – were keen to accept the manufacturers arguments. We see the same today with those like the *Tories* dependent on the votes of those small employers, still tied to those kinds of short-sighted measures. For more than 100 years now, it has been the *Social Democrats* who are more closely attuned to the interests of big capital, interests which tie in with the ideology of those parties and of the trades unions, based on bargaining within the system.

Marx also describes another feature that is familiar today. Alongside the economic campaign waged by the employers was another campaign. They argued that, particularly for young people, the additional “*leisure-time*” they would gain from only working 10 hours a day, would be detrimental to their morals. Being inside the environment of the factory was much better for them than having idle hands and being prone to all the temptations of the outside world.

Marx quotes another Factory Inspectors' Report of October 1848, which detailed the environment of those factories, complete with all the deafening noise, flax dust and so on. We see the same kind of thing today, with the *Tories* proposals for looking after the welfare of today's young people, by demanding that they agree to work for nothing, stacking shelves overnight in supermarkets, in order to obtain “*work experience*”. How wonderful it must

be to have spent those extra years at school, and run up huge debts to pay the £9,000 a year tuition fees, in order to be able to benefit from such experience, when capitalism can't find you a proper job!

4) Surplus Produce

In the same way that the workers time can be divided into *necessary* and *surplus labour-time*, so the output of these periods can be described as *necessary* or *surplus product*. As Marx says, the measure of a nation's wealth is the ratio of this surplus to necessary product, rather than the amount of the total product. To that effect, he quotes Ricardo.

“To an individual with a capital of £20,000, whose profits were £2,000 per annum, it would be a matter quite indifferent whether his capital would employ a 100 or 1,000 men, whether the commodity produced sold for £10,000 or £20,000, provided, in all cases, his profit were not diminished below £2,000. Is not the real interest of the nation similar? Provided its net real income, its rent and profits, be the same, it is of no importance whether the nation consists of 10 or of 12 millions of inhabitants.” (Ric. I.c., p. 416.) Long before Ricardo, Arthur Young, a fanatical upholder of surplus-produce, for the rest, a rambling, uncritical writer, whose reputation is in the inverse ratio of his merit, says, “Of what use, in a modern kingdom, would be a whole province thus divided [in the old Roman manner, by small independent peasants], however well cultivated, except for the mere purpose of breeding men, which taken singly is a most useless purpose?” (Arthur Young: “Political Arithmetic, &c.” London, 1774, p. 47.)” (Note 2, p 220)

This also has to be borne in mind when considering the views of those who oppose continuing aid to places like India, because their economies are about to become bigger than that of the UK. On the other hand, the size of an economy is not irrelevant from either an economic or political perspective, just as beyond a certain point, the size of a company's balance sheet can become a more decisive factor in its power, and its ability to accumulate additional capital than is its rate of profit.

Chapter 10 - The Working Day

1) The Limits of The Working Day

The working day, Marx says, is determinable but not determinate. In other words, it is of no fixed length, but we can know how long it is, at any one time. The period of the day the worker has to work to cover their wages, i.e. to reproduce themselves, is fixed by the labour-time required for the production of the necessaries required for the reproduction of labour-power. The number of hours required for that will vary, in accordance with what those necessaries are, and the levels of productivity in producing them.

But, in addition to this period of necessary labour, we have the period of surplus labour. The ratio of surplus labour to necessary labour, the rate of exploitation, is also the same as the ratio of surplus production to necessary production, and of necessary value to surplus-value – the rate of surplus value.

Knowing this rate doesn't, on its own, tell us the length of the working day. A 100% rate can apply as much to a 2 hour day, 4 hour day, or 24 hour day. It only tells us that in each of these variants, an equal portion of the day is devoted to creating surplus, as to reproducing the labour power consumed.

The other limit Marx identifies here is that, in relation to concrete labour. It is impossible to work more than 24 hours in a day. In fact, as he says, a horse can only be worked 8 hours in a day. So too, humans require a portion of the day to sleep, eat, learn, procreate and in

general reproduce their labour-power. So, the actual limit must always be less than 24 hours – at least on an average, because Marx himself gives examples of people working 36 hour shifts. Likewise, because the aim of capitalist production is profit, the period of surplus labour cannot be, on average, zero, because, if it were, capital could make no profit.

There is an important point to be made here. Marx, in discussing these limits, is talking about the limits of concrete labour-time. However, as he earlier demonstrated, the relevant measure for value is not concrete but abstract labour-time. It is abstract labour, not concrete labour, which is the essence of value, which creates value, and which is its measure. There is, for that reason, in practice, no limit to the number of abstract labour hours in a day, because concrete labour can be, and frequently is complex labour, not simple labour, and each hour of complex labour represents several hours, and potentially many, many hours of abstract labour.

Marx, in discussing the difference between abstract labour and concrete labour, earlier, illustrated that the multiple of complex labour to simple labour is decided, in the market, by what consumers are prepared to pay for the product of that complex labour, compared to the product of simple labour. So, for example, consumers are prepared to pay huge amounts of money, individually and collectively, to enjoy the product of 1 hour's concrete labour by a Robbie Williams, or a David Beckham, or indeed of a top clothing designer, computer games programmer, and so on. It's the fact that this labour is complex labour, rather than the quantity of concrete labour-time that actually goes into physically producing a

CD, creating the football stadium, the suit, or DVD, which is responsible for their high value. In fact, the more technology has developed, the less of this constant capital is actually required for modern production, and the greater proportion of it is made up of labour power/variable capital – not in the form of large quantities of concrete labour-time, but in the form of very complex labour, which represents large amounts of abstract labour-time. The consequence of this, in reducing what Marx calls the *organic composition of capital*, and increasing the rate of profit, will be dealt with in *Vol. III*.

On that basis, the complex labour hour of David Beckham might equal 1000 hours of abstract labour-time. Could he work for 24 hours (and the reproduction of his labour-power, on various forms of digital, electronic media, that can be viewed around the globe, 24 hours a day, is an attempt to achieve that), then, in a single day, he might be capable of working for 24,000 hours, whereas a nurse, even if they were physically able to do it, might only be able to work for 24 hours. It can be seen why, on a capitalist basis, such grotesquely different wages can be earned, and yet why capital might still make a hugely bigger profit from the labour-power of a David Beckham, or a Robbie Williams, than out of that of a nurse. Its one reason we don't have TV talent shows to recruit nurses.

“Capital is dead labour, that, vampire-like, only lives by sucking living labour, and lives the more, the more labour it sucks. The time during which the labourer works, is the time during which the capitalist consumes the labour-power he has purchased of him.” (p 224)

Within a single day, capital can suck in, in absolute terms, more from a single worker, providing complex labour, than a single worker providing simple labour. Yet, capital seeks, continually, to reduce what it pays for the labour power, which means it, continually, tries to reduce the complex labour to simple labour, to mechanise it and so on.

Once again, the contradiction at the heart of every commodity, including labour-power, between use value and exchange value, is expressed. The more complex the labour, the higher the value it produces. This is not a question of the value of the concrete labour-power being higher. The value of the labour power of a skilled worker like a brain surgeon, may be much higher than for a pop star, because it requires more labour-time to reproduce, e.g. for the additional education and training etc. Yet, the product of an hour's labour by the pop star may be much greater than that of the brain surgeon, simply because, in the market place, consumers are prepared to pay more for it.

The more capital tries to reduce the cost of purchasing that use value, the more it reduces the complex nature of the labour provided, and, thereby reduces its potential profitability! Capital introduced free public education, for example, so as to provide itself with the large number of commercial, professional, administrative and technical workers it required. In doing so, it reduced the cost of producing that labour-power, drew them increasingly from the working-class, and thereby reduced the value of that kind of labour-power.

On the one hand, the individual capitalist has an incentive in trying to have workers work as long as possible, because with the necessary labour-time fixed, the longer the working day, the longer the period of surplus labour.

Marx then presents the workers argument against such an extension.

“You preach to me constantly the gospel of “saving” and “abstinence.” Good! I will, like a sensible saving owner, husband my sole wealth, labour-power, and abstain from all foolish waste of it. I will each day spend, set in motion, put into action only as much of it as is compatible with its normal duration, and healthy development. By an unlimited extension of the working-day, you may in one day use up a quantity of labour-power greater than I can restore in three. What you gain in labour I lose in substance. The use of my labour-power and the spoliation of it are quite different things. If the average time that (doing a reasonable amount of work) an average labourer can live, is 30 years, the value of my labour-power, which you pay me from day to day is $1/(365 \times 30)$ or $1/10950$ of its total value. But if you consume it in 10 years, you pay me daily $1/10950$ instead of $1/3650$ of its total value, i.e., only $1/3$ of its daily value, and you rob me, therefore, every day of $2/3$ of the value of my commodity. You pay me for one day’s labour-power, whilst you use that of 3 days. That is against our contract and the law of exchanges. I demand, therefore, a working-day of normal length, and I demand it without any appeal to your heart, for in money matters sentiment is out of place. You may be a model citizen, perhaps a member of the Society for the Prevention of Cruelty to

Animals, and in the odour of sanctity to boot; but the thing that you represent face to face with me has no heart in its breast. That which seems to throb there is my own heart-beating. I demand the normal working-day because I, like every other seller, demand the value of my commodity.” (p 224-5)

Later, in *Capital*, Marx does indeed refer to the speech in Parliament of *William Ferrand MP*, who complained that three generations of workers had been used up, in in the space of one generation. The consequence was that the workers were being used up. Again, as Marx sets out later, in *Capital*, some of the more forward thinking capitalists, like Wedgwood, recognised that, and supported legislation to limit the working day. Engels, also in “*The Condition Of The Working Class*” details how big capital abandoned these kinds of penny-pinching methods of extracting surplus value. There are lots of examples that demonstrate this.

In 1974, during the *Three day Week*, it was found that many firms were producing as much in three days as they normally did in five. France, with far more holidays, and a shorter working week, has better rates of productivity per hour, than the US's most productive state, California. French workers produce as much in four days, as British workers do in five. The lesson being that, when workers are not worked so hard, they frequently work more productively.

Marx is wrong then when he says,

“There is here, therefore, an antinomy, right against right, both equally bearing the seal of the law of exchanges.

Between equal rights force decides. Hence is it that in the history of capitalist production, the determination of what is a working-day, presents itself as the result of a struggle, a struggle between collective capital, i.e., the class of capitalists, and collective labour, i.e., the working-class.” (p 225)

In reality, the question of the length of the working-day is inseparable from the question of the reproduction of labour-power, and the value of labour-power. In the end, as he and Engels write elsewhere, it comes down to a question of demand and supply, which, in turn, is inseparable from the accumulation of capital. If capital burns out the available supply of labour-power then wages must rise – which may indeed take the form of a reduction in hours worked – but also, capital will recognise the importance of wise husbandry of that labour-power. The real reason, ultimately, that restrictions on the working day were introduced and enforced, was that big capital recognised it was in its interests. That didn't mean that individual capitalists did not try to subvert those laws, of course.

However, we should remember Marx's historical and logical approach in writing *Capital*. For the period he is writing about, the inception of industrial production, his argument is correct. It is the basis of capital accumulation on the basis of absolute surplus value, which he is in the process of explaining.

2. The Greed For Surplus Labour. Manufacturer and Boyard.

Surplus labour has existed in all class societies where one class has had a monopoly of the means of production. However, in all previous class societies prior to capitalism, the surplus labour produces surplus products not surplus value in the capitalist sense. Because the range and quantity of such use values that can be consumed by a ruling class, is limited, so is the need to work the exploited class to destruction. However, with exchange value, there is no such limit to how much a ruling class may seek to accumulate.

“Hence the negro labour in the Southern States of the American Union preserved something of a patriarchal character, so long as production was chiefly directed to immediate local consumption. But in proportion, as the export of cotton became of vital interest to these states, the over-working of the negro and sometimes the using up of his life in 7 years of labour became a factor in a calculated and calculating system.” (p 226)

Under capitalism, the surplus labour provided by the worker is hidden. As Marx says, if the rate of exploitation is one hundred percent, its just as true that the worker works half a minute for himself and half a minute for capital, as it is that he works half the week for himself, and half for capital. The two are fused together and appear the same. But, under the *corvée*, for example, that was not the case.

“The necessary labour which the Wallachian peasant does for his own maintenance is distinctly marked off from his surplus-labour on behalf of the Boyard. The one he does on his own field, the other on the seignorial estate. Both parts of the labour-time exist, therefore,

independently, side by side one with the other. In the corvée the surplus-labour is accurately marked off from the necessary labour. This, however, can make no difference with regard to the quantitative relation of surplus-labour to necessary labour. Three days' surplus-labour in the week remain three days that yield no equivalent to the labourer himself, whether it be called corvée or wage-labour. But in the capitalist the greed for surplus-labour appears in the straining after an unlimited extension of the working-day, in the Boyard more simply in a direct hunting after days of corvée.” (p 227)

Confirming the point made earlier about how industrial capital moves away from its initial rapaciousness, and began to husband its human resources, Marx writes,

“If the Règlement organique of the Danubian provinces was a positive expression of the greed for surplus-labour which every paragraph legalised, the English Factory Acts are the negative expression of the same greed. These acts curb the passion of capital for a limitless draining of labour-power, by forcibly limiting the working-day by state regulations, made by a state that is ruled by capitalist-and landlord. Apart from the working-class movement that daily grew more threatening, the limiting of factory labour was dictated by the same necessity which spread guano over the English fields. The same blind eagerness for plunder that in the one case exhausted the soil, had, in the other, torn up by the roots the living force of the nation.” (p 229)

But, of course, then as now, the fact that capital, as a whole, recognised the need to husband its resources collectively, did not mean that capitalists would not seek

to subvert the law, for their own advantage, individually! Marx, throughout *Capital*, quotes extensively from the *Reports of Factory Inspectors*, who set out, in detail, the way individual capitalists sought to achieve this. The *1850 Factory Act*, for example, established an average 10 hour working day – 6 a.m. to 6 p.m. Mon – Fri , with 1/2 hour for breakfast and 1 hour for dinner, and 8 hours on Saturday, 6 a.m. - 2 p.m., with 1/2 hour for breakfast.

Marx quotes an *1859 Report* from Leonard Horner, showing that fraudulent mill owners would start 15 minutes early, and finish 15 minutes late. They would steal 10 minutes from breakfast and 20 minutes from dinner, during the week, and similar amounts on a Saturday. Altogether, they would steal 340 minutes a week from the worker, or about 27 days a year. The fact that, during crises, workers were put on short time didn't change this. In fact, during such times, the capitalists would feel the need even more to extract as much surplus from the workers as possible.

He quotes the *Inspectors' Report for 1858*.

The same reports set out the pitiful excuses used by employers.

““It is sometimes advanced by way of excuse, when persons are found at work in a factory, either at a meal hour, or at some illegal time, that they will not leave the mill at the appointed hour, and that compulsion is necessary to force them to cease work [cleaning their machinery, &c.], especially on Saturday afternoons. But, if the hands remain in a factory after the machinery has ceased to revolve ... they would not have been so

employed if sufficient time had been set apart specially for cleaning, &c., either before 6 a.m. [sic.!] or before 2 p.m. on Saturday afternoons.” (p 231-2)

Marx also quotes the inspectors on the extent that the employers saw so much to gain from such additional exploitation, and so little chance of being caught, and so little penalty when they were, that they had every incentive to break the law. This was important for Marx's political approach. In the *Programme* he wrote for the *First International*, he was clear that the significance of such things as the *Factory Acts* or minimum standards for education, was not in the fact that these could be, or would be, enforced by the capitalist state, but that they provided a basis for collective action by workers themselves for their enforcement.

*“This can only be effected by converting **social reason** into **social force**, and, under given circumstances, there exists no other method of doing so, than through **general laws**, enforced by the power of the state. In enforcing such laws, the working class do not fortify governmental power. On the contrary, they transform that power, now used against them, into their own agency. They effect by a general act what they would vainly attempt by a multitude of isolated individual efforts.”*

3) Branches of English Industry Without legal Limits to Exploitation

In this section, Marx once again draws heavily from the *Reports of Factory Inspectors*, and from Engels' *“Condition Of The Working Class”*, to describe the atrocious conditions that the early stage of industrial capitalism imposed, much of which can be seen once

more, around the globe, in countries undergoing a similar process. The depravities it imposed, as Marx says, even aroused bourgeois commentators to compare it, unfavourably, to the conditions imposed by slavery.

Some of the worst suffering was amongst children. Marx quotes from reports showing 9 year old children working from 2 or 3 in the morning until 12 at night, in the Nottinghamshire lace factories.

Marx details extensively the role played by children as young as 7 in the pottery industry in heavy work for 15 hours a day. But, life expectancy in the Potteries was short for all workers. Many died from pulmonary diseases caused by the dust. Marx quotes the findings of Dr. J.T. Arledge of the *North Staffs Royal Infirmary*, in the *Commissioners Report of 1863*.

“The potters as a class, both men and women, represent a degenerated population, both physically and morally. They are, as a rule, stunted in growth, ill-shaped, and frequently ill-formed in the chest; they become prematurely old, and are certainly short-lived; they are phlegmatic and bloodless, and exhibit their debility of constitution by obstinate attacks of dyspepsia, and disorders of the liver and kidneys, and by rheumatism. But of all diseases they are especially prone to chest-disease, to pneumonia, phthisis, bronchitis, and asthma. One form would appear peculiar to them, and is known as potter’s asthma, or potter’s consumption. Scrofula attacking the glands, or bones, or other parts of the body, is a disease of two-thirds or more of the potters That the ‘degenerescence’ of the population of this district is not even greater than it is, is due to the constant

recruiting from the adjacent country, and intermarriages with more healthy races.” (p 235)

Marx then details the suffering of workers in the match trade caused by working with phosphorus. Half these workers, in the major cities, were under thirteen, again they were working up to fifteen hours a day, including night work. Similar long hours were worked by children in the wallpaper industry.

It was not that Marx opposed child labour. He had no time for such a liberal approach. On the contrary, in the programme he wrote for the *First International*, Marx makes clear that he believes that child labour combined with education, is the most effective means of new generations of workers rapidly advancing beyond their middle class equivalents. But, as with his proposals in relation to education and factory reform, the point was to obtain statutory limits for such child labour, which the workers could then enforce via their own collective action. So, for example he writes,

“We consider the tendency of modern industry to make children and juvenile persons of both sexes co-operate in the great work of social production, as a progressive, sound and legitimate tendency, although under capital it was distorted into an abomination. In a rational state of society every child whatever, from the age of 9 years, ought to become a productive labourer in the same way that no able-bodied adult person ought to be exempted from the general law of nature, viz.: to work in order to be able to eat, and work not only with the brain but with the hands too.

However, for the present, we have only to deal with the children and young persons of both sexes divided into three classes, to be treated differently; the first class to range from 9 to 12; the second, from 13 to 15 years; and the third, to comprise the ages of 16 and 17 years. We propose that the employment of the first class in any workshop or housework be legally restricted to two; that of the second, to four; and that of the third, to six hours. For the third class, there must be a break of at least one hour for meals or relaxation...

In enforcing such laws, the working class do not fortify governmental power. On the contrary, they transform that power, now used against them, into their own agency. They effect by a general act what they would vainly attempt by a multitude of isolated individual efforts."

(Marx – Instructions For The Delegates Of The Provisional General Council Of The International Workingmen's Association)

He makes a similar point in the "*Critique of The Gotha Programme*"

"A general prohibition of child labour is incompatible with the existence of large-scale industry and hence an empty, pious wish. Its realization -- if it were possible -- would be reactionary, since, with a strict regulation of the working time according to the different age groups and other safety measures for the protection of children, an early combination of productive labour with education is one of the most potent means for the transformation of present-day society."

Marx had referred, in an earlier chapter, to the adulteration of bread. It was only one foodstuff so cheapened. He quotes Chevallier, who detailed six hundred articles.

“The French chemist, Chevallier, in his treatise on the “sophistications” of commodities, enumerates for many of the 600 or more articles which he passes in review, 10, 20, 30 different methods of adulteration. He adds that he does not know all the methods and does not mention all that he knows. He gives 6 kinds of adulteration of sugar, 9 of olive oil, 10 of butter, 12 of salt, 19 of milk, 20 of bread, 23 of brandy, 24 of meal, 28 of chocolate, 30 of wine, 32 of coffee, etc. Even God Almighty does not escape this fate. See Rouard de Card, “On the Falsifications of the materials of the Sacrament.” (“De la falsification des substances sacramentelles,” Paris, 1856.)” (note 3, p 238)

The adulteration of bread led to the 1860 Act on adulteration, but, like most similar acts, it was not effective, because the courts usually favoured the suppliers in a spirit of defending free trade.

“His report (H.S. Tremenheere) together with the evidence given, roused not the heart of the public but its stomach. Englishmen, always well up in the Bible, knew well enough that man, unless by elective grace a capitalist, or landlord, or sinecurist, is commanded to eat his bread in the sweat of his brow, but they did not know that he had to eat daily in his bread a certain quantity of human perspiration mixed with the discharge of abscesses, cobwebs, dead black-beetles, and putrid German yeast, without counting alum, sand, and other

agreeable mineral ingredients. Without any regard to his holiness, Free-trade, the free baking-trade was therefore placed under the supervision of the State inspectors (Close of the Parliamentary session of 1863), and by the same Act of Parliament, work from 9 in the evening to 5 in the morning was forbidden for journeymen bakers under 18. The last clause speaks volumes as to the over-work in this old-fashioned, homely line of business.” (p 238-9)

The same picture could be seen on the railways, where the consequences were fatal.

“Reynolds’ Newspaper, January, 1866. — Every week this same paper has, under the sensational headings, “Fearful and fatal accidents,” “Appalling tragedies,” &c., a whole list of fresh railway catastrophes. On these an employee on the North Staffordshire line comments: “Everyone knows the consequences that may occur if the driver and fireman of a locomotive engine are not continually on the look-out. How can that be expected from a man who has been at such work for 29 or 30 hours, exposed to the weather, and without rest. The following is an example which is of very frequent occurrence: — One fireman commenced work on the Monday morning at a very early hour. When he had finished what is called a day’s work, he had been on duty 14 hours 50 minutes. Before he had time to get his tea, he was again called on for duty.... The next time he finished he had been on duty 14 hours 25 minutes, making a total of 29 hours 15 minutes without intermission. The rest of the week’s work was made up as follows: — Wednesday, 15 hours; Thursday, 15 hours 35 minutes; Friday, 14½ hours; Saturday, 14 hours 10

minutes, making a total for the week of 88 hours 30 minutes. Now, sir, fancy his astonishment on being paid 6 1/4 days for the whole. Thinking it was a mistake, he applied to the time-keeper,... and inquired what they considered a day's work, and was told 13 hours for a goods man (i.e., 78 hours).... He then asked for what he had made over and above the 78 hours per week, but was refused. However, he was at last told they would give him another quarter, i.e., 10d.," I.c., 4th February. 1866." (Note 2, p 242-3)

4) Day & Night Work. The Relay System.

Constant capital exists to soak up labour and thereby create surplus value. Any time that constant capital is not soaking up labour – downtime – is a loss to the capitalist from several standpoints. Firstly, labour could have been employed during that period, and been producing surplus value. Secondly, the capitalist advanced capital for the purchase of this constant capital, and expects to be making a return on it constantly. Thirdly, if it stands idle, there might be a cost in restarting it, for example, in firing up kilns, furnaces etc.

For all these reasons, as well as those referred to previously, in relation to depreciation, capital seeks to ensure that constant capital is in continuous operation. In the early days of the *Industrial Revolution*, this was done via a two-shift system.

"It is well known that this relay system, this alternation of two sets of workers, held full sway in the full-blooded youth-time of the English cotton manufacture, and that at the present time it still flourishes, among others, in the

cotton spinning of the Moscow district. This 24 hours' process of production exists to-day as a system in many of the branches of industry of Great Britain that are still "free," in the blast-furnaces, forges, plate-rolling mills, and other metallurgical establishments in England, Wales, and Scotland. The working-time here includes, besides the 24 hours of the 6 working-days, a great part also of the 24 hours of Sunday. The workers consist of men and women, adults and children of both sexes. The ages of the children and young persons run through all intermediate grades, from 8 (in some cases from 6) to 18." (p 245-6)

Marx once again cites the *Factory Inspectors' Reports* on the abuses arising from it.

"It is impossible," the report continues, "for any mind to realise the amount of work described in the following passages as being performed by boys of from 9 to 12 years of age ... without coming irresistibly to the conclusion that such abuses of the power of parents and of employers can no longer be allowed to exist." (p 246)

As some of the reports indicated, where workers, often children, covered for others off sick, they would frequently work not just a 12 hour shift, but a 24 or even 36 hour shift! This was in all kinds of industry, and odious conditions, such as in steel manufacture, where people were working in temperatures of between 86-90 degrees.

"It is true that there is this loss from machinery lying idle in those manufactories in which work only goes on by day. But the use of furnaces would involve a further loss in our case. If they were kept up there would be a waste

of fuel (instead of, as now, a waste of the living substance of the workers), and if they were not, there would be loss of time in laying the fires and getting the heat up (whilst the loss of sleeping time, even to children of 8 is a gain of working-time for the Sanderson tribe), and the furnaces themselves would suffer from the changes of temperature.” (Whilst those same furnaces suffer nothing from the day and night change of labour.)” (E.F. Sanderson quoted on p 251)

5) The Struggle For A Normal Working-Day. Compulsory Laws For The Extension Of The Working-Day From The Middle Of The 14th. To The End Of The 17th. Century

For capital, the working day is essentially 24 hours, less that time that workers must have to replenish and reproduce themselves. In the early period of industrial capitalism, where what capital requires, above all, is masses of undifferentiated, unskilled labour, even the time for education or other cultural development is minimal. The hypocrisy was illustrated by Marx, who points out that Sunday working, by workers, for capital, was defended, whilst, *“In England even now occasionally in rural districts a labourer is condemned to imprisonment for desecrating the Sabbath, by working in his front garden.”* (Note 1, p 252)

“But in its blind unrestrainable passion, its were-wolf hunger for surplus-labour, capital oversteps not only the moral, but even the merely physical maximum bounds of the working-day. It usurps the time for growth, development, and healthy maintenance of the body. It steals the time required for the consumption of fresh air

and sunlight. It higgles over a meal-time, incorporating it where possible with the process of production itself, so that food is given to the labourer as to a mere means of production, as coal is supplied to the boiler, grease and oil to the machinery. It reduces the sound sleep needed for the restoration, reparation, refreshment of the bodily powers to just so many hours of torpor as the revival of an organism, absolutely exhausted, renders essential. It is not the normal maintenance of the labour-power which is to determine the limits of the working-day; it is the greatest possible daily expenditure of labour-power, no matter how diseased, compulsory, and painful it may be, which is to determine the limits of the labourers' period of repose. Capital cares nothing for the length of life of labour-power. All that concerns it is simply and solely the maximum of labour-power, that can be rendered fluent in a working-day. It attains this end by shortening the extent of the labourer's life, as a greedy farmer snatches increased produce from the soil by robbing it of its fertility." (p 252-3)

But, just as depriving the land of its fertility has a cost to the farmer, so wearing out and destroying labour-power has a cost for capital.

"If then the unnatural extension of the working-day, that capital necessarily strives after in its unmeasured passion for self-expansion, shortens the length of life of the individual labourer, and therefore the duration of his labour-power, the forces used up have to be replaced at a more rapid rate and the sum of the expenses for the reproduction of labour-power will be greater; just as in a machine the part of its value to be reproduced every day is greater the more rapidly the machine is worn out. It

would seem therefore that the interest of capital itself points in the direction of a normal working-day.” (p 253)

Marx compares this with slavery. The slave owner buys a slave in the same way they buy a horse. If they lose either by overwork or abuse, it is a direct loss. However, if there is an abundant supply of cheap slaves, the slave owner might still be prepared to overwork them in order to maximise the earnings from them.

“It is accordingly a maxim of slave management, in slave-importing countries, that the most effective economy is that which takes out of the human chattel in the shortest space of time the utmost amount of exertion it is capable of putting forth. It is in tropical culture, where annual profits often equal the whole capital of plantations, that negro life is most recklessly sacrificed. It is the agriculture of the West Indies, which has been for centuries prolific of fabulous wealth, that has engulfed millions of the African race. It is in Cuba, at this day, whose revenues are reckoned by millions, and whose planters are princes, that we see in the servile class, the coarsest fare, the most exhausting and unremitting toil, and even the absolute destruction of a portion of its numbers every year.” (Cairnes, “The Slave Power”, quoted on p 254)

“For slave-trade read labour-market, for Kentucky and Virginia, Ireland and the agricultural districts of England, Scotland, and Wales, for Africa, Germany. We heard how over-work thinned the ranks of the bakers in London. Nevertheless, the London labour-market is always over-stocked with German and other candidates for death in the bakeries.” (p 254)

The making up of the destroyed labour force proceeded very much along the lines of slavery. Marx quotes the speech of William Ferrand MP in parliament (27th April, 1863),

“But then the manufacturers proposed to the Poor Law Commissioners that they should send the “surplus-population” of the agricultural districts to the north, with the explanation “that the manufacturers would absorb and use it up.”

Agents were appointed with the consent of the Poor Law Commissioners. ... An office was set up in Manchester, to which lists were sent of those workpeople in the agricultural districts wanting employment, and their names were registered in books. The manufacturers attended at these offices, and selected such persons as they chose; when they had selected such persons as their ‘wants required’, they gave instructions to have them forwarded to Manchester, and they were sent, ticketed like bales of goods, by canals, or with carriers, others tramping on the road, and many of them were found on the way lost and half-starved. This system had grown up unto a regular trade. This House will hardly believe it, but I tell them, that this traffic in human flesh was as well kept up, they were in effect as regularly sold to these [Manchester] manufacturers as slaves are sold to the cotton-grower in the United States.... In 1860, ‘the cotton trade was at its zenith.’ ... The manufacturers again found that they were short of hands.... They applied to the ‘flesh agents, as they are called. Those agents sent to the southern downs of England, to the pastures of Dorsetshire, to the glades of Devonshire, to

the people tending kine in Wiltshire, but they sought in vain. The surplus-population was 'absorbed.'"

The Bury Guardian said, on the completion of the French treaty, that "10,000 additional hands could be absorbed by Lancashire, and that 30,000 or 40,000 will be needed." After the "flesh agents and sub-agents" had in vain sought through the agricultural districts,

"a deputation came up to London, and waited on the right hon. gentleman [Mr. Villiers, President of the Poor Law Board] with a view of obtaining poor children from certain union houses for the mills of Lancashire." (p 254-5)

This ability to use up labour and replace it with a new generation (often stunted and unhealthy) or new supplies from the countryside or from abroad, gave capital the view that labour power could continue to be used up. Capital eventually realised that could not continue for ever, but,

"In every stockjobbing swindle every one knows that some time or other the crash must come, but every one hopes that it may fall on the head of his neighbour, after he himself has caught the shower of gold and placed it in safety. Après moi le déluge! [After me, the flood] is the watchword of every capitalist and of every capitalist nation. Hence Capital is reckless of the health or length of life of the labourer, unless under compulsion from society. To the out-cry as to the physical and mental degradation, the premature death, the torture of over-work, it answers: Ought these to trouble us since they increase our profits? But looking at things as a whole, all this does not, indeed, depend on the good or ill will of the

individual capitalist. Free competition brings out the inherent laws of capitalist production, in the shape of external coercive laws having power over every individual capitalist.” (p 252)

“We, therefore, find, e.g., that in the beginning of 1863, 26 firms owning extensive potteries in Staffordshire, amongst others, Josiah Wedgwood, & Sons, petition in a memorial for “some legislative enactment.” Competition with other capitalists permits them no voluntary limitation of working-time for children, &c. “Much as we deplore the evils before mentioned, it would not be possible to prevent them by any scheme of agreement between the manufacturers. ... Taking all these points into consideration, we have come to the conviction that some legislative enactment is wanted.” (“Children’s Employment Comm.” Rep. I, 1863, p. 322.) Most recently a much more striking example offers. The rise in the price of cotton during a period of feverish activity, had induced the manufacturers in Blackburn to shorten, by mutual consent, the working-time in their mills during a certain fixed period. This period terminated about the end of November, 1871. Meanwhile, the wealthier manufacturers, who combined spinning with weaving, used the diminution of production resulting from this agreement, to extend their own business and thus to make great profits at the expense of the small employers. The latter thereupon turned in their extremity to the operatives, urged them earnestly to agitate for the 9 hours’ system, and promised contributions in money to this end.” (Note 2, p 257)

Laws were introduced, the *English Labour Statutes*, from the 14th century onwards. Their objective was to lengthen

the working day. This compulsion was required because, at this stage, the balance of forces is largely in favour of labour and against capital. After the *Black Death* had ravaged the population, that balance was tipped in favour of labour even further, with all wages rising. Even with the force of law, it was impossible to impose long hours on labour, and the hours set out in those *Statutes* were much less than workers ended up working in the 19th century.

“Hence it is natural that the lengthening of the working-day, which capital, from the middle of the 14th to the end of the 17th century, tries to impose by State-measures on adult labourers, approximately coincides with the shortening of the working-day which, in the second half of the 19th century, has here and there been effected by the State to prevent the coining of children’s blood into capital. That which to-day, e.g., in the State of Massachusetts, until recently the freest State of the North-American Republic, has been proclaimed as the statutory limit of the labour of children under 12, was in England, even in the middle of the 17th century, the normal working-day of able-bodied artisans, robust labourers, athletic blacksmiths.” (p 258)

“Still, during the greater part of the 18th century, up to the epoch of Modern Industry and machinism, capital in England had not succeeded in seizing for itself, by the payment of the weekly value of labour-power, the whole week of the labourer, with the exception, however, of the agricultural labourers. The fact that they could live for a whole week on the wage of four days, did not appear to the labourers a sufficient reason that they should work the other two days for the capitalist.” (p 260)

The response of capital was simple.

“The labouring people should never think themselves independent of their superiors.... It is extremely dangerous to encourage mobs in a commercial state like ours, where, perhaps, seven parts out of eight of the whole, are people with little or no property. The cure will not be perfect, till our manufacturing poor are contented to labour six days for the same sum which they now earn in four days.” (From “An Essay On Trade and Commerce, 1770”, quoted on p 262)

It is the same motivation which today encourages capital to seek to reduce the free-time workers might enjoy at the end of their working lives. By robbing them of the pension entitlements they have built up over decades of contributions from their wages, and increasing the retirement age, it forces them to continue providing free labour to capital for additional years, thereby increasing the profits of capital.

6) The Struggle For The Normal Working-Day. Compulsory Limitation By Law Of The Working-Time. The English Factory Acts, 1833 To 1864

Capital took centuries to be able to extend the working day to its natural limit. But, with the onset of machine production, at the end of the 18th century, and the creation of a mass working class, as the peasants were driven from the land, by the *Enclosure Acts*, capital pushed the working day way beyond its normal limit.

Enlightened sections of the bourgeoisie recognised the limitations for themselves, not to mention the immorality of that.

“It is certainly much to be regretted that any class of persons should toil 12 hours a day, which, including the time for their meals and for going to and returning from their work, amounts, in fact, to 14 of the 24 hours.... Without entering into the question of health, no one will hesitate, I think, to admit that, in a moral point of view, so entire an absorption of the time of the working-classes, without intermission, from the early age of 13, and in trades not subject to restriction, much younger, must be extremely prejudicial, and is an evil greatly to be deplored.... For the sake, therefore, of public morals. of bringing up an orderly population, and of giving the great body of the people a reasonable enjoyment of life, it is much to be desired that in all trades some portion of every working-day should be reserved for rest and leisure.” (Leonard Horner in “Reports of Insp. of Fact. for 31st Dec., 1841.”) (Note 1, p 264)

The workers fought back against it. But, the availability of such a huge, latent reserve army of labour, created the conditions both for capital to use it up wastefully, and for competition between them to force them to do so. At the same time, those conditions placed workers in the least favourable condition to be able to fight back.

Although laws were passed restricting hours and establishing regulations, in the whole period up to 1833, Parliament provided no resources for their implementation. Worst affected were children, who, at this stage, fulfilled an important role for capital, precisely because they were even cheaper labour than that of adults. Moreover, because children were a source of household income for parents, it was often the case that

parents acted as an immediate recruiter and discipline over child labour.

The *1833 Factory Act* established a 15 hour working day from 5.30 in the morning to 8.30 at night. It allowed workers aged between 13 to 18 to be employed at any time of day up to a limit of 12 hours. It mostly outlawed employing children under 9, and limited employment of 9-13 year olds to 8 hours a day. Night work for under 18's was outlawed.

Marx notes that, even under these limits, children under 13 could be worked 72 hours a week, whilst the "*Emancipation Act, which also administered freedom drop by drop, forbade the planters, from the outset, to work any Negro slave more than 45 hours a week.*" (p 266)

In fact, the *1833 Act* did not come into force until 1836, and in the meantime, capital agitated vigorously to reduce the age limit from 13 to 10. It continued until 1844. In the intervening period, the *Factory Inspectors' Reports* demonstrate that it was impossible to enforce. The employers introduced various "*Relay Systems*" whereby young workers were employed at varying times during the day, allocated to various jobs, and with varying meal times, so that it was impossible to audit what hours had been worked.

But, times were changing. Workers were organising more effectively in trades unions, and after 1838 had raised the demand for the *Ten Hours Act*. Increasing demand for labour-power was meeting the "*using up*" of available supplies of labour.

“Some of the manufacturers, even, who had managed their factories in conformity with the Act of 1833, overwhelmed Parliament with memorials on the immoral competition of their false brethren whom greater impudence, or more fortunate local circumstances, enabled to break the law. Moreover, however much the individual manufacturer might give the rein to his old lust for gain, the spokesmen and political leaders of the manufacturing class ordered a change of front and of speech towards the workpeople. They had entered upon the contest for the repeal of the Corn Laws, and needed the workers to help them to victory. They promised therefore, not only a double-sized loaf of bread, but the enactment of the Ten Hours’ Bill in the Free-trade millennium.” (p 267)

On this basis, the 1844 Act was introduced, which placed women over 18 under the same protections as young workers. Hours were limited to 12, and night work was banned. Hours for children under 13 were reduced to 6 1/2. The Act also effectively banned the Relay System by calculating the time worked from the time work began in a morning.

“The years 1846-47 are epoch-making in the economic history of England. The Repeal of the Corn Laws, and of the duties on cotton and other raw material; Free-trade proclaimed as the guiding star of legislation; in a word, the arrival of the millennium. On the other hand, in the same years, the Chartist movement and the 10 hours’ agitation reached their highest point. They found allies in the Tories panting for revenge. Despite the fanatical opposition of the army of perjured Free-traders, with

Bright and Cobden at their head, the Ten Hours' Bill, struggled for so long, went through Parliament.

The new Factory Act of June 8th, 1847, enacted that on July 1st, 1847, there should be a preliminary shortening of the working-day for "young persons" (from 13 to 18), and all females to 11 hours, but that on May 1st, 1848, there should be a definite limitation of the working-day to 10 hours. In other respects, the Act only amended and completed the Acts of 1833 and 1844." (p 268-9)

The employers took advantage of a weakening of the workers' position arising from the serious economic downturn of the early 1840's, and the crises of 1846-7, to try to frustrate the Act. They cut wages by 25%, in an attempt to get workers to agitate for a repeal of the Act. Leonard Horner reports,

"I found that men who had been getting 10s. a week, had had 1s. taken off for a reduction in the rate of 10 per cent, and 1s. 6d. off the remaining 9s. for the reduction in time, together 2s. 6d.. and notwithstanding this, many of them said they would rather work 10 hours." l.c." (Note 2, p 269)

"Another "friendly" dodge was to make the adult males work 12 to 15 hours, and then to blazon abroad this fact as the best proof of what the proletariat desired in its heart of hearts. But the "ruthless" Factory Inspector Leonard Horner was again to the fore. The majority of the "over-times" declared:

"They would much prefer working ten hours for less wages, but that they had no choice; that so many were out of employment (so many spinners getting very low

wages by having to work as piecers, being unable to do better), that if they refused to work the longer time, others would immediately get their places, so that it was a question with them of agreeing to work the longer time, or of being thrown out of employment altogether.”” (p 270)

The Act came in on May 1st 1848,

“But meanwhile the fiasco of the Chartist party whose leaders were imprisoned, and whose organisation was dismembered, had shaken the confidence of the English working-class in its own strength. Soon after this the June insurrection in Paris and its bloody suppression united, in England as on the Continent, all fractions of the ruling classes, landlords and capitalists, stock-exchange wolves and shop-keepers, Protectionists and Freetraders, government and opposition, priests and freethinkers, young whores and old nuns, under the common cry for the salvation of Property, Religion, the Family and Society. The working-class was everywhere proclaimed, placed under a ban, under a virtual law of suspects. The manufacturers had no need any longer to restrain themselves. They broke out in open revolt not only against the Ten Hours’ Act, but against the whole of the legislation that since 1833 had aimed at restricting in some measure the “free” exploitation of labour-power. It was a pro-slavery rebellion in miniature, carried on for over two years with a cynical recklessness, a terrorist energy all the cheaper because the rebel capitalist risked nothing except the skin of his “hands.”” (p 270-1)

The employers began by sacking a large part of the children and women, who were covered by the Act. Then they argued that the hour and a half provided for meal

breaks were to be taken before and after the actual 10 hour work day. The factory inspectors challenged that, largely successfully, in the courts.

The employers then turned their attention again to children, breaking up the times they worked in the afternoon, so that they could be kept at work until 8.30 at night. The employers then essentially declared they would reintroduce the Relay System for children. To back it up, they overwhelmed the *Home Secretary, Sir George Grey*, with petitions, opposing legal action against them. Grey conceded, but the *Factory Inspectors* refused his instructions and continued taking employers to court for breaches of the Act.

Not that that did much good. The magistrates, invariably acquitted them. Indeed, often they were the same people! That in itself was illegal.

Leonard Horner reported,

“Having endeavoured to enforce the Act ... by ten prosecutions in seven magisterial divisions, and having been supported by the magistrates in one case only ... I considered it useless to prosecute more for this evasion of the law. That part of the Act of 1848 which was framed for securing uniformity in the hours of work, ... is thus no longer in force in my district (Lancashire). Neither have the sub-inspectors or myself any means of satisfying ourselves, when we inspect a mill working by shifts, that the young persons and women are not working more than 10 hours a-day” (p 274)

Eventually, appearance and reality had to be aligned.

“This revolt of capital, after two years was at last crowned with victory by a decision of one of the four highest Courts of Justice in England, the Court of Exchequer, which in a case brought before it on February 8th, 1850, decided that the manufacturers were certainly acting against the sense of the Act of 1844, but that this Act itself contained certain words that rendered it meaningless. “By this decision, the Ten Hours’ Act was abolished.” A crowd of masters, who until then had been afraid of using the relay system for young persons and women, now took it up heart and soul.” (p 276)

But, now the contradictions of capital reasserted themselves, and its need for a state to mediate its interests re-emerged. On the one hand,

“The workpeople had hitherto offered a passive, although inflexible and unremitting resistance. They now protested in Lancashire and Yorkshire in threatening meetings.” (p 276)

On the other,

“Some of the masters themselves murmured:

“On account of the contradictory decisions of the magistrates, a condition of things altogether abnormal and anarchical obtains. One law holds in Yorkshire, another in Lancashire, one law in one parish of Lancashire, another in its immediate neighbourhood. The manufacturer in large towns could evade the law, the manufacturer in country districts could not find the people necessary for the relay system, still less for the shifting of hands from one factory to another,” &c.

And the first birthright of capital is equal exploitation of labour-power by all capitalists.” (p 276)

So, a compromise was reached in the 1850 *Factory Act*, which raised the working day for women and young people from 10 to 10½, but abolished the Relay System for good.

“Henceforth with a few exceptions the Factory Act of 1850 regulated the working-day of all workers in the branches of industry that come under it. Since the passing of the first Factory Act half a century had elapsed...

However, the principle had triumphed with its victory in those great branches of industry which form the most characteristic creation of the modern mode of production. Their wonderful development from 1853 to 1860, hand-in-hand with the physical and moral regeneration of the factory workers, struck the most purblind. The masters from whom the legal limitation and regulation had been wrung step by step after a civil war of half a century, themselves referred ostentatiously to the contrast with the branches of exploitation still “free.” The Pharisees of “Political Economy” now proclaimed the discernment of the necessity of a legally fixed working-day as a characteristic new discovery of their “science.”” (p 279-80)

This is another confirmation of the processes identified with the long wave. The period up to 1843 was one of long wave *Winter*, during which the position of workers was weak. A new long wave boom commenced in 1843, but as with all such *Spring* phases of the cycle, the

existing reserves of labour are large enough to be used up, and productivity gains enable a relative surplus population to be created, without strengthening the position of workers. It is only as this *Spring* phase begins to turn into the *Summer* phase, that this reserve begins to be used up, and productivity gains are more limited, that wages begin to rise, and the position of workers is strengthened.

7) The Struggle For The Normal Working-Day. Reaction Of The English Factory Acts On Other Countries

It is because the driving force, the purpose, of capitalist production is the creation of surplus value that the first and most striking attempts to extend the working day manifest themselves in those industries first *“revolutionised by water-power, steam, and machinery, in those first creations of the modern mode of production, cotton, wool, flax, and silk spinning, and weaving. The changes in the material mode of production, and the corresponding changes in the social relations of the producers gave rise first to an extravagance beyond all bounds, and then in opposition to this, called forth a control on the part of Society which legally limits, regulates, and makes uniform the working-day and its pauses. This control appears, therefore, during the first half of the nineteenth century simply as exceptional legislation.”* (p 282)

But, it was soon apparent that many types of production had now become dominated by capitalistic relations, and so, instead of exceptional legislation, what was required was more general legislation.

When capitalist production has developed, the individual labourer selling his labour-power on the 'free market' essentially disappears, because they are forced to succumb to the massively greater power of capital. The individual workers can only obtain the value of their labour-power, including the establishment of a normal working day, if they combine and act collectively.

“As the contest takes place in the arena of modern industry, it first breaks out in the home of that industry — England. The English factory workers were the champions, not only of the English, but of the modern working-class generally, as their theorists were the first to throw down the gauntlet to the theory of capital.” (p 283)

Other countries, therefore, lagged behind Britain. In the US, as Marx described, in his debates with Weston, in the initial period, as it had been in Britain, prior to the Industrial Revolution, labour had the upper hand against capital. In the US, wages were relatively high, because labour was relatively scarce. As soon as workers saved enough to buy a cheap piece of land, they turned themselves back into peasants. But, when industrialisation in the US takes off, and when large scale immigration changes that situation, capital gains the upper hand. Moreover,

“In the United States of North America, every independent movement of the workers was paralysed so long as slavery disfigured a part of the Republic. Labour cannot emancipate itself in the white skin where in the black it is branded. But out of the death of slavery a new life at once arose. The first fruit of the Civil War was the eight hours' agitation, that ran with the seven-leagued

boots of the locomotive from the Atlantic to the Pacific, from New England to California. The General Congress of Labour at Baltimore (August 16th, 1866) declared:

“The first and great necessity of the present, to free the labour of this country from capitalistic slavery, is the passing of a law by which eight hours shall be the normal working-day in all States of the American Union. We are resolved to put forth all our strength until this glorious result is attained.” (p 284)

And the same demand for an 8 hour day was adopted by the *First International* at its Congress in Geneva.

“It must be acknowledged that our labourer comes out of the process of production other than he entered. In the market he stood as owner of the commodity “labour-power” face to face with other owners of commodities, dealer against dealer. The contract by which he sold to the capitalist his labour-power proved, so to say, in black and white that he disposed of himself freely. The bargain concluded, it is discovered that he was no “free agent,” that the time for which he is free to sell his labour-power is the time for which he is forced to sell it, that in fact the vampire will not lose its hold on him “so long as there is a muscle, a nerve, a drop of blood to be exploited.” For “protection” against “the serpent of their agonies,” the labourers must put their heads together, and, as a class, compel the passing of a law, an all-powerful social barrier that shall prevent the very workers from selling, by voluntary contract with capital, themselves and their families into slavery and death. In place of the pompous catalogue of the “inalienable rights of man” comes the modest Magna Charta of a legally limited working-day,

which shall make clear “when the time which the worker sells is ended, and when his own begins.”” (p 285-6)

Lessons of Marx's Analysis Of The Working Day

In general, capital proceeds on the basis of the extraction of *relative surplus value*, the analysis of which Marx is coming to shortly. That is because relative surplus value is far more efficient a means of exploitation than absolute surplus value. Relative surplus value is more appropriate to the conditions of a more mature and developed form of capitalism, which, having used up a large amount of the labour reserve, has been led to replace labour with machines, and, in the process, has had to develop a more educated and skilled workforce. Moreover, relative surplus value arises naturally out of the drive of each individual capital, under the lash of competition, to raise the level of productivity.

However, in the early stages of industrialisation, there is a large *latent reserve army of labour*, and capital only needs a large amount of unskilled labour. It begins by using that up, including its cheapest components, the women and children. In that respect, it proceeds in a similar way to slavery, when it has access to large numbers of cheap slaves.

It does so, not because the capitalists themselves were necessarily greedy individuals. Often they were not. Marx refers sarcastically to those who were members of the RSPCA and other such charitable causes. Many 19th century capitalists like *Carnegie* were philanthropists. The point is that as representatives of capital, rather than as individuals, they were controlled, not by their own

individual sentiments and morals, but by the needs of capital and of competition, and its objective laws.

Marx quotes to this effect.

““The conduct of each of these classes (capitalists and workmen) has been the result of the relative situation in which they have been placed.” (Reports, &c., for 31st October, 1848, p. 113.)” (Note 1, p 282)

“With suppressed irony, and in very well weighed words, the Factory Inspectors hint that the actual law also frees the capitalist from some of the brutality natural to a man who is a mere embodiment of capital, and that it has given him time for a little “culture.” “Formerly the master had no time for anything but money; the servant had no time for anything but labour” (l.c., p. 48).” (Note 1, p 286)

However, those objective laws themselves indicated to capital that the wasteful using up of labour could not continue, which is why individual capitalists themselves recognised the need for regulation, e.g. the petition by Wedgwood and others to limit the working day. The capitalist state as the *Executive Committee* of the ruling class acts to provide regulation in the interests of *Capital in General* rather than at the level of *Many Capitals*.

But, the size of the latent reserve moves up and down, and the need of capital to preserve labour varies with it. The progress towards a normal working day, is protracted and reflects these fluctuations, and the relative strength of the contending classes that goes with it. It takes the form of class struggle, but it is not just a labour-capital class struggle. It encompasses the class struggle that was taking place between capital and landed property.

So, at one point, where capital needs the support of workers for the *Repeal of the Corn Laws*, it offers the reforms of the Factory Acts. When that is won, capital reneges on the deal, and attempts to claw back a greater portion of the working day for profit. Now, landed property strikes back at capital by trying to make an alliance with the workers to impose restrictions on capital.

Nor is the battle between labour and capital simply one fought out at an industrial level via the trades unions. In fact, Marx set out the limitations of that in his debates, in the First International, with Weston, contained in the pamphlet *"Value, Price and Profit"*. Capital would always have the upper hand.

But labour, during this period, had also established its own co-operative factories and shops. Robert Owen, in the mills at New Lanark, had introduced a 10 hour day as far back as 1810, along with many other reforms, which demonstrated that factories could be operated more efficiently and profitably, where workers were not overworked etc. The workers textile co-operatives, in Lancashire, as Marx demonstrated, were more efficient and profitable than their privately owned competitors, despite the obstacles placed in their way.

"Robert Owen, soon after 1810, not only maintained the necessity of a limitation of the working-day in theory, but actually introduced the 10 hours' day into his factory at New Lanark. This was laughed at as a communistic Utopia; so were his "Combination of children's education with productive labour and the Co-operative Societies of Workingmen", first called into being by him. To-day, the first Utopia is a Factory Act, the second figures as an

official phrase in all Factory Acts, the third is already being used as a cloak for reactionary humbug.” (Note 2, p 283)

As Marx put it in his Inaugural Address to the First International.

“After a 30 years’ struggle, fought with almost admirable perseverance, the English working classes, improving a momentaneous split between the landlords and money lords, succeeded in carrying the Ten Hours’ Bill. The immense physical, moral, and intellectual benefits hence accruing to the factory operatives, half-yearly chronicled in the reports of the inspectors of factories, are now acknowledged on all sides. Most of the continental governments had to accept the English Factory Act in more or less modified forms, and the English Parliament itself is every year compelled to enlarge its sphere of action...

But there was in store a still greater victory of the political economy of labour over the political economy of property. We speak of the co-operative movement, especially the co-operative factories raised by the unassisted efforts of a few bold “hands”. The value of these great social experiments cannot be overrated. By deed instead of by argument, they have shown that production on a large scale, and in accord with the behests of modern science, may be carried on without the existence of a class of masters employing a class of hands; that to bear fruit, the means of labour need not be monopolized as a means of dominion over, and of extortion against, the labouring man himself; and that, like slave labour, like serf labour, hired labour is but a transitory and inferior form, destined

to disappear before associated labor plying its toil with a willing hand, a ready mind, and a joyous heart. In England, the seeds of the co-operative system were sown by Robert Owen; the workingmen's experiments tried on the Continent were, in fact, the practical upshot of the theories, not invented, but loudly proclaimed, in 1848."

Chapter 11 - The Rate and Mass Of Surplus Value

Marx begins by assuming the value of labour-power, i.e. the number of hours required to reproduce it, to be constant. On that basis, with any given rate of surplus value, the mass of surplus value can be calculated.

If the value of labour-power = $v = 6$ hours, and the rate of surplus value = 100%, then the amount of surplus value = 6 hours also. If the value of money is constant, then if 6 hours = 1 gram of gold = £0.15, then the amount of surplus value = £0.15.

Every day, each worker creates £0.15 of surplus value. But, the variable capital is the monetary value of all the labour power employed. So, if 100 workers are employed and the variable capital amounts to £15, this is equal to the average value of one labour power £0.15 multiplied by the number of workers (100) employed.

Similarly, 100 workers will provide £15 of surplus value, $100 \times £0.15$, and a workforce of n will produce $n \times £0.15$ in surplus value.

Marx deduces the following law.

“...the mass of the surplus value produced is equal to the amount of the variable capital advanced, multiplied by the rate of surplus value, in other words: it is determined by the compound ratio between the number of labour-powers exploited simultaneously by the same capitalist and the degree of exploitation of each individual labour-power.

Let the mass of the surplus value be S , the surplus value supplied by the individual labourer in the average day s the variable capital daily advanced in the purchase of one individual labour-power v , the sum total of the variable capital V , the value of an average labour-power P , its degree of exploitation (a'/a) (surplus-labour/necessary-labour) and the number of labourers employed n ; we have: $S = (s/v) \times V, P \times (a'/a) \times n.$ " (p 288)

As a consequence, these two factors can counteract or reinforce each other. If the rate of exploitation falls, this can be offset if more workers are exploited and vice versa. If the rate of exploitation rises and the number of workers exploited also rises, the two will reinforce each other in increasing the mass of surplus value, and vice versa.

If, on our previous example, there were 100 workers, who worked for 12 hours, 6 hours to reproduce their labour power, and 6 hours producing surplus value, and in money terms this amounts to £15 variable capital, and £15 surplus value, then if the number of workers falls to 50, so that variable capital falls to $50 \times £0.15 = £7.50$, the mass of surplus value can remain at £15, provided these 50 workers now provide double the amount of surplus value each. That is if each provides 12 not 6 hours of surplus labour, so that $50 \times 12 \text{ hours} = £0.30 = £15$. The working day would have to rise from 12 hours to 18 hours.

"Diminution of the variable capital may therefore be compensated by a proportionate rise in the degree of exploitation of labour-power, or the decrease in the number of the labourers employed by a proportionate

extension of the working day. Within certain limits therefore the supply of labour exploitable by capital is independent of the supply of labourers. On the contrary, a fall in the rate of surplus value leaves unaltered the mass of the surplus value produced, if the amount of the variable capital, or number of the labourers employed, increases in the same proportion.” (p 288-9)

So long as we are talking about simple labour this has impassable limits. There are only 24 hours in a day that this simple labour can work, and, out of that, a portion must form necessary labour-time, required for its reproduction, whilst another portion must be set aside to allow the labour time for recuperation. However, as I have set out in previous chapters, not all labour is simple labour. Complex labour represents multiples of simple labour. Consequently, there is no real limit to the number of abstract labour hours in a working day. If an hour of David Beckham's labour = 1000 hours of simple labour, then there are 24000 hours of abstract labour in a Beckham day!

Whatever the total length of working day, for any particular type of labour, however, it has an upper limit (24,000 hours of abstract labour for Beckham, for example), and out of this must be taken the amount of necessary labour-time – maybe 12000 hours – and the amount of time needed for recuperation, (maybe 6,000 hours for Beckham), and this is reflected in the value of the labour power, and paid out in wages.

For now, we will follow Marx, and assume we are dealing with only a type of simple labour.

If the total value produced in 24 hours of labour = £0.60, then whatever the value of labour power, be it £0.10 or £0.50, then the amount of surplus value produced must always be less than £0.60. Moreover, the total amount of value produced by each worker must itself be less than £0.60, because of the time required for recuperation, i.e. they cannot physically work 24 hours a day on a repeated basis. So, if we have:

500 workers employed for 12 hours

6 hours for necessary labour-power

6 hours for surplus labour-power

1 hour = £1

then,

$500 \times 6 \times £1 = £3000$ variable capital

$500 \times 6 \times £1 = £3000$ surplus value

Total new value produced = £6000.

If we have instead, 100 workers working 18 hours a day, and

6 hours for necessary labour

12 hours for surplus labour,

i.e. a 200% rather than 100% rate of surplus value, then,

$100 \times 6 \times £1 = £600$ variable capital

$100 \times 12 \times £1 = £1200$ surplus value

Total new value = £1800.

“This palpable law is of importance for the clearing up of many phenomena, arising from a tendency (to be worked out later on) of capital to reduce as much as possible the number of labourers employed by it, or its variable constituent transformed into labour-power, in contradiction to its other tendency to produce the greatest possible mass of surplus value.” (p 289)

“A third law results from the determination, of the mass of the surplus value produced, by the two factors: rate of surplus value and amount of variable capital advanced. The rate of surplus value, or the degree of exploitation of labour-power, and the value of labour-power, or the amount of necessary working time being given, it is self evident that the greater the variable capital, the greater would be the mass of the value produced and of the surplus value. If the limit of the working-day is given, and also the limit of its necessary constituent, the mass of value and surplus value that an individual capitalist produces, is clearly exclusively dependent on the mass of labour that he sets in motion. But this, under the conditions supposed above, depends on the mass of labour-power, or the number of labourers whom he exploits, and this number in its turn is determined by the amount of the variable capital advanced. With a given rate of surplus value, and a given value of labour-power, therefore, the masses of surplus value produced vary directly as the amounts of the variable capitals advanced.” (p 289)

This is true, whether we are talking about simple or complex labour, because complex labour here represents multiples of simple labour.

Suppose we have a 10 hour working day, and a 100% rate of exploitation. It is just the same if a capitalist has a variable capital of £1,000 which is allocated,

1000 workers @ £1 = £1000

as if they allocate it,

1 David Beckham @ £1000 = £1,000.

In both cases, the amount of variable capital is £1,000, and in both cases the amount of new value created will be £2,000 divided £1,000 to the labour that created it, and £1,000 in surplus value.

Capital is divided into constant and variable capital, as analysed in previous chapters. The proportions between them vary in different types of production. For example, modern car production uses a lot of constant capital in the form of buildings, robots, assembly areas, materials and so on, and relatively little in the way of variable capital. *Apple*, and other high tech producers, use relatively little in the way of constant capital, but use relatively large amounts of variable capital – lots of developers, analysts, programmers, designers etc. – and because these types of labour are highly complex, each hour of their labour-time is equivalent to many hours of simple labour. Put another way, each average worker employed by *Apple*, and other such high tech, high value companies, is equivalent to many simple labourers.

In addition, even in the same branch of production, the proportion between constant and variable capital varies, because technical change occurs, which means that what were once labour intensive types of production

become capital intensive instead. At one time, economies employed around 80% of people in *agriculture*. In Britain, today, just 0.7% of the population is employed in agriculture. Yet, agricultural production is much higher in Britain today than it was prior to the Industrial Revolution. Similarly, in the 19th century, most of these agricultural workers moved to become employed in *manufacturing*. That was a process, which the Malthusians argued must end in disaster. Of course, it did not, because agricultural production increased astronomically, in part because of the introduction of capital equipment, and chemicals produced by manufacturing industry. But, again, in manufacturing, capital replaced labour, so that now in Britain only 21.4% of the population is employed in manufacturing, but the value of manufacturing output is higher than it was! Today, 78% of the population are employed in *services*, and once again, capital is replacing labour in all of these areas too.

“But in whatever proportion a given capital breaks up into a constant and a variable part, whether the latter is to the former as 1:2 or 1:10 or 1:x, the law just laid down is not affected by this. For, according to our previous analysis, the value of the constant capital reappears in the value of the product, but does not enter into the newly produced value, the newly created value product. To employ 1,000 spinners, more raw material, spindles, &c., are, of course, required, than to employ 100. The value of these additional means of production however may rise, fall, remain unaltered, be large or small; it has no influence on the process of creation of surplus value by means of the labour-powers that put them in motion. The law demonstrated above now, therefore, takes this form: the

masses of value and of surplus value produced by different capitals — the value of labour-power being given and its degree of exploitation being equal — vary directly as the amounts of the variable constituents of these capitals, i.e., as their constituents transformed into living labour-power.” (p 290)

This appears to contradict all experience.

“Everyone knows that a cotton spinner, who, reckoning the percentage on the whole of his applied capital, employs much constant and little variable capital, does not, on account of this, pocket less profit or surplus value than a baker, who relatively sets in motion much variable and little constant capital. For the solution of this apparent contradiction, many intermediate terms are as yet wanted, as from the standpoint of elementary algebra many intermediate terms are wanted to understand that 0/0 may represent an actual magnitude.” (p 290)

What Marx is referring to here is that capitals, of equal magnitude, tend to obtain the same rate, and consequently amount of profit, irrespective of how much variable capital they employ. The resolution of this apparent paradox is provided in *Volume III of Capital*, where Marx demonstrates that competition acts to share out the total amount of surplus value between these different capitals, and, in the process, establishes “*Prices of Production*”, separate from exchange values, which then take the place of the latter, as the pivot around which market prices fluctuate. This is the so called “*Transformation Problem.*”

If we take the total number of workers in a country and a given length of working day, then these workers can be considered as a single collective worker, and their labour as a single collective work day. So, if there are 1 million workers, and a 10 hour day we have a collective 10 million hour day. If we assume that all labour is simple labour, then this limit is set by the growth of population, and the amount of surplus value, by this and the possible lengthening of the working day. As Marx says in examining relative surplus value, it will be seen that this is not exactly true.

I would again point out here that this also only applies in relation to simple labour. The population could be falling, but if, via education, training etc., and consequent changes in the nature of production and consumption, simple labour is replaced by complex labour, then the collective working day and collective surplus value can rise, and possibly rise substantially. For example,

1 million simple labours working 10 hours = a collective working day of 10 million hours.

10,000 David Beckham's working 10 hours = a collective working day of 100 million hours, if each Beckham hour = 1000 hours of simple labour.

Not all money or value can be turned into capital. If a worker needs to work 8 hours, to reproduce the value of their labour power, and also works 4 hours producing surplus value, the capitalist, to live only as well as the worker, off this surplus value, would have to employ 2 workers, i.e. 2×4 hours surplus value = 8 hours

necessary labour time, to buy those necessities. But, capital needs to expand, not just feed the capitalist.

So, to live twice as well as a worker, and convert half the surplus value into capital, the capitalist would have to increase the minimum amount of capital employed 8 times. That is not just the amount required to employ 8 workers, but also to provide them with the necessary amount of constant capital. The capitalist could, and they did work themselves.

"..but he is then only a hybrid between capitalist and labourer, a "small master." A certain stage of capitalist production necessitates that the capitalist be able to devote the whole of the time during which he functions as a capitalist, i.e., as personified capital, to the appropriation and therefore control of the labour of others, and to the selling of the products of this labour. The guilds of the middle ages therefore tried to prevent by force the transformation of the master of a trade into a capitalist, by limiting the number of labourers that could be employed by one master within a very small maximum. The possessor of money or commodities actually turns into a capitalist in such cases only where the minimum sum advanced for production greatly exceeds the maximum of the middle ages. Here, as in natural science, is shown the correctness of the law discovered by Hegel (in his "Logic"), that merely quantitative differences beyond a certain point pass into qualitative changes." (p 292)

Marx elaborates a principle that applies today.

“The minimum of the sum of value that the individual possessor of money or commodities must command, in order to metamorphose himself into a capitalist, changes with the different stages of development of capitalist production, and is at given stages different in different spheres of production, according to their special and technical conditions. Certain spheres of production demand, even at the very outset of capitalist production, a minimum of capital that is not as yet found in the hands of single individuals. This gives rise partly to state subsidies to private persons, as in France in the time of Clobber, and as in many German states up to our own epoch, partly to the formation of societies with legal monopoly for the exploitation of certain branches of industry and commerce, the forerunners of our modern joint stock companies.” (p 293)

This is relevant today in a number of aspects. For example, we see in many established industries high barriers to entry due to the minimum amount of capital required. Its impossible to enter mass car production without hundreds of millions of pounds of capital for instance. On the other hand, *Microsoft* began in Bill Gates' parents garage. Similarly, many areas of production would not start without state support, or the state taking them on. For example, there would have been no space industry without the US and Soviet states engaging in that activity.

“Capital further developed into a coercive relation, which compels the working class to do more work than the narrow round of its own life-wants prescribes. As a producer of the activity of others, as a pumper-out of surplus labour and exploiter of labour-power, it surpasses

in energy, disregard of bounds, recklessness and efficiency, all earlier systems of production based on directly compulsory labour.

At first, capital subordinates labour on the basis of the technical conditions in which it historically finds it. It does not, therefore, change immediately the mode of production. The production of surplus value — in the form hitherto considered by us — by means of simple extension of the working day, proved, therefore, to be independent of any change in the mode of production itself. It was not less active in the old-fashioned bakeries than in the modern cotton factories.” (p 293)

Capitalist production and the production of surplus value changes the relation of the worker to the means of production. Outside capitalism, the worker utilises the means of production to achieve his goal, the creation of some new use value. He does not relate to them as capital, but merely as a means to an end, means of production.

But, under capitalism, the worker relates to them as capital. Now, the means of production are the means of absorbing the workers' labour, in order to create value and surplus value. Instead of the worker employing the means of production to achieve his end, of creating a new use value, the means of production (capital) employs the worker to achieve its end of creating exchange value, and surplus value.

“It is now no longer the labourer that employs the means of production, but the means of production that employ the labourer. Instead of being consumed by him as

material elements of his productive activity, they consume him as the ferment necessary to their own life-process, and the life-process of capital consists only in its movement as value constantly expanding, constantly multiplying itself. Furnaces and workshops that stand idle by night, and absorb no living labour, are “a mere loss” to the capitalist. Hence, furnaces and workshops constitute lawful claims upon the night-labour of the work-people. The simple transformation of money into the material factors of the process of production, into means of production, transforms the latter into a title and a right to the labour and surplus labour of others.” (p 293-4)

Part IV

Production Of relative Surplus Value

Chapter 12 – The Concept of Relative Surplus Value

Up to now, the analysis has assumed that the amount of necessary labour-time, required to reproduce labour-power, was constant. The analysis began with an historical analysis of the length of the working day, which showed that its length was variable. The determination ultimately turns on the relative strength of labour and capital, which in turn depends on the demand for and supply of labour-power. Surplus labour-time is then the difference between the actual working day, and the amount of necessary labour-time.

When capital has developed to the stage whereby a normal working day is established, according to the objective laws Marx described in *Chapter 10*, it appears that the only way to expand the mass of surplus value is to increase the number of workers – or to increase the proportion of complex to simple labour – employed.

However, there is another means of increasing both the mass and rate of surplus value, that, in fact, is more effective than lengthening the working day. That is by reducing the proportion of the working day required as necessary labour-time. To be clear, this is not a question of simply cutting wages. Marx continues to insist that labour-power, like every other commodity, is sold at its value. That value, as we have seen, is determined by the amount of socially necessary labour-time required for its reproduction. In the case of labour-power, that is the socially necessary labour-time required to produce all of the food, shelter, clothing, education, entertainment, and

so on, required to reproduce workers in the quantity, and to the standard that capital requires, at the particular time. So, if the cost of producing these things can be reduced – whilst maintaining their quality – the value of labour-power falls. The proportion of the working day required, as necessary labour-time falls, leaving a bigger proportion of the day as surplus labour-time.

Suppose the working day is 12 hours long. 10 hours are required as necessary labour-time, leaving 2 hours as surplus labour-time. Now, if the cost of producing the wage goods, needed by the worker, can be reduced by 10%, so that only 9 hours of the day are required, as necessary labour-time, this will leave 3 hours as surplus labour-time, an increase of 50%! The rate of exploitation has gone from $2/10 = 20\%$, to $3/9 = 33.3\%$. Yet the worker is, in absolute terms, no worse off. They continue to consume the quantity and quality of commodities, that they did before. But, these commodities are now 10% cheaper, allowing capital to reduce nominal wages by 10%, whilst real wages stay constant. Of course, the worker is relatively worse off, because they are now handing over 3 hours of their labour to the capitalist for free, whereas before they were only handing over 2.

In fact, as Marx demonstrates, on this basis, real wages can and do rise, whilst the rate and amount of profit rises simultaneously. It was on this basis that Marx opposed the idea of immiseration of workers contained in Lassalle's "*Iron Law of Wages*", and against which Marx commented, in the "*Critique Of The Gotha Programme*",

"It was made clear that the wage worker has permission to work for his own subsistence—that is, to live, only

insofar as he works for a certain time gratis for the capitalist (and hence also for the latter's co-consumers of surplus value); that the whole capitalist system of production turns on the increase of this gratis labour by extending the working day, or by developing the productivity—that is, increasing the intensity or labour power, etc.; that, consequently, the system of wage labour is a system of slavery, and indeed of a slavery which becomes more severe in proportion as the social productive forces of labour develop, whether the worker receives better or worse payment. And after this understanding has gained more and more ground in our party, some return to Lassalle's dogma although they must have known that Lassalle did not know what wages were, but, following in the wake of the bourgeois economists, took the appearance for the essence of the matter.

It is as if, among slaves who have at last got behind the secret of slavery and broken out in rebellion, a slave still in thrall to obsolete notions were to inscribe on the program of the rebellion: Slavery must be abolished because the feeding of slaves in the system of slavery cannot exceed a certain low maximum!”

Marx calls the extraction of surplus value, by lengthening the working day, *absolute surplus value*, and by reducing the value of labour power, *relative surplus value*.

As stated above, this cannot be achieved simply by cutting wages.

“This result, however, would be obtained only by lowering the wages of the labourer below the value of his labour-

power. With the four shillings and sixpence which he produces in nine hours, he commands one-tenth less of the necessaries of life than before, and consequently the proper reproduction of his labour-power is crippled. The surplus-labour would in this case be prolonged only by an overstepping of its normal limits; its domain would be extended only by a usurpation of part of the domain of necessary labour-time. Despite the important part which this method plays in actual practice, we are excluded from considering it in this place, by our assumption, that all commodities, including labour-power, are bought and sold at their full value. Granted this, it follows that the labour-time necessary for the production of labour-power, or for the reproduction of its value, cannot be lessened by a fall in the labourer's wages below the value of his labour-power, but only by a fall in this value itself.” (p 297-8)

This reduction in value requires an increase in the productivity of labour.

“For example, suppose a shoe-maker, with given tools, makes in one working day of twelve hours, one pair of boots. If he must make two pairs in the same time, the productiveness of his labour must be doubled; and this cannot be done, except by an alteration in his tools or in his mode of working, or in both. Hence, the conditions of production, i.e., his mode of production, and the labour-process itself, must be revolutionised. By increase in the productiveness of labour, we mean, generally, an alteration in the labour-process, of such a kind as to shorten the labour-time socially necessary for the production of a commodity, and to endow a given quantity of labour with the power of producing a greater

quantity of use-value. Hitherto in treating of surplus-value, arising from a simple prolongation of the working day, we have assumed the mode of production to be given and invariable. But when surplus-value has to be produced by the conversion of necessary labour into surplus-labour, it by no means suffices for capital to take over the labour-process in the form under which it has been historically handed down, and then simply to prolong the duration of that process. The technical and social conditions of the process, and consequently the very mode of production must be revolutionised, before the productiveness of labour can be increased. By that means alone can the value of labour-power be made to sink, and the portion of the working day necessary for the reproduction of that value, be shortened.” (p 298-9)

In order for this improvement in productivity to reduce the value of labour power it must reduce the value of wage goods. But, that does not mean just a rise in productivity in these industries will have this effect. For example, productivity in shoe making might remain constant, but if productivity in leather production rises, the cost of the leather in shoes will fall, bringing about a fall in the value of shoes themselves.

Marx says,

“But the value of a commodity is determined, not only by the quantity of labour which the labourer directly bestows upon that commodity, but also by the labour contained in the means of production. For instance, the value of a pair of boots depends not only on the cobbler’s labour, but also on the value of the leather, wax, thread, &c. Hence, a fall in the value of labour-power is also brought about

by an increase in the productiveness of labour, and by a corresponding cheapening of commodities in those industries which supply the instruments of labour and the raw material, that form the material elements of the constant capital required for producing the necessaries of life. But an increase in the productiveness of labour in those branches of industry which supply neither the necessaries of life, nor the means of production for such necessaries, leaves the value of labour-power undisturbed.” (p 299)

If the value of one commodity, that forms part of the workers' consumption, falls, then this can only reduce the value of labour power in proportion to the significance of that commodity in relation to the workers' total consumption. For example, suppose the necessary labour-time amounts to 10 hours. Of that 1 hour is required to cover the purchase of clothing. If productivity in clothing production doubles, so that only 1/2 hour is now required, this only reduces necessary labour-time from 10 hours to 9.5 hours, a fall of 5%. However, if 5 hours are required to cover food, and the cost of food is halved, then only 2.5 hours are required, which brings about a 25% reduction in the value of labour-power.

This reduction in the value of labour-power does not reduce the value of other commodities. The labour-time required for their production remains the same. It is only the labour-time required to reproduce labour-power – the necessary labour-time – that falls, and it is this consequence that, thereby, increases the amount and rate of surplus value.

“This general result is treated, here, as if it were the immediate result directly aimed at in each individual case. Whenever an individual capitalist cheapens shirts, for instance, by increasing the productiveness of labour he by no means necessarily aims at reducing the value of labour-power and shortening, pro tanto the necessary labour-time. But it is only in so far as he ultimately contributes to this result, that he assists in raising the general rate of surplus-value. The general and necessary tendencies of capital must be distinguished from their forms of manifestation.” (p 299-300)

Marx makes an important point in relation to where his completed work would have taken him, in analysing competition, and how this was manifest in the subjective decisions of capitalists. Of course, he did not live to complete that work. He writes,

“It is not our intention to consider, here, the way in which the laws, immanent in capitalist production, manifest themselves in the movements of individual masses of capital, where they assert themselves as coercive laws of competition, and are brought home to the mind and consciousness of the individual capitalist as the directing motives of his operations. But this much is clear; a scientific analysis of competition is not possible, before we have a conception of the inner nature of capital, just as the apparent motions of the heavenly bodies are not intelligible to any but him, who is acquainted with their real motions, motions which are not directly perceptible by the senses.” (p 300)

Marx then describes the process by which this raising of productivity occurs, and why capitalist competition drives

this process. He does so by looking at the way each capitalist has a motivation for raising their own productivity in order to make higher than average profits. This is because of the difference between value and exchange value.

Suppose 1 hour's labour = £10.

In a working day of 12 hours, £120 of new value is created. If, in this 12 hours, 120 items are produced, each will have £1 of new value added to it. Suppose the constant capital used up, in each article, is also £1. Then the price of each article is £2.

If a capitalist can raise his productivity, compared to his competitors, he can make extra profits.

Suppose a capitalist raises his productivity so that, in 12 hours, he can produce 240 rather than 120 items. The constant capital, in each, will still be £1, but the labour in each will now be only £0.50. So, the individual value of his products is just £1.50.

However, it is not the individual value of these commodities which determine their market price, but their social value, the average socially necessary labour-time required for their production. If this capitalist is only one of a large number producing these commodities, his lower cost of production will not change the average socially necessary labour time.

So, the market price will remain £2, whereas his individual value is £1.50, giving him an extra £0.50 per unit profit over his rivals. But, in practice, in order to get rid of the additional supply, he may have to cut his prices

below this, say to £1.75, making just an extra £0.25 profit, but will in the process increase his market share.

“This augmentation of surplus-value is pocketed by him, whether his commodities belong or not to the class of necessary means of subsistence that participate in determining the general value of labour-power. Hence, independently of this latter circumstance, there is a motive for each individual capitalist to cheapen his commodities, by increasing the productiveness of labour.” (p 301)

Even in the case described, however, the additional surplus value arises because the amount of necessary labour-time is reduced.

Suppose out of the 12 hour day, 10 hours were required for necessary labour. In that case, wages amount to £100, and surplus value is £20. But, now, the capitalist produces 240 items not 120. He sells each at £1.75 bringing in £420. Of this £240 represents constant capital, and £100 represents wages (variable capital) leaving a profit now of £80.

Previously, the ratio of surplus value to necessary value = surplus labour to necessary labour was 20:100 = 1:5, now it is 80:100 = 4:5.

The other way of looking at this, says Marx, is to view the labour employed in this firm as intensified labour, like complex labour, so that in every hour, it creates more value than 1 hour of simple labour. Unlike with complex labour, however, which might involve the capitalist paying for it at a higher value, this capitalist continues to pay for it at its original value. We do see this in practice in a

slightly different form. If we look at the same type of labour employed at different sizes of firms, for example, we see workers employed at very large firms, which enjoy the economies of scale, being paid higher wages, and receiving better conditions, than the same workers employed by small firms. In the same way, workers in advanced economies, where productivity is high, generally have higher wages than workers in less developed economies, where it is low.

“Hence, the capitalist who applies the improved method of production, appropriates to surplus-labour a greater portion of the working day, than the other capitalists in the same trade. He does individually, what the whole body of capitalists engaged in producing relative surplus-value, do collectively. On the other hand, however, this extra surplus-value vanishes, so soon as the new method of production has become general, and has consequently caused the difference between the individual value of the cheapened commodity and its social value to vanish. The law of the determination of value by labour-time, a law which brings under its sway the individual capitalist who applies the new method of production, by compelling him to sell his goods under their social value, this same law, acting as a coercive law of competition, forces his competitors to adopt the new method. The general rate of surplus-value is, therefore, ultimately affected by the whole process, only when the increase in the productiveness of labour, has seized upon those branches of production that are connected with, and has cheapened those commodities that form part of, the necessary means of subsistence, and are therefore elements of the value of labour-power.” (p 302-3)

“The value of commodities is in inverse ratio to the productiveness of labour. And so, too, is the value of labour-power, because it depends on the values of commodities. Relative surplus-value is, on the contrary, directly proportional to that productiveness. It rises with rising and falls with falling productiveness. The value of money being assumed to be constant, an average social working day of 12 hours always produces the same new value, six shillings, no matter how this sum may be apportioned between surplus-value and wages. But if, in consequence of increased productiveness, the value of the necessaries of life fall, and the value of a day’s labour-power be thereby reduced from five shillings to three, the surplus-value increases from one shilling to three.” (p 303)

“Hence there is immanent in capital an inclination and constant tendency, to heighten the productiveness of labour, in order to cheapen commodities, and by such cheapening to cheapen the labourer himself.” (p 303)

The capitalist is only interested in the surplus value of the commodities they produce, not their exchange value. In realising the surplus value, they also recover the value of the constant and variable capital advanced in the production. This solves the question then of why capital seeks to reduce the exchange value of commodities, because relative surplus value increases with the productivity of labour, whilst that same process reduces the exchange value of commodities.

“The shortening of the working day is, therefore, by no means what is aimed at, in capitalist production, when labour is economised by increasing its productiveness. It

is only the shortening of the labour-time, necessary for the production of a definite quantity of commodities, that is aimed at. The fact that the workman, when the productiveness of his labour has been increased, produces, say 10 times as many commodities as before, and thus spends one-tenth as much labour-time on each, by no means prevents him from continuing to work 12 hours as before, nor from producing in those 12 hours 1,200 articles instead of 120. Nay, more, his working day may be prolonged at the same time, so as to make him produce, say 1,400 articles in 14 hours. In the treatises, therefore, of economists of the stamp of MacCulloch, Ure, Senior, and tutti quanti [the like], we may read upon one page, that the labourer owes a debt of gratitude to capital for developing his productiveness, because the necessary labour-time is thereby shortened, and on the next page, that he must prove his gratitude by working in future for 15 hours instead of 10. The object of all development of the productiveness of labour, within the limits of capitalist production, is to shorten that part of the working day, during which the workman must labour for his own benefit, and by that very shortening, to lengthen the other part of the day, during which he is at liberty to work gratis for the capitalist.” (p 304)

Once again, we see the same thing today, in relation to the raising of the retirement age. It is now 170 years since the working day was reduced to 10 hours. Yet, today, many workers still work an 8 hour day, and the Tories, like the Blairites before them, object to the modest proposal of the EU to introduce a maximum 48 hour week!!! But, in that 170 years, the productivity of labour has risen by astronomical amounts. Each worker, today,

produces, in each hour, many hundreds, if not thousands, times as many use values as they did in 1850. Yet, despite that, and despite the fact, on that basis, that workers should be able to benefit by working fewer hours per day, fewer days per week, fewer weeks per year, and fewer years in their life, capital insists on making workers work both longer hours, and more years out of their life, to provide itself with more profits.

Chapter 13 - Co-operation

“A greater number of labourers working together, at the same time, in one place (or, if you will, in the same field of labour), in order to produce the same sort of commodity under the mastership of one capitalist, constitutes, both historically and logically, the starting-point of capitalist production.” (p 305)

At first, capitalist production varies only quantitatively from handicraft production. A number of workers are employed, by a single capitalist, first through the putting-out system, whereby material is provided to workers, to work up in their cottages, and then by bringing them together, in factories. The mass of surplus value increases, because it is extracted from a greater number of workers. But, the labour-power of workers is not homogeneous. Taken as a whole, an average can be calculated, but this implies that some workers will be more productive than the average, and others less.

If a group of workers is taken as the basis, these differences are averaged out, so that any one group will be much the same as another. Marx quotes Edmund Burke, on this point.

““Unquestionably, there is a good deal of difference between the value of one man’s labour and that of another from strength, dexterity, and honest application. But I am quite sure, from my best observation, that any given five men will, in their total, afford a proportion of labour equal to any other five within the periods of life I have stated; that is, that among such five men there will

be one possessing all the qualifications of a good workman, one bad, and the other three middling, and approximating to the first, and the last. So that in so small a platoon as that of even five, you will find the full complement of all that five men can earn.” (E. Burke, 1. c., pp. 15, 16.)” (Note 1, p 306)

If say 12 workers are employed by a single capitalist, then by definition, taken as a whole, they produce at the average level, because the average is their total output divided by 12. The differences between them are cancelled out. But, if the same 12 were employed by 6 capitalists, employing 2 workers each, it would be surprising were that to be the case. One capitalist might employ the 2 most productive workers, and another the 2 least productive workers.

The total product of these 12 workers would still have its value determined by the average of the socially necessary labour-time required for its production (i.e. the time taken by all 12, divided by 12), but the individual value of the production of capitalist 1, would be below this level, and that of Capitalist 2 above it.

“If one workman required considerably more time for the production of a commodity than is socially necessary, the duration of the necessary labour-time would, in his case, sensibly deviate from the labour-time socially necessary on an average; and consequently his labour would not count as average labour, nor his labour-power as average labour-power. It would either be not saleable at all, or only at something below the average value of labour-power. A fixed minimum of efficiency in all labour is therefore assumed, and we shall see, later on, that

capitalist production provides the means of fixing this minimum. Nevertheless, this minimum deviates from the average, although on the other hand the capitalist has to pay the average value of labour-power. Of the six small masters, one would therefore squeeze out more than the average rate of surplus-value, another less. The inequalities would be compensated for the society at large, but not for the individual masters. Thus the laws of the production of value are only fully realised for the individual producer, when he produces as a capitalist, and employs a number of workmen together, whose labour, by its collective nature, is at once stamped as average social labour.” (p 306-7)

Capitalist production brings other changes as a consequence of bringing larger numbers of workers together. Buildings, stores, and tools are now shared for the total production, and therefore, used more efficiently, what orthodox economics calls “Economies of Scale”.

“A room where twenty weavers work at twenty looms must be larger than the room of a single weaver with two assistants. But it costs less labour to build one workshop for twenty persons than to build ten to accommodate two weavers each; thus the value of the means of production that are concentrated for use in common on a large scale does not increase in direct proportion to the expansion and to the increased useful effect of those means. When consumed in common, they give up a smaller part of their value to each single product; partly because the total value they part with is spread over a greater quantity of products, and partly because their value, though absolutely greater, is, having regard to their sphere of

action in the process, relatively less than the value of isolated means of production.” (p 306-7)

So, the value of constant capital in the product falls, and the value of the product itself falls. This is before any further advantages, arising from large numbers of workers, assisting in each others production. It provides capitalist production with a huge advantage over handicraft production, spelling the end of the latter.

There are many tasks which can only be done if a large number of workers combine their efforts. For example, lifting some heavy or large object. Moreover, it is apparent that, in co-operating, to achieve this task, the combined power of all these workers is greater than the sum of their individual efforts. This fact has meant that co-operative labour has been a feature of human activity from the beginning of Man's history.

In orthodox economics, this feature is known as *“Increasing Returns To Scale”*.

“In such cases the effect of the combined labour could either not be produced at all by isolated individual labour, or it could only be produced by a great expenditure of time, or on a very dwarfed scale. Not only have we here an increase in the productive power of the individual, by means of co-operation, but the creation of a new power, namely, the collective power of masses.” (p 308-9)

“Hence it is that a dozen persons working together will, in their collective working-day of 144 hours, produce far more than twelve isolated men each working 12 hours, or than one man who works twelve days in succession. The

reason of this is that man is, if not as Aristotle contends, a political, at all events a social animal.” (p 309)

The natural extension of this principle of co-operative labour is the division of labour, so that one overall task is divided into a series of subordinate tasks, which different workers or groups of workers perform.

“For instance, if a dozen masons place themselves in a row, so as to pass stones from the foot of a ladder to its summit, each of them does the same thing; nevertheless, their separate acts form connected parts of one total operation; they are particular phases, which must be gone through by each stone; and the stones are thus carried up quicker by the 24 hands of the row of men than they could be if each man went separately up and down the ladder with his burden.” (p 309)

Here, each worker performs the same task in sequence, thereby reducing the time required, which means reducing the value of the end product. But, the division of the task could also mean its division into different tasks.

“It is owing to the absence of this kind of co-operation that, in the western part of the United States, quantities of corn, and in those parts of East India where English rule has destroyed the old communities, quantities of cotton, are yearly wasted.” (p 310-11)

The irony is that in the USSR, which was supposed to be a highly planned economy, where, therefore, such co-operation should have been highly developed, such wastage was massive. In agriculture, huge quantities rotted for lack of adequate storage, or transport to take it to market at the right time. In fact, the market proved far

better at organising such co-operation than did attempts at detailed planning.

“On the one hand, co-operation allows of the work being carried on over an extended space; it is consequently imperatively called for in certain undertakings, such as draining, constructing dykes, irrigation works, and the making of canals, roads and railways. On the other hand, while extending the scale of production, it renders possible a relative contraction of the arena. This contraction of arena simultaneous with, and arising from, extension of scale, whereby a number of useless expenses are cut down, is owing to the conglomeration of labourers, to the aggregation of various processes, and to the concentration of the means of production.” (p 311)

This is one reason why, early on, when small capitals are inadequate to take on the scale of such undertakings effectively, it is the state which does so. It is one reason, as Marx and Engels described, for the development of the bureaucratic-collectivist state of the *Asiatic Mode Of Production*, which arises to undertake huge hydraulic and irrigation works. Similarly, the state took responsibility at the outset of the *Industrial Revolution* for road building. It has done so for the space industry, for nuclear power etc.

“Whether the combined working-day, in a given case, acquires this increased productive power, because it heightens the mechanical force of labour, or extends its sphere of action over a greater space, or contracts the field of production relatively to the scale of production, or at the critical moment sets large masses of labour to work, or excites emulation between individuals and raises their animal spirits, or impresses on the similar

operations carried on by a number of men the stamp of continuity and many-sidedness, or performs simultaneously different operations, or economises the means of production by use in common, or lends to individual labour the character of average social labour whichever of these be the cause of the increase, the special productive power of the combined working-day is, under all circumstances, the social productive power of labour, or the productive power of social labour. This power is due to co-operation itself. When the labourer co-operates systematically with others, he strips off the fetters of his individuality, and develops the capabilities of his species.” (p 311-12)

Marx says that, in general, workers cannot co-operate unless they are brought together. On one level this is true, on another it is not. Even in Marx's day, the division of labour was creating whole new industries producing intermediate products. That is commodities whose only function was as a component in some other commodity. Today, the international division of labour means that components can be produced in many different countries and assembled in another.

But, for the production of any specific use value, Marx is correct.

“Hence wage-labourers cannot co-operate, unless they are employed simultaneously by the same capital, the same capitalist, and unless therefore their labour-powers are bought simultaneously by him. The total value of these labour-powers, or the amount of the wages of these labourers for a day, or a week, as the case may be, must be ready in the pocket of the capitalist, before the

workmen are assembled for the process of production.”
(p 312)

The capitalist must lay out a greater quantity of capital to employ a large number of workers simultaneously, than to employ the same number in smaller amounts over a longer period. This is important later for understanding Marx's analysis of *the rate of turnover of capital*.

“Hence the number of the labourers that co-operate, or the scale of co-operation, depends, in the first instance, on the amount of capital that the individual capitalist can spare for the purchase of labour-power; in other words, on the extent to which a single capitalist has command over the means of subsistence of a number of labourers.”
(p 312)

And, of course, to employ these workers, the capitalist also has to have sufficient capital to buy the constant capital needed to set these workers in motion. As described earlier, a function of economies of scale is that the amount of constant capital required does not increase, in the same proportion as the number of workers, but a large increase in the number of workers (given the same level of technology) still requires a large increase in constant capital.

A dialectical relation exists here.

“Hence, concentration of large masses of the means of production in the hands of individual capitalists, is a material condition for the co-operation of wage-labourers, and the extent of the co-operation or the scale of production, depends on the extent of this concentration.”
(p 312)

A minimum of capital was required initially for the small master to become a capitalist, living off surplus value. Now, a larger minimum of capital is required so that the capitalist can produce on a scale large enough to benefit from such a co-operative labour.

“We also saw that at first, the subjection of labour to capital was only a formal result of the fact, that the labourer, instead of working for himself, works for and consequently under the capitalist. By the co-operation of numerous wage-labourers, the sway of capital develops into a requisite for carrying on the labour-process itself, into a real requisite of production. That a capitalist should command on the field of production, is now as indispensable as that a general should command on the field of battle.” (p 313)

Where workers, even in a factory, worked as individual workers, there was no need for a separate commanding or co-ordinating function. It is precisely the fact that labour becomes co-operative that the requirement for the commanding and co-ordinating function arises, and is taken on by capital. It then acquires special characteristics.

Under capitalism, this function becomes inseparable from the other function, its driving force, the extraction of surplus value. Moreover, as an increasing number of workers are brought together, and the individual worker, selling his labour-power on the market disappears, replaced by the mass worker, so as was seen in the struggle over the working day, these workers are led to act co-operatively and collectively in other ways, i.e. to defend their collective interest as against capital.

“As the number of the co-operating labourers increases, so too does their resistance to the domination of capital, and with it, the necessity for capital to overcome this resistance by counter pressure. The control exercised by the capitalist is not only a special function, due to the nature of the social labour-process, and peculiar to that process, but it is, at the same time, a function of the exploitation of a social labour-process, and is consequently rooted in the unavoidable antagonism between the exploiter and the living and labouring raw material he exploits.” (p 313)

One function, as with the slave master, was to ensure that materials and equipment were not wasted and abused. Once again, Marx illustrates the way the workers co-operatives were superior to private capital in this regard.

“That Philistine paper, the Spectator, states that after the introduction of a sort of partnership between capitalist and workmen in the “Wirework Company of Manchester,” “the first result was a sudden decrease in waste, the men not seeing why they should waste their own property any more than any other master’s, and waste is, perhaps, next to bad debts, the greatest source of manufacturing loss.” The same paper finds that the main defect in the Rochdale co-operative experiments is this: “They showed that associations of workmen could manage shops, mills, and almost all forms of industry with success, and they immediately improved the condition of the men; but then they did not leave a clear place for masters.” Quelle horreur!” (Note 2, p 313)

The Irish Marxist James Connolly noted the same feature of the Agricultural and Manufacturing Co-operative at Ralahine. He writes,

“To those who fear that the institution of common property will be inimical to progress and invention, it must be reassuring to learn that this community of ‘ignorant’ Irish peasants introduced into Ralahine the first reaping machine used in Ireland, and hailed it as a blessing at a time when the gentleman farmers of England were still gravely debating the practicability of the invention. From an address to the agricultural labourers of the County Clare, issued by the community on the introduction of this machine, we take the following passages, illustrative of the difference of effect between invention under common ownership and capitalist ownership: –

“This machine of ours is one of the first machines ever given to the working classes to lighten their labour, and at the same time increase their comforts. It does not benefit any one person among us exclusively, nor throw any individual out of employment. Any kind of machinery used for shortening labour – except used in a co-operative society like ours – must tend to lessen wages, and to deprive working men of employment, and finally either to starve them, force them into some other employment (and then reduce wages in that also) or compel them to emigrate. Now, if the working classes would cordially and peacefully unite to adopt our system, no power or party could prevent their success.”

This was published by order of the committee, 21st August, 1833, and when we observe the date we cannot but wonder at the number of things Clare – and the rest of Ireland – has forgotten since.”

(James Connolly – Labour In Irish History)

Under capitalism, it is not the conscious will of the workers which brings them together as a single, co-operative, productive body, but only capital. The relations between each other and the means of production appear to them only as part of some plan imposed by the capitalist. And so this control, on the one hand, a co-ordinating and controlling role, whose function is the efficient production of use values, and on the other, the efficient production of surplus value, appears as despotic. This is in clear distinction to that function in the workers co-operatives, for example, where the manager fulfilling that co-ordinating role is employed by the workers themselves.

Under capitalist production, the function, when production reaches a certain dimension is also undertaken by specialist managers, a specialised form of wage labourer. Marx compares them to officers, whose function is to co-ordinate and command the other troops in the army. But, those managers are employed by capital itself.

These officers (the managers) and the sergeants (supervisors and overlookers) develop as a specific social strata, with a specific function. Despite the view developed on the basis of Marx's comments in the *Communist Manifesto*, about society dividing into two great class camps, later in *Capital*, Marx describes how

the increasing centralisation and concentration of capital, and its technological development, must lead to the increase in size of this middle class strata.

So, it becomes clear that *“It is not because he is a leader of industry that a man is a capitalist; on the contrary, he is a leader of industry because he is a capitalist. The leadership of industry is an attribute of capital, just as in feudal times the functions of general and judge, were attributes of landed property.”* (p 315)

The capitalist buys the labour-power of individual workers, but by employing a large number of them, and combining their activity, the capitalist not only enjoys the benefit of the labour of each individual worker, and the value and surplus value they create, but also benefits from their greater combined output and creation of value and surplus value.

“As co-operators, as members of a working organism, they are but special modes of existence of capital. Hence, the productive power developed by the labourer when working in co-operation, is the productive power of capital. This power is developed gratuitously, whenever the workmen are placed under given conditions, and it is capital that places them under such conditions. Because this power costs capital nothing, and because, on the other hand, the labourer himself does not develop it before his labour belongs to capital, it appears as a power with which capital is endowed by Nature a productive power that is immanent in capital.” (p 315)

Marx details a number of examples of the gigantic achievements of co-operative labour under the *Asiatic*

Mode Of Production, as referred to earlier.

“Co-operation, such as we find it at the dawn of human development, among races who live by the chase, or, say, in the agriculture of Indian communities, is based, on the one hand, on ownership in common of the means of production, and on the other hand, on the fact, that in those cases, each individual has no more torn himself off from the navel-string of his tribe or community, than each bee has freed itself from connexion with the hive. Such co-operation is distinguished from capitalistic co-operation by both of the above characteristics. The sporadic application of co-operation on a large scale in ancient times, in the middle ages, and in modern colonies, reposes on relations of dominion and servitude, principally on slavery. The capitalistic form, on the contrary, pre-supposes from first to last, the free wage-labourer, who sells his labour-power to capital. Historically, however, this form is developed in opposition to peasant agriculture and to the carrying on of independent handicrafts whether in guilds or not. From the standpoint of these, capitalistic co-operation does not manifest itself as a particular historical form of co-operation, but co-operation itself appears to be a historical form peculiar to, and specifically distinguishing, the capitalist process of production.” (p 316)

“The simultaneous employment of a large number of wage-labourers, in one and the same process, which is a necessary condition of this change, also forms the starting-point of capitalist production. This point coincides with the birth of capital itself.” (p 317)

Chapter 14 - Division Of Labour and Manufacture

1) Two Fold Origin Of Manufacture

Marx's use of the term manufacturing is not the same as that we use today. He uses the term to denote the kind of production that sits between home based handicraft production, and the kind of machine production we today associate with manufacturing. He writes,

“That co-operation which is based on division of labour, assumes its typical form in manufacture, and is the prevalent characteristic form of the capitalist process of production throughout the manufacturing period properly so called. That period, roughly speaking, extends from the middle of the 16th to the last third of the 18th century.” (p 318)

This kind of manufacturing arises in two different ways.

Firstly, a single capitalist can bring together a group of workers to carry out a particular kind of production. Marx cites carriage production, but the same thing would apply today to car production. To produce a carriage, a whole series of different skills are required. Prior to manufacture, and in fact more like today, these different types of skills would have been the preserve of specific artisans and their guilds. For example, the wheels required for the carriage would have been bought from a wheelwright, and the same would have applied for the upholstery etc.

But, the capitalist instead employs his own wheelwright, upholsterer, painter, locksmith and so on, all of whom work in the same manufactory to produce carriages. They can all be kept employed simultaneously because the capitalist produces several carriages at the same time – previously carriages would have been built to order – so that each type of worker is working at their particular part of the product, ready for it to be passed on to the next.

In the past, a wheelwright would have worked on all sorts of wheels, and the same for every other type of skill. But, now each artisan works day after day producing only the same type of product, required for carriage production. This raises the productivity and skill of the worker in producing this specific product, but, at the same time narrows the range of their skill to that particular type of production.

Secondly, manufacture arises by a capitalist employing, in a manufactory, a group of workers, all doing exactly the same thing. For example, paper production. Each worker carries out all of the processes required. They basically continue to work as they did as handicraft workers, but now in a manufactory alongside identical workers.

The capitalist assigns different stages of the production process to different workers. The workers effectively become one collective worker, each co-operating with the other. The advantages of this are easily observed – as with masons acting as a human chain to pass on stones – as each worker becomes increasingly more proficient in performing the tasks assigned to them.

“The needlemaker of the Nuremberg Guild was the cornerstone on which the English needle manufacture was raised. But while in Nuremberg that single artificer performed a series of perhaps 20 operations one after another, in England it was not long before there were 20 needlemakers side by side, each performing one alone of those 20 operations, and in consequence of further experience, each of those 20 operations was again split up, isolated, and made the exclusive function of a separate workman.” (p 319-20)

But, at this stage, the basis of this division of labour remains handicraft production. The decisive factor remains the individual skill of the workman.

2) The Detail Labourer and His Implements

The worker who specialises in some particular type of work, obviously becomes more adept and productive. In addition, the fact that several generations of such workers work alongside each other means that the tricks of the trade can be passed on one to another. The fact that all the workers perform the same task means they operate as one collective worker, so that the differentiation one to another disappears into an average, and their collective output is higher than the sum of their individual efforts.

This tendency drives greater differentiation of tasks in order to obtain these benefits of the division of labour. But, at the same time this degree of specialisation, as a lifelong occupation, also drives towards particular trades or skill becoming hereditary. That is a throw back to

previous types of society where this led to the establishment of castes and guilds.

This also encourages the development of specific skills and industries to particular geographic areas.

Having described the quality of textile production from Dakka and Coromandel, Marx writes,

“It is only the special skill accumulated from generation to generation, and transmitted from father to son, that gives to the Hindu, as it does to the spider, this proficiency. And yet the work of such a Hindu weaver is very complicated, compared with that of a manufacturing labourer.” (p 322)

Marx describes some of the ways specialisation raises productivity. For example, the worker who performs several different tasks one after another has to change tools and maybe even location. The time to do that is lost to production.

“The extra expenditure of power, demanded by every transition from rest to motion, is made up for by prolonging the duration of the normal velocity when once acquired. On the other hand, constant labour of one uniform kind disturbs the intensity and flow of a man’s animal spirits, which find recreation and delight in mere change of activity.” (p 322)

This has been recognised in some of the more modern production techniques, developed originally in Japan, and which are utilised in the development of work groups, flexible specialisation etc. which utilise modern technology, to move production to such work groups along tracks rather than traditional conveyor belts, or

assembly lines. The work groups are then given a degree of control over the work process to arrange according to how they see fit, with each worker in the group performing several tasks.

Whilst traditional Fordist mass production raised productivity spectacularly, these new neo-Fordist, or Toyotist techniques have in turn often raised productivity by more than 100% over traditional mass production.

In the same way that workers become more specialised in the functions they perform so too develops the need for more specialised tools to assist in those tasks.

“In Birmingham alone 500 varieties of hammers are produced, and not only is each adapted to one particular process, but several varieties often serve exclusively for the different operations in one and the same process. The manufacturing period simplifies, improves, and multiplies the implements of labour, by adapting them to the exclusively special functions of each detail labourer. It thus creates at the same time one of the material conditions for the existence of machinery, which consists of a combination of simple instruments.” (p 323)

However, this should not be confused with the profusion of different products arising from historical development, and which in turn stands in the way of standardisation, and rationalisation which in turn facilitates a considerable increase in productivity.

3) The Two Fundamental Forms Of Manufacture: Heterogeneous Manufacture, Serial Manufacture

Manufacture can be divided into two forms, though they are sometimes combined. Firstly, there is the kind of manufacture where a number of individual components are assembled. Marx gives the example provided by William Petty of watch making. A whole series of components are made by separate detailed workers, and then assembled by another set of specialised workers. The individual components can be produced as separate products, in separate factories or even industries, or may be produced in parallel by groups of workers all working in one factory.

The second type of manufacture is where a series of processes are undertaken to bring about a transformation that creates the final product. An example would be wire being transformed into needles, but various chemical processes, such as brewing, are of this type too. By bringing together all of the scattered trades required for such production, such manufacture shortens the time required for moving from one stage to another. On the one hand, the division of labour requires the various tasks involved in each stage to be separated, and kept independent, on the other the need to exploit the additional productivity from co-operative labour, requires that the work pass incessantly from one worker to the next in each stage of the process.

Looking at some particular raw material its progress can be viewed as occurring through a series of stages. However, standing back and looking at the production process as a whole, the situation appears differently. From this viewpoint, the same raw material is being used simultaneously at all stages of production. What is an

output of one stage of the process, appears simultaneously as an input of the next stage and so on.

“On the other hand, if we look at the workshop as a whole, we see the raw material in all the stages of its production at the same time. The collective labourer, with one set of his many hands armed with one kind of tools, draws the wire, with another set, armed with different tools, he, at the same time, straightens it, with another, he cuts it, with another, points it, and so on. The different detail processes, which were successive in time, have become simultaneous, go on side by side in space. Hence, production of a greater quantum of finished commodities in a given time. This simultaneity, it is true, is due to the general co-operative form of the process as a whole; but Manufacture not only finds the conditions for co-operation ready to hand, it also, to some extent, creates them by the sub-division of handicraft labour. On the other hand, it accomplishes this social organisation of the labour-process only by riveting each labourer to a single fractional detail.” (p 326)

Remember that for Marx, as he described in the first chapters, every individual commodity is merely a representative of its class, and so he is not bound by the fetishism of trying to identify the price or value of any particular individual commodity within the production process. Remember too that for Marx, raw material means any material that has been the subject of past human labour, so when he speaks of raw material here, he means the cloth that makes the clothes, as much as he means the cotton that makes the cloth. Moreover, as Marx does repeatedly throughout *Capital*, he provides an analysis here at the level of *“many capitals”*. In other

words, he is looking at how this process works at the level of particular firms or industries, but that can also be scaled up to the level of "*capital in general*", that is the way in which capital operates at an economy wide level. At that level, the same kinds of interaction, with one industry providing the raw material for another, and so on, the same kind of analysis, of the "*collective worker*", performing all of these functions with his/her many hands, applies equally as his description here.

The workers, in this process, are made increasingly dependent on each other.

"The result of the labour of the one is the starting-point for the labour of the other. The one workman therefore gives occupation directly to the other." (p 326)

Experience dictates how much labour-time is required for each stage, so that sufficient supply can be built up, to ensure that material is passed to the next stage, without any interruption or delay. This has been raised to new heights with today's production systems based around "*Just In Time*".

This dependence produces other results.

"It is clear that this direct dependence of the operations, and therefore of the labourers, on each other, compels each one of them to spend on his work no more than the necessary time, and thus a continuity, uniformity, regularity, order, and even intensity of labour, of quite a different kind, is begotten than is to be found in an independent handicraft or even in simple co-operation. The rule, that the labour-time expended on a commodity should not exceed that which is socially necessary for its

production, appears, in the production of commodities generally, to be established by the mere effect of competition; since, to express ourselves superficially, each single producer is obliged to sell his commodity at its market-price. In Manufacture, on the contrary, the turning out of a given quantum of product in a given time is a technical law of the process of production itself.” (p 326-7)

Because of the point made earlier that a sufficient supply of components is required to ensure a constant flow, and because each stage requires different amounts of labour-time, more workers have to be employed on certain stages of the process than others. This establishes given proportions of the numbers of workers and equipment required for the greatest efficiency. Marx quotes Charles Babbage,

““When (from the peculiar nature of the produce of each manufactory), the number of processes into which it is most advantageous to divide it is ascertained, as well as the number of individuals to be employed, then all other manufactories which do not employ a direct multiple of this number will produce the article at a greater cost.... Hence arises one of the causes of the great size of manufacturing establishments.” (C. Babbage. “On the Economy of Machinery,” 1st ed. London. 1832. Ch. xxi, pp. 172-73.)” (Note 2, p 327)

As these proportions are scaled up there are other economies of scale to be achieved. For example, in supervision or the transport of components from one stage to another. In fact, only at a certain scale of

production does it become economic to make these functions the task, in turn, of specific workers.

Some processes, for example glass making, require workers each having different functions to work, as a team, simultaneously on the same task. The driver and fireman on a steam locomotive operate in a similar manner. None can achieve the end result without the other, and so each is like a part of a single organism. But, similarly, such processes can be scaled up. The glass furnace, for example, has six openings, each having its own work group, whilst the factory itself can have several furnaces.

Different types of such manufacture can expand so that different types of manufacture are combined. For example, because glass manufacture required earthenware pots, to contain the molten glass, the manufacturers expanded into ceramics manufacture, to ensure quality. Various glass products, like mirrors, had brass fittings, so glass makers expanded into brass founding. These only develop into separate types of production with the introduction of machine industry.

The development of manufacture on an increasing scale, and the recognition, early on, of the need to economise on the labour-time required for production, leads to the sporadic introduction of machinery. Marx points out that the Roman Empire had provided the *“elementary form of all machinery in the water-wheel.”* (p 329)

In the handicraft period, prior to manufacture, it is the division of labour, rather than machinery, which plays the most significant role.

“The sporadic use of machinery in the 17th century was of the greatest importance, because it supplied the great mathematicians of that time with a practical basis and stimulant to the creation of the science of mechanics.” (p 329)

Under manufacturing, it is the collective labourer, which acts like a machine.

“The collective labourer, formed by the combination of a number of detail labourers, is the machinery specially characteristic of the manufacturing period. The various operations that are performed in turns by the producer of a commodity, and coalesce one with another during the progress of production, lay claim to him in various ways. In one operation he must exert more strength, in another more skill, in another more attention; and the same individual does not possess all these qualities in an equal degree. After Manufacture has once separated, made independent, and isolated the various operations, the labourers are divided, classified, and grouped according to their predominating qualities. If their natural endowments are, on the one hand, the foundation on which the division of labour is built up, on the other hand, Manufacture, once introduced, develops in them new powers that are by nature fitted only for limited and special functions. The collective labourer now possesses, in an equal degree of excellence, all the qualities requisite for production, and expends them in the most economical manner, by exclusively employing all his organs, consisting of particular labourers, or groups of labourers, in performing their special functions. The one-sidedness and the deficiencies of the detail labourer become perfections when he is a part of the collective

labourer. The habit of doing only one thing converts him into a never failing instrument, while his connexion with the whole mechanism compels him to work with the regularity of the parts of a machine.” (p 330)

But,

“Since the collective labourer has functions, both simple and complex, both high and low, his members, the individual labour-powers, require different degrees of training, and must therefore have different values. Manufacture, therefore, develops a hierarchy of labour-powers, to which there corresponds a scale of wages.” (p 330)

Manufacturing then creates a class of unskilled workers whose function is separated off from all those specific functions that require a degree of skill or specialisation. Such a group did not exist under handicraft production.

“If it develops a one-sided speciality into a perfection, at the expense of the whole of a man’s working capacity, it also begins to make a speciality of the absence of all development. Alongside of the hierarchic gradation there steps the simple separation of the labourers into skilled and unskilled. For the latter, the cost of apprenticeship vanishes; for the former, it diminishes, compared with that of artificers, in consequence of the functions being simplified. In both cases the value of labour-power falls. An exception to this law holds good whenever the decomposition of the labour-process begets new and comprehensive functions, that either had no place at all, or only a very modest one, in handicrafts. The fall in the value of labour-power, caused by the disappearance or

diminution of the expenses of apprenticeship, implies a direct increase of surplus-value for the benefit of capital; for everything that shortens the necessary labour-time required for the reproduction of labour-power, extends the domain of surplus-labour. “ (p 331)

4) Division of Labour in Manufacture and Division of Labour in Society

The social division of labour is the foundation of all commodity production.

“If we keep labour alone in view, we may designate the separation of social production into its main divisions or genera — viz., agriculture, industries, &c., as division of labour in general, and the splitting up of these families into species and sub-species, as division of labour in particular, and the division of labour within the workshop as division of labour in singular or in detail.” (p 331-2)

The division of labour arises in primitive societies because within the tribe or clan, and later within the family, different individuals have different abilities, based on physiological differences. But, similarly, different commodities, in different environments, develop different means of production and subsistence so that when these tribes and clans meet, they have different products, which they can exchange.

“Exchange does not create the differences between the spheres of production, but brings what are already different into relation, and thus converts them into more or less inter-dependent branches of the collective production of an enlarged society. In the latter case, the social division of labour arises from the exchange

between spheres of production, that are originally distinct and independent of one another. In the former, where the physiological division of labour is the starting-point, the particular organs of a compact whole grow loose, and break off, principally owing to the exchange of commodities with foreign communities, and then isolate themselves so far, that the sole bond, still connecting the various kinds of work, is the exchange of the products as commodities. In the one case, it is the making dependent what was before independent; in the other case, the making independent what was before dependent.” (p 332-3)

The basis of a developed social division of labour is the separation of town and country. The social division of labour can only proceed on the basis of a certain minimum level and density of population. There must be enough people to provide a market for specific goods that makes it worthwhile developing production of them as a separate activity.

“Just as a certain number of simultaneously employed labourers are the material pre-requisites for division of labour in manufacture, so are the number and density of the population, which here correspond to the agglomeration in one workshop, a necessary condition for the division of labour in society. Nevertheless, this density is more or less relative. A relatively thinly populated country, with well-developed means of communication, has a denser population than a more numerous populated country, with badly-developed means of communication; and in this sense the Northern States of the American Union, for instance, are more thickly populated than India.” (p 333)

A dialectical interaction exists between the division of labour in manufacture and in society.

*“Since the production and the circulation of commodities are the general pre-requisites of the capitalist mode of production, division of labour in manufacture demands, that division of labour in society at large should previously have attained a certain degree of development. Inversely, the former division reacts upon and develops and multiplies the latter. Simultaneously, with the differentiation of the instruments of labour, the industries that produce these instruments, become more and more differentiated. If the manufacturing system seize upon an industry, which, previously, was carried on in connexion with others, either as a chief or as a subordinate industry, and by one producer, these industries immediately separate their connexion, and become independent. If it seize upon a particular stage in the production of a commodity, the other stages of its production become converted into so many independent industries.”*² (p 333-4)

Where manufacture consists of a number of separate parts that are assembled, this can lead to the production of the parts themselves by other outside producers, including handicraft producers. Something similar to this was identified in the 1980's and 90's by theorists of flexible specialisation, in regard to *“The Third Italy”*. But, from the 1980's onwards, there was a move by many large companies to focus on their core activity, and to delegate production, and provision of services, for non-core activities to external suppliers.

The social division of labour and the division of labour in manufacturing appear to be the same, but they are not. Under the former, a cattle breeder might provide hides, that the tanner turns into leather, that the cobbler turns into shoes. Each provides the next with the material required for their own production. But, each is produced and sold as a commodity. Within manufacture, the output of each worker is not immediately a commodity. It is merely a component, or the completion of a stage in a process in the production of a commodity.

“The division of labour in the workshop implies concentration of the means of production in the hands of one capitalist; the division of labour in society implies their dispersion among many independent producers of commodities. While within the workshop, the iron law of proportionality subjects definite numbers of workmen to definite functions, in the society outside the workshop, chance and caprice have full play in distributing the producers and their means of production among the various branches of industry. The different spheres of production, it is true, constantly tend to an equilibrium: for, on the one hand, while each producer of a commodity is bound to produce a use-value, to satisfy a particular social want, and while the extent of these wants differs quantitatively, still there exists an inner relation which settles their proportions into a regular system, and that system one of spontaneous growth; and, on the other hand, the law of the value of commodities ultimately determines how much of its disposable working-time society can expend on each particular class of commodities.” (p 336)

But, it is precisely within this difference that the real nature and contradictions of capitalism as a system are exposed. Within the factory, within the process of manufacture, everything proceeds in an orderly fashion, based on a preconceived plan, which is itself based on a scientific understanding of the necessary proportions in which each component is to be produced and so on. Within capitalism as a whole, no such rationality exists.

“But this constant tendency to equilibrium, of the various spheres of production, is exercised, only in the shape of a reaction against the constant upsetting of this equilibrium. The a priori system on which the division of labour, within the workshop, is regularly carried out, becomes in the division of labour within the society, an a posteriori, nature-imposed necessity, controlling the lawless caprice of the producers, and perceptible in the barometrical fluctuations of the market-prices. Division of labour within the workshop implies the undisputed authority of the capitalist over men, that are but parts of a mechanism that belongs to him. The division of labour within the society brings into contact independent commodity-producers, who acknowledge no other authority but that of competition, of the coercion exerted by the pressure of their mutual interests; just as in the animal kingdom, the bellum omnium contra omnes [war of all against all – Hobbes] more or less preserves the conditions of existence of every species. The same bourgeois mind which praises division of labour in the workshop, life-long annexation of the labourer to a partial operation, and his complete subjection to capital, as being an organisation of labour that increases its productiveness that same bourgeois mind denounces

with equal vigour every conscious attempt to socially control and regulate the process of production, as an inroad upon such sacred things as the rights of property, freedom and unrestricted play for the bent of the individual capitalist. It is very characteristic that the enthusiastic apologists of the factory system have nothing more damning to urge against a general organisation of the labour of society, than that it would turn all society into one immense factory.” (p 336-7)

The social division of labour can be witnessed in all kinds of society. Under the *Asiatic Mode of Production*, it assumes fixed legal forms. The guilds too ensured their own monopolies by preventing capital from employing labour and was consistent with handicraft production.

“While division of labour in society at large, whether such division be brought about or not by exchange of commodities, is common to economic formations of society the most diverse, division of labour in the workshop, as practised by manufacture, is a special creation of the capitalist mode of production alone.” (p 339)

5) The Capitalistic Nature of Manufacture

Manufacture is premised on the bringing together of a large number of workers under the control of one capitalist. Its only on this basis that the additional productive power of co-operative labour, via the division of labour, can be harnessed. But, having done so, the division of labour then forces each capital to continue to expand.

As Marx described previously, this division of labour establishes fixed proportions in which different groups of workers in the factory must stand in relation to each other in order that production can continue to flow smoothly from one group to another. This means that output can only be expanded by increasing the number of workers in these proportions. But, an increased number of workers also requires an increased amount of tools and equipment for these workers to work with an increased quantity of material to process and so on. As with the glass factory, efficient use of a furnace implies each of its openings is used by a work group, but when this is done then the output and increase in workers can only be achieved by introducing an additional furnace whose efficient use dictates that sufficient workers are employed to utilise all of its openings.

So, a minimum efficient level of capital is established. But, the additional productivity created by the division of labour, and from economies of scale mean that, in fact, the quantity of material processed increases in a greater proportion than the increase in the number of workers, so there is an in built necessity within capitalist production for the element of constant capital to grow compared to the number of workers. This aspect of what Marx means by the expansion of capital is important for more recent debates in this regard. In fact, because capital is a social relation between capital and wage labour, the real expansion of capital can only be viewed in terms of an expansion of this relation, i.e. an expansion of the quantity of abstract labour time employed, because it is only this expansion which is capable of achieving the real

aim of capitalist production – the creation of surplus value.

Marx writes,

“The quantity of it consumed in a given time, by a given amount of labour, increases in the same ratio as does the productive power of that labour in consequence of its division. Hence, it is a law, based on the very nature of manufacture, that the minimum amount of capital, which is bound to be in the hands of each capitalist, must keep increasing; in other words, that the transformation into capital of the social means of production and subsistence must keep extending.” (p 340)

In other words, what Marx means by the extension, expansion or accumulation of capital is not in relation to its price or value, but in relation to its physical amount. In fact, given what Marx has already said in relation to the production of surplus value, it could be no other. As he pointed out earlier, whether a capitalist works with a constant capital of £1 million or £10 is irrelevant, because it can only ever, at most, pass on this value to the end product. In either case, it is the size of the variable capital which works with either the £1 million or £10, which creates the surplus value, and the amount of that surplus value is the same in either case, if the variable capital remains constant in size.

Comparing the constant capital to the test tubes and containers used in science experiments, with labour being the equivalent of the actual chemicals being experimented on, Marx wrote in *Chapter 9*,

“The circumstance, however, that retorts and other vessels, are necessary to a chemical process, does not compel the chemist to notice them in the result of his analysis. If we look at the means of production, in their relation to the creation of value, and to the variation in the quantity of value, apart from anything else, they appear simply as the material in which labour-power, the value-creator, incorporates itself.” (p 207)

If a capitalist produces yarn, for instance, and comes to start production, requiring to lay out £1,000 for cotton and £1,000 for labour-power = £2,000, but then, before they have done so, finds that the price of cotton has risen to £2,000, this does not mean that this capital has expanded! It only means that the capitalist has to provide an additional £1,000 of capital, in order that production can proceed. It means diverting capital from elsewhere, or else mobilising potential capital, currently in the form of money hoards etc.

The same is true had they bought the cotton at £1,000 and its value then risen to £2,000. An expansion of capital as Marx defines it, in this regard, can only arise on the basis of the production of surplus value.

Because the workers are employed by, and are a part of capital, the additional creative force of their co-operative labour appears to be a product of capital itself. Capital subordinates labour to it, and within the ranks of labour, creates a hierarchy and gradation of workers that previously did not exist. Not only are workers divided into managers, supervisors, foremen, overlookers and so on, but they are divided into skilled and unskilled and so on, each having a different value of labour-power.

Manufacture revolutionises production relations, by forcing the workers to increasingly specialise in one specific function. This in itself acts to subordinate workers. In the past, the worker, say a carpenter, sold his labour-power to a capitalist, because he lacked the means of production to be able to produce and sell commodities himself. Now the carpenter was reduced instead to a worker whose skill was restricted to one particular task, which only had meaning as part of a process within the factory, and so he could then only sell his labour-power to fulfil this function to a capitalist who owns such a factory.

“By nature unfitted to make anything independently, the manufacturing labourer develops productive activity as a mere appendage of the capitalist’s workshop. As the chosen people bore in their features the sign manual of Jehovah, so division of labour brands the manufacturing workman as the property of capital.” (p 340-1)

This also brings about a division of labour between mental and manual labour. The handicraft worker brought together their mental faculties along with their manual skill in production. But, the factory worker reduced to one specific, manual function is reduced to an automaton themselves, simply a programmed organic cog in a larger machine, made up of similar cogs. Their subordination and control, in fact, requires that they abandon all individual mental contribution in the form of initiative, or will, or control, because that has become the prerogative and the function of other specialist workers – the supervisors and managers – who plan and control the production process as a whole.

“This separation begins in simple co-operation, where the capitalist represents to the single workman, the oneness and the will of the associated labour. It is developed in manufacture which cuts down the labourer into a detail labourer. It is completed in modern industry, which makes science a productive force distinct from labour and presses it into the service of capital.” (p 341)

This became even more the case with machine industry, where the worker was reduced to becoming merely an adjunct of the machine. Its most recent variant is the development of the cybernetic arm, which the worker attaches to their own arm, and which speeds up the process of picking and selecting from the conveyor.

Marx quotes Adam Ferguson,

“Ignorance is the mother of industry as well as of superstition. Reflection and fancy are subject to err; but a habit of moving the hand or the foot is independent of either. Manufactures, accordingly, prosper most where the mind is least consulted, and where the workshop may ... be considered as an engine, the parts of which are men.” (p 341)

And Adam Smith,

“The understandings of the greater part of men,” says Adam Smith, “are necessarily formed by their ordinary employments. The man whose whole life is spent in performing a few simple operations ... has no occasion to exert his understanding... He generally becomes as stupid and ignorant as it is possible for a human creature to become.” (p 342)

As an antidote, Smith proposed, *“education of the people by the State, but prudently, and in homeopathic doses”*. (p 342)

Marx is also right to point to the role that this plays in the development of industrial diseases, as well as the crippling of the worker as a human being. We see it readily today in the form of *Repetitive Strain Injuries*, but also as mental labour has replaced manual labour in the increase of various mental illnesses, related to workplace stress etc.

“Co-operation based on division of labour, in other words, manufacture, commences as a spontaneous formation. So soon as it attains some consistence and extension, it becomes the recognised methodical and systematic form of capitalist production.” (p 343)

The division of labour creates a necessary gradation within the factory and within society. In so doing it creates its own specific organisation of labour in society. It not only raises productive potential via this organisation and the co-operative labour it engenders, but by creating the need for specialised tools, for specialised workers, in turn revolutionises the means of production themselves.

“In its specific capitalist form and under the given conditions, it could take no other form than a capitalistic one manufacture is but a particular method of begetting relative surplus-value, or of augmenting at the expense of the labourer the self-expansion of capital usually called social wealth, “Wealth of Nations,” &c. It increases the social productive power of labour, not only for the benefit of the capitalist instead of for that of the labourer, but it

does this by crippling the individual labourers. It creates new conditions for the lordship of capital over labour. If, therefore, on the one hand, it presents itself historically as a progress and as a necessary phase in the economic development of society, on the other hand, it is a refined and civilised method of exploitation.” (p 344)

Within manufacture, as opposed to modern machine industry, although the division of labour creates the gradation of workers, because it continues to be based upon handicraft skills, the majority of workers continue to be skilled rather than unskilled. This is particularly the case in respect of male workers, which, in turn, leads to women and children brought in to undertake unskilled work, creating yet another gradation.

The continuance of the importance of skilled labour under manufacture bestows some power on the male workers to resist the encroachment of capital, and so skilled male workers attempt to defend these positions by demands for the continuation of the 7 year apprenticeship periods and so on. This raises the value of labour power at the same time as more efficient production of commodities reduces it.

“Hence throughout the whole manufacturing period there runs the complaint of want of discipline among the workmen. And had we not the testimony of contemporary writers, the simple facts, that during the period between the 16th century and the epoch of Modern Industry, capital failed to become the master of the whole disposable working-time of the manufacturing labourers, that manufactures are short-lived, and change their locality from one country to another with the emigrating or

immigrating workmen, these facts would speak volumes. "Order must in one way or another be established," exclaims in 1770 the oft-cited author of the "Essay on Trade and Commerce." "Order," re-echoes Dr. Andrew Ure 66 years later, "Order" was wanting in manufacture based on "the scholastic dogma of division of labour," and "Arkwright created order."" (p 347)

Manufacture, as a productive system came up against its own limits, which caused its demise. But, in the process, it created specialised factories, creating specialised tools for specialised workers.

"One of its most finished creations was the workshop for the production of the instruments of labour themselves, including especially the complicated mechanical apparatus then already employed.

A machine-factory, says Ure, "displayed the division of labour in manifold gradations the file, the drill, the lathe, having each its different workman in the order of skill." (P. 21.)

This workshop, the product of the division of labour in manufacture, produced in its turn machines. It is they that sweep away the handicraftsman's work as the regulating principle of social production. Thus, on the one hand, the technical reason for the life-long annexation of the workman to a detail function is removed. On the other hand, the fetters that this same principle laid on the dominion of capital, fall away." (p 347)

Chapter 15 - Machinery and Modern Industry

1) The Development of Machinery

The aim of capital, in introducing machinery, is to reduce the value of commodities, to reduce the portion of the day devoted to reproducing labour-power, and thereby increase surplus value.

Under manufacture, the revolution in the mode of production starts with labour-power, via co-operative labour and the division of labour. In modern industry, it starts with the changes wrought in the means of production.

In what way do machines differ from tools such as those used by the handicraft worker? At what point does a tool become a machine?

“We are only concerned here with striking and general characteristics; for epochs in the history of society are no more separated from each other by hard and fast lines of demarcation, than are geological epochs.” (p 351)

According to Marx,

“All fully developed machinery consists of three essentially different parts, the motor mechanism, the transmitting mechanism, and finally the tool or working machine. The motor mechanism is that which puts the whole in motion. It either generates its own motive power, like the steam-engine, the caloric engine, the electromagnetic machine, &c., or it receives its impulse

from some already existing natural force, like the water-wheel from a head of water, the wind-mill from wind, &c. The transmitting mechanism, composed of fly-wheels, shafting, toothed wheels, pullies, straps, ropes, bands, pinions, and gearing of the most varied kinds, regulates the motion, changes its form. where necessary, as for instance, from linear to circular, and divides and distributes it among the working machines. These two first parts of the whole mechanism are there, solely for putting the working machines in motion, by means of which motion the subject of labour is seized upon and modified as desired. The tool or working machine is that part of the machinery with which the industrial revolution of the 18th century started. And to this day it constantly serves as such a starting-point, whenever a handicraft, or a manufacture, is turned into an industry carried on by machinery.” (p 352-3)

In essence, the tools used in handicraft become part of the machine, even if in changed form. For example, a lathe or milling machine contains a cutting or shaving tool similar to that of a chisel, or plane, but it is adapted to the particular motion and operation of the machine. A drilling machine continues to use a drill-bit, a mechanical saw a saw blade and so on.

Originally, these tools continued to be made by handicraft or manufacture, and were then fitted to the machine, which was itself machine made. From around 1850, the making of the tools themselves transferred to machine production, tool-making becoming an industry itself. Even in modern times, the job of toolmaker has been a specific skill within engineering.

“The machine proper is therefore a mechanism that, after being set in motion, performs with its tools the same operations that were formerly done by the workman with similar tools. Whether the motive power is derived from man, or from some other machine, makes no difference in this respect. From the moment that the tool proper is taken from man, and fitted into a mechanism, a machine takes the place of a mere implement. The difference strikes one at once, even in those cases where man himself continues to be the prime mover. The number of implements that he himself can use simultaneously, is limited by the number of his own natural instruments of production, by the number of his bodily organs. In Germany, they tried at first to make one spinner work two spinning-wheels, that is, to work simultaneously with both hands and both feet. This was too difficult. Later, a treddle spinning-wheel with two spindles was invented, but adepts in spinning, who could spin two threads at once, were almost as scarce as two-headed men. The Jenny, on the other hand, even at its very birth, spun with 12-18 spindles, and the stocking-loom knits with many thousand needles at once. The number of tools that a machine can bring into play simultaneously, is from the very first emancipated from the organic limits that hedge in the tools of a handicraftsman.” (p 353-4)

It is generally those tasks that required manual dexterity that continued to be undertaken by workers and their tools, whereas those things which required humans merely to provide motive power were transferred to other sources.

For example, a potter uses his hands to create and shape the ware, but his feet to power the wheel.

Similarly, for the spinner and weaver. What first provides the alternative motive power depends on conditions. In England, water wheels are employed to power mills, because of ample sources of rapidly flowing water. In the Netherlands, the lack of such leads to the employment of windmills.

The introduction of steam, hydraulic, internal combustion or electric forms of power merely enable capital to operate free of the restrictions that natural sources of power impose. However, the introduction of these other forms of motive power does have another consequence. That is that production must proceed on the basis of a much greater scale than where purely human motive power is provided. Without that, machine production is not rational.

“Increase in the size of the machine, and in the number of its working tools, calls for a more massive mechanism to drive it; and this mechanism requires, in order to overcome its resistance, a mightier moving power than that of man, apart from the fact that man is a very imperfect instrument for producing uniform continued motion. But assuming that he is acting simply as a motor, that a machine has taken the place of his tool, it is evident that he can be replaced by natural forces. Of all the great motors handed down from the manufacturing period, horse-power is the worst, partly because a horse has a head of his own, partly because he is costly, and the extent to which he is applicable in factories is very restricted. Nevertheless the horse was extensively used during the infancy of modern industry. This is proved, as well by the complaints of contemporary agriculturists, as

by the term “horse-power,” which has survived to this day as an expression for mechanical force.” (p 355-6)

And, to this day, motive power is still measured in horse power, though it is far removed from the actual power provided by horses.

Marx refers to the way this process has a dialectical interaction with scientific discovery. For example, attempts to power additional millstones, using water power, foundered, leading to further scientific analysis into the laws of friction. Similar investigation led to the discovery of the fly-wheel.

The development of the steam engine also meant that the motive power and, therefore, location of industry was urban rather than rural.

“As soon as tools had been converted from being manual implements of man into implements of a mechanical apparatus, of a machine, the motive mechanism also acquired an independent form, entirely emancipated from the restraints of human strength. Thereupon the individual machine, that we have hitherto been considering, sinks into a mere factor in production by machinery. One motive mechanism was now able to drive many machines at once. The motive mechanism grows with the number of the machines that are turned simultaneously, and the transmitting mechanism becomes a wide-spreading apparatus.” (p 357)

Marx notes that machines do not proceed on the same basis as division of labour. The latter divided a process into a series of functions to be undertaken by different workers serially. However, machines tend to incorporate

this series of processes into a single operation. For example, Marx quotes the production of envelopes that had been undertaken by four different workers, but for which, *“one single envelope machine now performs all these operations at once, and makes more than 3,000 envelopes in an hour.”* (p 358)

What we meet again here then is factories in which a large number of the same kind of machines churn away, day after day, in the same production. The rhythm of these machines, throughout the factory, is now determined by the simple motive power.

“Just as a number of tools, then, form the organs of a machine, so a number of machines of one kind constitute the organs of the motive mechanism.” (p 359)

“A real machinery system, however, does not take the place of these independent machines, until the subject of labour goes through a connected series of detail processes, that are carried out by a chain of machines of various kinds, the one supplementing the other. Here we have again the co-operation by division of labour that characterises Manufacture; only now, it is a combination of detail machines. The special tools of the various detail workmen, such as those of the beaters, combers, spinners, &c., in the woollen manufacture, are now transformed into the tools of specialised machines, each machine constituting a special organ, with a special function, in the system. In those branches of industry in which the machinery system is first introduced, Manufacture itself furnishes, in a general way, the natural basis for the division, and consequent organisation, of the process of production.” (p 358-9)

Under manufacture, the process of production is geared to conform with what is possible for the artisans. With machine production, the machine is designed on the basis of resolving how to most efficiently perform each detail of the production process. This also requires the rise of science and experimentation, as well as the application of accumulated knowledge, on a large scale.

In manufacture, the co-operation of the detail workers establishes the proportion of each to be employed, to ensure material flows from one process to another. The same applies with machine production, as each set of machines acts to supply the next, in the process, so that the outputs of the process are continuously and simultaneously the inputs of the next.

In the same way that the co-operative labour turned the workers into a single collective worker, so the detail machines operate as part of one single, collective machine.

“The collective machine, now an organised system of various kinds of single machines, and of groups of single machines, becomes more and more perfect, the more the process as a whole becomes a continuous one, i.e., the less the raw material is interrupted in its passage from its first phase to its last; in other words, the more its passage from one phase to another is effected, not by the hand of man, but by the machinery itself. In Manufacture the isolation of each detail process is a condition imposed by the nature of division of labour, but in the fully developed factory the continuity of those processes is, on the contrary, imperative.” (p 359-60)

Machines frequently required human involvement, but increasingly, that too was removed as new inventions fully automated the machines, and thereby opened the potential for their continual improvement. This reduced the worker to the function of mere machine minder for when it broke.

The increasing number of inventions could only take off because there existed skilled workers, from the manufacturing period, to bring these inventions to practical reality. This leads to the development of machine making as a separate industry in its own right.

“Here, then, we see in Manufacture the immediate technical foundation of modern industry. Manufacture produced the machinery, by means of which modern industry abolished the handicraft and manufacturing systems in those spheres of production that it first seized upon. The factory system was therefore raised, in the natural course of things, on an inadequate foundation. When the system attained to a certain degree of development, it had to root up this ready-made foundation, which in the meantime had been elaborated on the old lines, and to build up for itself a basis that should correspond to its methods of production. Just as the individual machine retains a dwarfish character, so long as it is worked by the power of man alone, and just as no system of machinery could be properly developed before the steam-engine took the place of the earlier motive powers, animals, wind, and even water; so, too, modern industry was crippled in its complete development, so long as its characteristic instrument of production, the machine, owed its existence to personal strength and personal skill, and depended on the

muscular development, the keenness of sight, and the cunning of hand, with which the detail workmen in manufactures, and the manual labourers in handicrafts, wielded their dwarfish implements.” (p 361)

The growth of machine industry, especially into new areas, was limited both by the constraints of expanding the number of skilled workers, capable of building machines, and by the limited nature of manufacture as a mode of production.

“The increasing size of the prime movers, of the transmitting mechanism, and of the machines proper, the greater complication, multiformity and regularity of the details of these machines, as they more and more departed from the model of those originally made by manual labour, and acquired a form, untrammelled except by the conditions under which they worked, the perfecting of the automatic system, and the use, every day more unavoidable, of a more refractory material, such as iron instead of wood-the solution of all these problems, which sprang up by the force of circumstances, everywhere met with a stumbling-block in the personal restrictions, which even the collective labourer of Manufacture could not break through, except to a limited extent. Such machines as the modern hydraulic press, the modern power-loom, and the modern carding engine, could never have been furnished by Manufacture.” (p 362)

Necessarily, the introduction of machines, in one sphere, brings their introduction elsewhere. A huge increase in demand from weaving raises prices for spun cotton and wool, promoting the need for more mechanised spinning.

Similarly, the revolution of dyeing and bleaching, combing etc. promotes mechanisation. But, similarly, when spinning machines were introduced, this brought about a huge rise in the quantity of yarn thrown on to the market, which as Marx described in *Theories of Surplus Value*, caused a crisis of overproduction. But, the low prices for yarn, encouraged further innovation, and the development of power-looms, which soaked up the excess yarn.

In like manner, these developments made necessary a revolution in communication and transport.

“Hence, apart from the radical changes introduced in the construction of sailing vessels, the means of communication and transport became gradually adapted to the modes of production of mechanical industry, by the creation of a system of river steamers, railways, ocean steamers, and telegraphs. But the huge masses of iron that had now to be forged, to be welded, to be cut, to be bored, and to be shaped, demanded, on their part, cyclopean machines, for the construction of which the methods of the manufacturing period were utterly inadequate.

Modern industry had therefore itself to take in hand the machine, its characteristic instrument of production, and to construct machines by machines. It was not till it did this, that it built up for itself a fitting technical foundation, and stood on its own feet. Machinery, simultaneously with the increasing use of it, in the first decades of this century, appropriated, by degrees, the fabrication of machines proper. But it was only during the decade preceding 1866, that the construction of railways and

ocean steamers on a stupendous scale called into existence the cyclopean machines now employed in the construction of prime movers.” (p 363)

Having solved the problem of controllable power, via the steam engine, this still required the need to replace the skill of the artisan, in order to produce accuracy and precision, for straight lines and angles. That was first resolved by Henry Maudsley with the slide rest, originally designed for the lathe.

“This mechanical appliance replaces, not some particular tool, but the hand itself, which produces a given form by holding and guiding the cutting tool along the iron or other material operated upon. Thus it became possible to produce the forms of the individual parts of machinery

'with a degree of ease, accuracy, and speed, that no accumulated experience of the hand of the most skilled workman could give.’” (p 364)

“In simple co-operation, and even in that founded on division of labour, the suppression of the isolated, by the collective, workman still appears to be more or less accidental. Machinery, with a few exceptions to be mentioned later, operates only by means of associated labour, or labour in common. Hence the co-operative character of the labour-process is, in the latter case, a technical necessity dictated by the instrument of labour itself.” (p 364-5)

2) The Value Transferred By Machinery To The Product

In the same way that capital can, without cost, appropriate the additional power of labour that arises from co-operation and division of labour, so capital appropriates natural forces. However, these natural forces still require the expenditure of human labour before they can be harnessed. The power of flowing water requires a water wheel, before it can be harnessed; steam a steam-engine; petrol an internal combustion engine and so on.

By harnessing all of these productive forces, the productive potential of labour is raised massively, but it requires an increased expenditure of labour to bring it about.

The machine creates no new value, but, like all constant capital, transfers a portion of its own value to the product. Machines clearly have much more value than the tools which were used under manufacture. The machine, like a tool, has to be present in its complete form in the production process, but, like the tool, only gives up a portion of its value in wear and tear to the product. The difference between the portion given up, and the total value is much greater for the machine than the tool, because machines are made more durable and so have longer lives. In addition, the machine is constructed so that its use is regulated according to scientific principles, so the wear and tear is more even and regulated. Finally, the amount of production, undertaken by a machine is vastly greater than that of a tool.

But, having allowed for the value of the machine, transferred to the product, by wear and tear, and the value of ancillary materials required for it to run, capital

acquires all of the productive power of the machine derived from its harnessing of science and natural forces for free, just as it does the power of co-operative labour.

“The greater the productive power of the machinery compared with that of the tool, the greater is the extent of its gratuitous service compared with that of the tool. In modern industry man succeeded for the first time in making the product of his past labour work on a large scale gratuitously, like the forces of Nature.” (p 366)

The amount of value added to the individual product depends upon the quantity of that product.

“Mr. Baynes, of Blackburn, in a lecture published in 1858, estimates that

“each real mechanical horse-power will drive 450 self-acting mule spindles, with preparation, or 200 throstle spindles, or 15 looms for 40 inch cloth with the appliances for warping, sizing, &c.”

In the first case, it is the day’s produce of 450 mule spindles, in the second, of 200 throstle spindles, in the third, of 15 power-looms, over which the daily cost of one horse-power, and the wear and tear of the machinery set in motion by that power, are spread; so that only a very minute value is transferred by such wear and tear to a pound of yarn or a yard of cloth. The same is the case with the steam-hammer mentioned above. Since its daily wear and tear, its coal-consumption, &c., are spread over the stupendous masses of iron hammered by it in a day, only a small value is added to a hundred weight of iron; but that value would be very great, if the cyclopean instrument were employed in driving in nails. (p 367)

The amount of product depends on the speed of the machines. Finally,

“Given the rate at which machinery transfers its value to the product, the amount of value so transferred depends on the total value of the machinery. The less labour it contains, the less value it imparts to the product. The less value it gives up, so much the more productive it is, and so much the more its services approximate to those of natural forces. But the production of machinery by machinery lessens its value relatively to its extension and efficacy. (p 368)

Marx continues,

“An analysis and comparison of the prices of commodities produced by handicrafts or manufactures, and of the prices of the same commodities produced by machinery, shows generally, that, in the product of machinery, the value due to the instruments of labour increases relatively, but decreases absolutely. In other words, its absolute amount decreases, but its amount, relatively to the total value of the product, of a pound of yarn, for instance, increases. (p 368)

I might misunderstand him here, but this seems to me the wrong way around. Because machinery is much more expensive, the amount spent on instruments of labour will rise absolutely, but precisely because the machinery increases output so greatly, the relative cost of those instruments must surely fall as a proportion of the value of each commodity, because that higher cost is spread across a much larger number of items, and in *Volume III*, Marx makes precisely that point.

He also notes,

“This portion of value which is added by the machinery, decreases both absolutely and relatively, when the machinery does away with horses and other animals that are employed as mere moving forces, and not as machines for changing the form of matter.” (Note 2, p 368)

The efficiency of a machine is measured by the human labour-power it replaces.

“Before Eli Whitney invented the cotton gin in 1793, the separation of the seed from a pound of cotton cost an average day’s labour. By means of his invention one negress was enabled to clean 100 lbs. daily; and since then, the efficacy of the gin has been considerably increased. A pound of cotton wool, previously costing 50 cents to produce, included after that invention more unpaid labour, and was consequently sold with greater profit, at 10 cents.” (p 369)

Marx emphasises that this saving of labour-power is not the same as the saving in wages. That is because wages only represent that part of the day for which capital pays. Suppose 1 hour of labour-time = £1. A machine costing £3,000, therefore, costs 3000 hours of labour-time. Suppose the machine does the same work as 150 workers, paid £20 each = £3000. However, if these 150 workers produce surplus value at a rate of 100%, then the total value they create is £6000 = 6000 hours. So, the machine, which costs 3000 hours to produce, does the work of 6000 hours of human labour-time.

But,

“The use of machinery for the exclusive purpose of cheapening the product, is limited in this way, that less labour must be expended in producing the machinery than is displaced by the employment of that machinery, For the capitalist, however, this use is still more limited. Instead of paying for the labour, he only pays the value of the labour-power employed; therefore, the limit to his using a machine is fixed by the difference between the value of the machine and the value of the labour-power replaced by it.” (p 370)

This demonstrates why, for example, the workers, at the Ralahine co-operative, had an incentive to introduce a reaping machine, whilst capitalists were still thinking about it. When workers themselves own the means of production, all labour-time expended in production is their own. Any saving in that time is an immediate gain for them. For the capitalist, however, it is only a saving in the paid for labour-time that counts. That is why worker co-ops always have an incentive to introduce machinery ahead of capitalist enterprises. The more labour is exploited by capital, i.e. the higher the rate of surplus value, the more that is the case.

“Since the division of the day’s work into necessary and surplus-labour differs in different countries, and even in the same country at different periods, or in different branches of industry; and further, since the actual wage of the labourer at one time sinks below the value of his labour-power, at another rises above it, it is possible for the difference between the price of the machinery and the price of the labour-power replaced by that machinery to vary very much, although the difference between the quantity of labour requisite to produce the machine and

the total quantity replaced by it, remain constant.” (pp 370-1)

Ironically, the introduction of machinery in some branches of industry can create such a level of unemployment in others that wages are forced so low, beneath the value of labour-power, that it makes it uneconomic to introduce machinery into them.

Generally, capital introduces machines to replace labour where wages have risen. An example would be the introduction of new technology in the print industry in the 1980's, or today the introduction of driverless trains on the London Underground.

Marx writes,

“Hence in a communistic society there would be a very different scope for the employment of machinery than there can be in a bourgeois society.” (Note 1, p 371)

Marx gives various examples of how the Factory Acts raised the cost of employing women and children, and thereby led to them being replaced by machines.

“In England women are still occasionally used instead of horses for hauling canal boats, because the labour required to produce horses and machines is an accurately known quantity, while that required to maintain the women of the surplus-population is below all calculation. Hence nowhere do we find a more shameful squandering of human labour-power for the most despicable purposes than in England, the land of machinery.” (p 372)

3) The Proximate Effects Of Machinery On The Workers

a) Appropriation of Supplementary Labour-Power by Capital. The Employment of Women and Children

One of first effects of the introduction of machinery was that, because some of the muscular power that was previously required was now provided by the machine, workers no longer needed to be strong or even fully developed. That meant that women and children could be employed, both because they were cheaper to employ, and because they were often more dexterous than male workers.

So, whole workers families tended to be employed, which meant, given the long hours, that many things that had previously been part of a healthy family life disappeared. Children lost out on play, the performance of various aspects of domestic production ceased.

“Dr. Edward Smith, during the cotton crisis caused by the American Civil War, was sent by the English Government to Lancashire, Cheshire, and other places, to report on the sanitary condition of the cotton operatives. He reported, that from a hygienic point of view, and apart from the banishment of the operatives from the factory atmosphere, the crisis had several advantages. The women now had sufficient leisure to give their infants the breast, instead of poisoning them with “Godfrey’s cordial.” They had time to learn to cook. Unfortunately the acquisition of this art occurred at a time when they had nothing to cook. But from this we see how capital, for the purposes of its self-expansion, has usurped the labour

necessary in the home of the family. This crisis was also utilised to teach sewing to the daughters of the workmen in sewing schools. An American revolution and a universal crisis, in order that the working girls, who spin for the whole world, might learn to sew!” (Note 3, p 372)

The value of labour-power is determined not just on the basis of the cost of reproducing the individual worker, but that of the average worker's family, because capital has to ensure the supply of future generations of workers. However, if capital can employ all of the members of the worker's family, the cost of reproducing that family is spread over the wages paid to them all, not just to the father. Consequently, the value of labour-power, and, therefore wages, fall, whilst capital gets to exploit not just one worker but the whole family.

This has been witnessed at various times, when an expansion of capital has meant that capital sought to employ more workers. Much of Marx's description of the consequences could be applied, for example, to the period after WWII, when large numbers of married women were encouraged to join the labour market.

““The numerical increase of labourers has been great, through the growing substitution of female for male, and above all, of childish for adult labour. Three girls of 13, at wages of from 6 shillings to 8 shillings a week, have replaced the one man of mature age, of wages varying from 18 shillings to 45 shillings.” (Th. de Quincey: “The Logic of Political Econ.,” London, 1844. Note to p. 147.) Since certain family functions, such as nursing and suckling children, cannot be entirely suppressed, the mothers confiscated by capital, must try substitutes of

some sort. Domestic work, such as sewing and mending, must be replaced by the purchase of ready-made articles. Hence, the diminished expenditure of labour in the house is accompanied by an increased expenditure of money. The cost of keeping the family increases, and balances the greater income. In addition to this, economy and judgement in the consumption and preparation of the means of subsistence becomes impossible. Abundant material relating to these facts, which are concealed by official Political Economy, is to be found in the Reports of the Inspectors of Factories, of the Children's Employment Commission, and more especially in the Reports on Public Health." (Note 1, p 373)

In the post war period, the same things could be seen as, in return for earning a wage, large amounts of domestic labour, formerly performed manually, by housewives, was done instead by domestic machinery, e.g. vacuum cleaners, washing machines, TV to entertain children, as well as a welfare state to provide care etc. That, in turn, created a large demand for all of these new consumer goods, developed as part of the *Long Wave Innovation Cycle*, which could be paid for out of the additional wages being earned.

Machinery also changes the relation between capital and the worker. Its no longer a free contract for the sale of labour-power. The worker now also sells the labour-power of their children, turning them into slave owners, and their children into slaves. All of the atrocious practices involved in this, which included the prostituting, in large numbers, of their own wives and daughters, have been well documented, as well as described in the novels of Dickens and his contemporaries.

“The revolution effected by machinery in the juridical relations between the buyer and the seller of labour-power, causing the transaction as a whole to lose the appearance of a contract between free persons, afforded the English Parliament an excuse, founded on juridical principles, for the interference of the state with factories. Whenever the law limits the labour of children to 6 hours in industries not before interfered with, the complaints of the manufacturers are always renewed. They allege that numbers of the parents withdraw their children from the industry brought under the Act, in order to sell them where “freedom of labour” still rules, i.e., where children under 13 years are compelled to work like grown-up people, and therefore can be got rid of at a higher price. But since capital is by nature a leveller, since it exacts in every sphere of production equality in the conditions of the exploitation of labour, the limitation by law of children’s labour, in one branch of industry, becomes the cause of its limitation in others.” (p 374-5)

Today, the representatives of the more reactionary sections of capital, within the Tory Party, are marked by their high moral tone on issues like the family, on abortion, on drug use etc. Yet it was capital, via the introduction of machine industry, that caused the greatest damage in all these respects. Women employed in the most degrading conditions; children employed in conditions of the most terrible immorality, the needs of work causing mothers to abandon their children, or else replace their own care by dosing them up with opiates, like laudanum and so on.

“In fact, the revolution in the mode of cultivation had led to the introduction of the industrial system.

Married women, who work in gangs along with boys and girls, are, for a stipulated sum of money, placed at the disposal of the farmer, by a man called the "undertaker," who contracts for the whole gang. "These gangs will sometimes travel many miles from their own village; they are to be met morning and evening on the roads, dressed in short petticoats, with suitable coats and boots, and sometimes trousers, looking wonderfully strong and healthy, but tainted with a customary immorality and heedless of the fatal results which their love of this busy and independent life is bringing on their unfortunate offspring who are pining at home."

Every phenomenon of the factory districts is here reproduced, including, but to a greater extent, ill-disguised infanticide, and dosing children with opiates.

"My knowledge of such evils," says Dr. Simon, the medical officer of the Privy Council and editor in chief of the Reports on Public Health, "may excuse the profound misgiving with which I regard any large industrial employment of adult women."

"Happy indeed," exclaims Mr. Baker, the factory inspector, in his official report, "happy indeed will it be for the manufacturing districts of England, when every married woman having a family is prohibited from working in any textile works at all."" (p 376-7)

Marx goes on, referring to Engels' extensive accounts, in *"The Condition Of The Working Class"*, too, of the moral degradation of women and children, and to the *"intellectual desolation"* also caused. That was despite the clauses in the Factory Acts, requiring education as a

condition for employing children. It is only when capital itself requires educated workers that it begins to provide systematic education by the state. Prior to that, it was workers who organised their own education, via their co-operative societies, which provided libraries and meeting rooms above the shops, and organised schools and lectures.

Where employers did provide '*education*', prior to the 1844 Factory Act, it was frequently by people who themselves could neither read nor write. It was these kinds of conditions, including the selling of their children's labour-power, which led Marx, in writing the program of the *First International*, to stress that although he opposed state provided education, it was necessary to have statutorily determined minimum standards of education, that had to be provided by employers.

“By the excessive addition of women and children to the ranks of the workers, machinery at last breaks down the resistance which the male operatives in the manufacturing period continued to oppose to the despotism of capital.” (p 379)

b) Prolongation Of The Working Day

At the same time that machinery provides a powerful means of reducing the labour-time, required for producing commodities, it also produces, for capital, an incentive to lengthen the working day, and creates the increased power, over labour, to bring it about. Machinery sets up an incessant rhythm of production that the human body cannot match. The latter always acts as a limit on the productiveness of machinery, and thereby

encourages capital to push human labour up to and beyond those bounds. Compared to previous forms of production, reliant on manual labour, as a motive force, machine industry is much lighter, and opens the way for the employment of women and children, who are more easily dominated by capital.

The productiveness of machinery is inversely proportional to the value transferred by it to the product. In other words, a highly productive machine will produce a lot of products. The value it transfers, in a given time, will be spread over this larger number, and therefore, less in each item. For example, a machine which transfers £1,000 a year, and which produces 10,000 items, will transfer £0.10 to each item. A machine transferring the same £1,000, in that time, but producing 20,000 items, will transfer only £0.05 to each item.

The life of a machine is dependent on how extensively it is employed. A machine, run at the same rate, will wear out twice as quickly, if it is run 20 hours a day, rather than 10 hours a day. However, this is not strictly proportional, and capital has an incentive to work the machine for as long as possible, in a day as possible. A machine worked 20 hours a day, for 5 years, transfers as much value to the product as the same machine worked 10 hours a day for 10 years. As was seen in previous chapters, as well as wear and tear of machines, they lose value due to depreciation, which, unlike the former, is not recovered in the value of the product. Because depreciation is a function of time, the capitalist has an incentive to minimise it, by recovering the value of the machine in the shortest time possible.

“The material wear and tear of a machine is of two kinds. The one arises from use, as coins wear away by circulating, the other from non-use, as a sword rusts when left in its scabbard. The latter kind is due to the elements. The former is more or less directly proportional, the latter to a certain extent inversely proportional, to the use of the machine.

But in addition to the material wear and tear, a machine also undergoes, what we may call a moral depreciation. It loses exchange-value, either by machines of the same sort being produced cheaper than it, or by better machines entering into competition with it. In both cases, be the machine ever so young and full of life, its value is no longer determined by the labour actually materialised in it, but by the labour-time requisite to reproduce either it or the better machine. It has, therefore, lost value more or less. The shorter the period taken to reproduce its total value, the less is the danger of moral depreciation; and the longer the working-day, the shorter is that period.” (p 381)

This is all the more the case when machinery is first introduced into an industry, because it is at this point that the most rapid and dramatic developments occur. Marx quotes Charles Babbage,

““It has been estimated, roughly, that the first individual of a newly-invented machine will cost about five times as much as the construction of the second.” (Babbage, l.c., p. 349.)” (Note 3, p 381)

The developments were dramatic. Marx quotes Babbage again.

“The improvements which took place not long ago in frames for making patent net were so great that a machine in good repair which had cost £1,200, sold a few years after for £60 ... improvements succeeded each other so rapidly, that machines which had never been finished were abandoned in the hands of their makers, because new improvements had superseded their utility.” (Babbage, l.c., p. 233.) In these stormy, go-ahead times, therefore, the tulle manufacturers soon extended the working-day, by means of double sets of hands, from the original 8 hours to 24.” (Note 1, p 382)

With a given working day, doubling the amount of labour exploited involves also doubling the amount of constant capital employed, both in the form of machinery and tools, and possibly buildings, and in material. But, lengthening the working day means no additional buildings, machinery or tools are required, though more material will still be required. As a result, the amount of surplus value increases, whilst the capital laid out, to produce it, falls.

Moreover, the more this constant capital increases in value, the more capital is led to ensure its continual employment.

“The development of the factory system fixes a constantly increasing portion of the capital in a form, in which, on the one hand, its value is capable of continual self-expansion, and in which, on the other hand, it loses both use-value and exchange-value whenever it loses contact with living labour. “When a labourer,” said Mr. Ashworth, a cotton magnate, to Professor Nassau W. Senior, “lays down his spade, he renders useless, for that

period, a capital worth eighteen-pence. When one of our people leaves the mill, he renders useless a capital that has cost £100,000.” (p 382)

Machinery raises relative surplus value by the ways described in previous chapters.

1. It reduces the value of labour-power directly
2. It reduces the value of labour-power, by cheapening commodities that go into its production
3. In those spheres where it is first introduced, it has the effect of turning the labour-power into labour of a higher degree of efficiency.

These factors mean that where such machinery is employed, capital enjoys monopoly profits, and so the capitalist tries to make hay while the sun shines, by prolonging the working day as much as possible.

As machinery becomes generalised, these surplus profits disappear. The surplus value produced is determined by the amount of abstract labour exploited, and by the ratio of necessary to surplus labour-time. The amount of abstract labour exploited depends on the ratio of variable to constant capital (*the organic composition of capital*).

Machinery reduces the ratio of necessary to surplus labour-time, but only by, at the same time, reducing the ratio of variable to constant capital.

“It converts what was formerly variable capital, invested in labour-power, into machinery which, being constant capital, does not produce surplus-value. It is impossible, for instance, to squeeze as much surplus-value out of 2

as out of 24 labourers. If each of these 24 men gives only one hour of surplus-labour in 12, the 24 men give together 24 hours of surplus-labour, while 24 hours is the total labour of the two men. Hence, the application of machinery to the production of surplus-value implies a contradiction which is immanent in it, since of the two factors of the surplus-value created by a given amount of capital, one, the rate of surplus-value, cannot be increased, except by diminishing the other, the number of workmen. This contradiction comes to light, as soon as by the general employment of machinery in a given industry, the value of the machine-produced commodity regulates the value of all commodities of the same sort; and it is this contradiction, that in its turn, drives the capitalist, without his being conscious of the fact, to excessive lengthening of the working-day, in order that he may compensate the decrease in the relative number of labourers exploited, by an increase not only of the relative, but of the absolute surplus-labour.” (p 383-4)

So long as we assume that the labour-power employed here remains of the same type then this is true, but for the reasons Marx has set out elsewhere, already, we know that changes in the productive forces also bring about changes in human labour. Once we allow for the fact that such changes in the machinery and other productive forces might, and will, require different, more complex, forms of labour-power to be employed, this assumption falls, because there is no longer merely 24 hours in a day. Two highly complex labours may well produce more value and surplus value, in an 8 hour day, than 24 simple labours in a 12 hour day.

The introduction of machinery both opens up the potential for exploiting the labour of women and children, and, by replacing human labour-power, creates a surplus population. By these means, it also increases its dominion over labour. Hence the paradox that the dreams of many men over the ages of being able to free themselves of the drudgery of toil, by the automation of tasks, led under capitalism, to a lengthening of the working day, and his subjugation to those very machines. Instead of freeing himself to expand his mind and creative talents, it led to the dulling of his mind, as he was required to become an unthinking appendage of the machine.

c) Intensification Of Labour

In previous chapters, Marx described the way in which capitalist industrialisation led to the lengthening of the working day, almost without bounds. That was especially true with the introduction of machinery, for the reasons just described. However, this initial response could not continue.

“The immoderate lengthening of the working-day, produced by machinery in the hands of capital, leads to a reaction on the part of society, the very sources of whose life are menaced; and, thence, to a normal working-day whose length is fixed by law.” (p 385)

Capital's first response to the limitation of the working day – besides simply trying to disregard it – is to bring about an intensification of labour. That is to introduce speed-up so that workers are forced to produce as much in 10 hours as they previously did in 12 or 14. This is not

to be confused with the extraction of relative surplus value. The latter arises from the revolutionising of the production process, which increases productivity. The intensification of labour, by contrast, is just another form of absolute surplus value, production, making workers work more intensively rather than extensively.

“Nevertheless the reader will clearly see, that where we have labour, not carried on by fits and starts, but repeated day after day with unvarying uniformity, a point must inevitably be reached, where extension of the working-day and intensity of the labour mutually exclude one another, in such a way that lengthening of the working-day becomes compatible only with a lower degree of intensity, and a higher degree of intensity, only with a shortening of the working-day.” (p 386)

However, this extraction of absolute surplus value, via the intensification, goes along with the turn of capital towards the extraction of relative surplus value, and is, in large part, a function of the introduction of machines to that end.

“So soon as the gradually surging revolt of the working-class compelled Parliament to shorten compulsorily the hours of labour, and to begin by imposing a normal working-day on factories proper, so soon consequently as an increased production of surplus-value by the prolongation of the working-day was once for all put a stop to, from that moment capital threw itself with all its might into the production of relative surplus-value, by hastening on the further improvement of machinery. At the same time a change took place in the nature of relative surplus-value. Generally speaking, the mode of

producing relative surplus-value consists in raising the productive power of the workman, so as to enable him to produce more in a given time with the same expenditure of labour. Labour-time continues to transmit as before the same value to the total product, but this unchanged amount of exchange-value is spread over more use-value; hence the value of each single commodity sinks. Otherwise, however, so soon as the compulsory shortening of the hours of labour takes place. The immense impetus it gives the development of productive power, and to economy in the means of production, imposes on the workman increased expenditure of labour in a given time, heightened tension of labour-power, and closer filling up of the pores of the working-day, or condensation of labour to a degree that is attainable only within the limits of the shortened working-day. This condensation of a greater mass of labour into a given period thenceforward counts for what it really is, a greater quantity of labour. In addition to a measure of its extension, i.e., duration, labour now acquires a measure of its intensity or of the degree of its condensation or density. The denser hour of the ten hours' working-day contains more labour, i.e., expended labour-power. than the more porous hour of the twelve hours' working-day. The product therefore of one of the former hours has as much or more value than has the product of 1 1/5 of the latter hours. Apart from the increased yield of relative surplus-value through the heightened productiveness of labour, the same mass of value is now produced for the capitalist say by 3 1/3 hours of surplus-labour, and 6 2/3 hours of necessary labour, as was previously produced by four hours of surplus-labour and eight hours of necessary labour." (p 386-7)

In other words, there are two complementary processes going on. The introduction of machinery increases the productivity of labour. That means the commodities required to reproduce labour-power become cheaper, which means the value of labour-power falls. That means less of the working day is required for necessary labour, leaving a higher portion as surplus labour. Relative surplus value rises.

At the same time, the kind of regularisation of the work process that machinery introduces, i.e. a machine runs at the same pace all day long, whereas a craftsman, working with tools, operates at different speeds during the day, means the workers themselves more resemble a machine, working at the same pace all day. The more the worker becomes accustomed to that, the more they can cope with the machine operating at a faster pace. That principle is put on a scientific basis by the introduction of Taylorist, scientific management. Moreover, while they may not be able to cope, physically and mentally, with that pace for 12 hours a day, they may for 10. So, as much work is done in 10 hours as previously in 12.

That was seen in Britain in 1974 during the three day week, when as much output was more or less produced in three days as previously was done in five.

“The first effect of shortening the working-day results from the self-evident law, that the efficiency of labour-power is in an inverse ratio to the duration of its expenditure. Hence, within certain limits what is lost by shortening the duration is gained by the increasing tension of labour-power. That the workman moreover

really does expend more labour-power, is ensured by the mode in which the capitalist pays him.” (p 387)

Marx says that this effect of shortening the working day was more marked in those areas where machinery was not dominant.

“Mr. Robert Gardner reduced the hours of labour in his two large factories at Preston, on and after the 20th April, 1844, from twelve to eleven hours a day. The result of about a year’s working was that “the same amount of product for the same cost was received, and the workpeople as a whole earned in eleven hours as much wages as they did before in twelve.” I pass over the experiments made in the spinning and carding rooms, because they were accompanied by an increase of 2% in the speed of the machines. But in the weaving department, where, moreover, many sorts of figured fancy articles were woven, there was not the slightest alteration in the conditions of the work. The result was: “From 6th January to 20th April, 1844, with a twelve hours’ day, average weekly wages of each hand 10s. 1½d., from 20th April to 29th June, 1844, with day of eleven hours, average weekly wages 10s. 3½d.” Here we have more produced in eleven hours than previously in twelve, and entirely in consequence of more steady application and economy of time by the workpeople. While they got the same wages and gained one hour of spare time, the capitalist got the same amount produced and saved the cost of coal, gas, and other such items, for one hour. Similar experiments, and with the like success,

were carried out in the mills of Messrs. Horrocks and Jacson.” (p 388)

Shorter working hours create the conditions for more intensive labour, and when those shorter hours are fully established, capital introduces machinery to squeeze out even more labour, in a given time. That is done by gradually speeding up the machines, and by increasing the number of machines each worker minds.

But, capital also has to improve the machinery. More labour cannot be squeezed out of workers in these diminished work days, if the machines themselves break down, or are inefficient.

“One fact is sufficient to show how greatly the wealth of the manufacturers increased along with the more intense exploitation of labour-power. From 1838 to 1850, the average proportional increase in English cotton and other factories was 32%, while from 1850 to 1856 it amounted to 86%.” (p 392)

Marx details how this rose even more sharply between 1856-62.

He quotes Ferrand,

“I have been informed by delegates from 16 districts of Lancashire and Cheshire, in whose behalf I speak, that the work in the factories is, in consequence of the improvements in machinery, constantly on the increase. Instead of as formerly one person with two helps tending two looms, one person now tents three looms without helps, and it is no uncommon thing for one person to tent four. Twelve hours’ work, as is evident from the facts

adduced, is now compressed into less than 10 hours. It is therefore self-evident, to what an enormous extent the toil of the factory operative has increased during the last 10 years.” (p 392-3)

Marx comments,

“There cannot be the slightest doubt that the tendency that urges capital, so soon as a prolongation of the hours of labour is once for all forbidden, to compensate itself, by a systematic heightening of the intensity of labour, and to convert every improvement in machinery into a more perfect means of exhausting the workman, must soon lead to a state of things in which a reduction of the hours of labour will again be inevitable. On the other hand, the rapid advance of English industry between 1848 and the present time, under the influence of a day of 10 hours, surpasses the advance made between 1833 and 1847, when the day was 12 hours long, by far more than the latter surpasses the advance made during the half century after the first introduction of the factory system, when the working-day was without limits.” (p 393)

4) The Factory

Marx quotes Dr. Ure's descriptions of the factory,

“Combined co-operation of many orders of workpeople, adult and young, in tending with assiduous skill, a system of productive machines, continuously impelled by a central power”, and

“a vast automaton, composed of various mechanical and intellectual organs, acting in uninterrupted concert for the

production of a common object, all of them being subordinate to a self-regulated moving force.” (p 394-5)

Marx points out these two descriptions are not the same.

“In one, the collective labourer, or social body of labour, appears as the dominant subject, and the mechanical automaton as the object; in the other, the automaton itself is the subject, and the workmen are merely conscious organs, co-ordinate with the unconscious organs of the automaton, and together with them, subordinated to the central moving-power. The first description is applicable to every possible employment of machinery on a large scale, the second is characteristic of its use by capital, and therefore of the modern factory system.” (p 395-6)

The machine takes over the workers' tools and replaces his skill, thereby removing the technical foundation of the division of labour under manufacture. The hierarchy of labour, established under manufacture, tends to be replaced by an equalisation of labour as they are reduced to the level of machine minders. The only differences become those of age and sex.

The division of labour is now one based on the types of machines that undertake the various functions, and those that mind them. There is merely simple co-operation amongst workers grouped around particular machines.

The kind of co-operative, organised group working of manufacture, for example in glass blowing, is replaced by the relation between the head worker and their assistants. The division is between those who actually work on the machine, ensuring it functions correctly, including those working on the engine, and their

attendants, frequently children, who feed the machine, clean any material that might stop it working, and so on.

In addition, there are those workers, relatively small in number, whose job is to ensure that all of the machinery etc. is maintained and continues to function. That is engineers, mechanics, joiners etc.

“This is a superior class of workmen, some of them scientifically educated, others brought up to a trade; it is distinct from the factory operative class, and merely aggregated to it. This division of labour is purely technical.” (p 396)

The same kind of proportion, between different processes, dependent upon the time required for production, continues as with manufacture. But, where, under manufacture, each process became the exclusive task of particular workers, under machine production, workers, when needed, can be moved from minding one type of machine to another. Moreover, the machine tends to combine a series of processes within one operation, for example, as was referred to in a previous section, in relation to the envelope machine. In addition, where a process formerly required a large number of workers to ensure sufficient material is passed on to the next stage, because the worker only has two hands, the machine overcomes this. A spinning machine, for example, simply extends the number of spindles, whilst still being minded by one worker.

It was the fact that machines could be minded by any reasonably trained worker that allowed the employers to introduce the *“Relay System”*, discussed in the chapter

on the working day. It is what allows shift systems to seamlessly change workers, whilst the machine continues to operate.

On the question of this training, Marx says,

“Lastly, the quickness with which machine work is learnt by young people, does away with the necessity of bringing up for exclusive employment by machinery, a special class of operatives. With regard to the work of the mere attendants, it can, to some extent, be replaced in the mill by machines, and owing to its extreme simplicity, it allows of a rapid and constant change of the individuals burdened with this drudgery.” (p 397-8)

What appeared under manufacture as the division of labour, in the shape of the detailed worker, who specialises in a particular process, appears under capitalist machine production as the *“speciality of serving one and the same machine.” (p 398)*

By this process, not only is the value of his labour power reduced, but because the worker is now wholly dependent on the factory for employment, he has become wholly subjugated to capital.

“In handicrafts and manufacture, the workman makes use of a tool, in the factory, the machine makes use of him. There the movements of the instrument of labour proceed from him, here it is the movements of the machine that he must follow. In manufacture the workmen are parts of a living mechanism. In the factory we have a lifeless mechanism independent of the workman, who becomes its mere living appendage.” (p 398)

Marx describes this labour process under capitalism as like a labour of Sisyphus, a deadening routine that wears out the muscular and nervous system, because of its endless repetition of the same bodily movements, to meet the needs of the machine, removing all interest and creativity.

“Every kind of capitalist production, in so far as it is not only a labour-process, but also a process of creating surplus-value, has this in common, that it is not the workman that employs the instruments of labour, but the instruments of labour that employ the workman. But it is only in the factory system that this inversion for the first time acquires technical and palpable reality. By means of its conversion into an automaton, the instrument of labour confronts the labourer, during the labour-process, in the shape of capital, of dead labour, that dominates, and pumps dry, living labour-power. The separation of the intellectual powers of production from the manual labour, and the conversion of those powers into the might of capital over labour, is, as we have already shown, finally completed by modern industry erected on the foundation of machinery.” (p 398-9)

The skill of the worker has been replaced by the machine, and the ownership of the machine, and the intellectual power of the science behind it, place the capitalist in an unassailable position.

“This “master,” therefore, in whose brain the machinery and his monopoly of it are inseparably united, whenever he falls out with his “hands,” contemptuously tells them:

'The factory operatives should keep in wholesome remembrance the fact that theirs is really a low species of skilled labour; and that there is none which is more easily acquired, or of its quality more amply remunerated, or which by a short training of the least expert can be more quickly, as well as abundantly, acquired.... The master's machinery really plays a far more important part in the business of production than the labour and the skill of the operative, which six months' education can teach, and a common labourer can learn.' (p 399)

As stated previously, the expansion of production along these lines, establishes the need for discipline, within the factory, which in turn creates a new division of labour, as overlookers, supervisors, foremen and managers, of different grades, are established to ensure that surplus value is maximised. In the process, creating a new division, separating mental from manual labour.

Dr. Ure wrote,

"Even at the present day, when the system is perfectly organised and its labour lightened to the utmost, it is found nearly impossible to convert persons past the age of puberty, into useful factory hands." (p 399-400)

Marx writes,

"The factory code in which capital formulates, like a private legislator, and at his own good will, his autocracy over his workpeople, unaccompanied by that division of responsibility, in other matters so much approved of by the bourgeoisie, and unaccompanied by the still more approved representative system, this code is but the

capitalistic caricature of that social regulation of the labour-process which becomes requisite in co-operation on a great scale, and in the employment in common, of instruments of labour and especially of machinery. The place of the slave-driver's lash is taken by the overlooker's book of penalties. All punishments naturally resolve themselves into fines and deductions from wages, and the law-giving talent of the factory Lycurgus so arranges matters, that a violation of his laws is, if possible, more profitable to him than the keeping of them.” (p 400)

The law at that time was even more clearly class law than it is today. Not only could unemployed labourers be branded as slaves, and put to work by employers as such, but even wage workers legal position differed from that of the capitalist. If a worker broke his contract of employment, that was a criminal offence, punishable by imprisonment. If the capitalist breached the contract it was only a civil offence, which the worker had to pursue through the courts!

Marx gives the following examples,

“One occurs at Sheffield at the end of 1866. In that town a workman had engaged himself for 2 years in a steelworks. In consequence of a quarrel with his employer he left the works, and declared that under no circumstances would he work for that master any more. He was prosecuted for breach of contract, and condemned to two months' imprisonment. (If the master break the contract, he can be proceeded against only in a civil action, and risks nothing but money damages.) After the workman has served his two months, the master

invites him to return to the works, pursuant to the contract. Workman says: No, he has already been punished for the breach. The master prosecutes again, the court condemns again, although one of the judges, Mr. Shee, publicly denounces this as a legal monstrosity, by which a man can periodically, as long as he lives, be punished over and over again for the same offence or crime. This judgment was given not by the "Great Unpaid," the provincial Dogberries, but by one of the highest courts of justice in London. — [Added in the 4th German edition. — This has now been done away with. With few exceptions, e.g., when public gas-works are involved, the worker in England is now put on an equal footing with the employer in case of breach of contract and can be sued only civilly. — F. E.] The second case occurs in Wiltshire at the end of November 1863. About 30 power-loom weavers, in the employment of one Harrup, a cloth manufacturer at Leower's Mill, Westbury Leigh, struck work because master Harrup indulged in the agreeable habit of making deductions from their wages for being late in the morning; 6d. for 2 minutes; 1s. for 3 minutes, and 1s. 6d. for ten minutes. This is at the rate of 9s. per hour, and £4 10s. 0d. per diem; while the wages of the weavers on the average of a year, never exceeded 10s. to 12s. weekly. Harrup also appointed a boy to announce the starting time by a whistle, which he often did before six o'clock in the morning: and if the hands were not all there at the moment the whistle ceased, the doors were closed, and those hands who were outside were fined: and as there was no clock on the premises, the unfortunate hands were at the mercy of the young Harrup-inspired time-keeper. The hands on strike, mothers of families as well as girls, offered to

resume work if the timekeeper were replaced by a clock, and a more reasonable scale of fines were introduced. Harrup summoned 19 women and girls before the magistrates for breach of contract. To the utter indignation of all present, they were each mulcted in a fine of 6d. and 2s. 6d. for costs.” (Note 2, p 400-1)

5) The Strife Between Workman And Machine

The struggle between wage labour and capital takes place from the beginning of capitalist relations. However, its only with the introduction of machinery that this struggle takes the form of a struggle with the instruments of labour themselves. This is not just because the machinery is seen as replacing workers and depriving them of their livelihood. The introduction of machinery, along with all of the other deterioration of the workers' conditions, also brought a large increase in deaths, accidents and industrial diseases that did not exist with handicraft production, or manufacture. In its flush of youth, capital rushes forward without any concern for the effects this has on the longer term consequences for the value creating substance – labour – and, therefore, its own longer term interests. This is illustrated by Marx's quote from Leonard Horner,

“I have heard some mill-owners speak with inexcusable levity of some of the accidents; such, for instance, as the loss of a finger being a trifling matter. A working-man's living and prospects depend so much upon his fingers, that any loss of them is a very serious matter to him. When I have heard such inconsiderate remarks made, I have usually put this question: Suppose you were in want of an additional workman, and two were to apply, both

equally well qualified in other respects, but one had lost a thumb or a forefinger, which would you engage? There never was a hesitation as to the answer....” (Note 1, p 402)

But, it should not be assumed from this that capital did not learn the lessons of its longer term interests. Marx gives a further quote,

“In those factories that have been longest subject to the Factory Acts, with their compulsory limitation of the hours of labour, and other regulations, many of the older abuses have vanished. The very improvement of the machinery demands to a certain extent “improved construction of the buildings,” and this is an advantage to the workpeople. (See “Rep. of Insp. of Fact. for 31st Oct., 1863,” p. 109.)” (Note 2, p 402)

In Lenin's *“The Development Of Capitalism In Russia”*, which is a brilliant application of Marx's analysis and method in *Capital*, he argues vehemently against the Narodniks, who could only see the negative aspects of capitalism. In it, Lenin demonstrates that, in fact, in Russia, the conditions of workers, in general, were better in manufacture than in handicraft production, and were better in the larger capitalist machine industry than in manufacture.

Once capital is able to extract relative surplus value, this is a much more effective means of raising the rate of exploitation than is absolute surplus value. Moreover, the conditions required to effectively extract relative surplus value, frequently conflict with attempts to extract absolute surplus value. That does not mean capital abandons the

latter. It always seeks to exploit more labour-time and, at certain times, - high, persistent unemployment, periods when increases in productivity decline – its focus returns to absolute surplus value.

Protests against machinery begin in Europe as early as the 17th century, with widespread action against the ribbon loom, invented in Germany. Marx details other such protests including those of the Luddites.

“It took both time and experience before the workpeople learnt to distinguish between machinery and its employment by capital, and to direct their attacks, not against the material instruments of production, but against the mode in which they are used.” (p 404)

Marx highlights the difference of the change from handicraft industry to manufacture, compared to the change of the latter to machine industry.

“The contests about wages in Manufacture, pre-suppose manufacture, and are in no sense directed against its existence. The opposition against the establishment of new manufactures, proceeds from the guilds and privileged towns, not from the workpeople.” (p 404)

Under manufacture, it was handicraft labour that still formed the basis of production, though its productivity is raised by the division of labour.

“Hence the writers of the manufacturing period treat the division of labour chiefly as a means of virtually supplying a deficiency of labourers, and not as a means of actually displacing those in work.” (p 404)

As demand rose from Britain's colonial markets, there were not enough workers to meet it, and as Marx demonstrated previously, in this early period, capital had difficulty getting workers to work more than three or four days a week anyway. The division of labour, plus employing more workers from the countryside, as the feudal system broke down, was a means of satisfying this demand.

“At that time, therefore, division of labour and co-operation in the workshops, were viewed more from the positive aspect, that they made the workpeople more productive.” (p 405)

By contrast the introduction of machinery has different consequences.

“If it be said that 100 millions of people would be required in England to spin with the old spinning-wheel the cotton that is now spun with mules by 500,000 people, this does not mean that the mules took the place of those millions who never existed. It means only this, that many millions of workpeople would be required to replace the spinning machinery. If, on the other hand, we say, that in England the power-loom threw 800,000 weavers on the streets, we do not refer to existing machinery, that would have to be replaced by a definite number of workpeople, but to a number of weavers in existence who were actually replaced or displaced by the looms.” (p 404)

In agriculture, the concentration of the means of production in a few hands, along with the introduction of principles of co-operation and division of labour, creates

a revolution in production. But, this leads not to conflict between wage labour and capital, but between the larger landholders, able to introduce these methods, and the smaller ones, who cannot. It creates the conditions for trying to establish larger farms, via land grabs, as happened with the *Enclosure Acts* in Britain, not to mention outright theft, by members of the landed aristocracy.

“Hence this subversion of agriculture puts on, at first, more the appearance of a political revolution.” (p 405)

It is machinery which really creates the conditions for the conflict between wage workers and capital. As Ricardo says,

“Machinery and labour are in constant competition; Ricardo l.c. P 479” (Note 3, p 405)

Marx describes the consequence.

“The whole system of capitalist production is based on the fact that the workman sells his labour-power as a commodity. Division of labour specialises this labour-power, by reducing it to skill in handling a particular tool. So soon as the handling of this tool becomes the work of a machine, then, with the use-value, the exchange-value too, of the workman’s labour-power vanishes; the workman becomes unsaleable, like paper money thrown out of currency by legal enactment. That portion of the working-class, thus by machinery rendered superfluous, i.e., no longer immediately necessary for the self-expansion of capital, either goes to the wall in the unequal contest of the old handicrafts and manufactures with machinery, or else floods all the more easily

accessible branches of industry, swamps the labour-market, and sinks the price of labour-power below its value. It is impressed upon the workpeople, as a great consolation, first, that their sufferings are only temporary ("a temporary inconvenience"), secondly, that machinery acquires the mastery over the whole of a given field of production, only by degrees, so that the extent and intensity of its destructive effect is diminished. The first consolation neutralises the second. When machinery seizes on an industry by degrees, it produces chronic misery among the operatives who compete with it. Where the transition is rapid, the effect is acute and felt by great masses. History discloses no tragedy more horrible than the gradual extinction of the English hand-loom weavers, an extinction that was spread over several decades, and finally sealed in 1838. Many of them died of starvation, many with families vegetated for a long time on 2½ d. a day." (p 405-6)

Marx's description here also has important lessons for today, at a micro and macro level. Marx describes the way the hand-loom workers' misery was perpetuated, because they continued to be employed in competition with the power loom. It meant a terrible reduction in their wages, below what was necessary for their subsistence. A part of the difference was made up by payments of *Poor Relief* out of Parish funds. That just prolonged the agony of the workers, whilst allowing a form of production, whose time had passed, to continue. It also drained resources from other workers and producers, who had to pay *Poor Rates*, to the Parish, to cover the relief, which became an increasing burden.

We see the same thing today, in the way various forms of welfarism allow low-paying employers to keep going, usually also providing their workers with poor and unstable working conditions, because their workers wages are supplemented by transfers from other workers, via the tax and benefits system. This drain from workers wages means a drain on funds that could go to creating demand in some other industry, able to employ workers at a higher rate of pay. It would then force the low paying, inefficient producers to modernise their production. As with the *Poor Law*, Welfarism gives the impression of providing subsidies to workers, but, in reality, is a subsidy from better paid workers to bad employers, who, as a consequence, can continue to pay low wages. A good example of that is Wal-Mart in the US, which refuses to negotiate a health insurance scheme with its workers, preferring instead to force them to use *Medicare* and *Medicaid* provided by the state, and funded by other workers taxes.

The same thing applies at a macro level in the current *Eurozone Debt Crisis*, where entire economies that are, overall, uncompetitive, impose prolonged misery and austerity on their workers, which is facilitated by a similar kind of Welfarism, paid for by workers elsewhere in Europe. What these economies require is not a long slow death, like that suffered by the hand loom weavers, but the injection of large amounts of new capital, to create new competitive industries, which can provide the workers with decent stable jobs, at decent wages, and with decent conditions. If capital cannot do that, then workers have to organise to bring it about themselves.

Marx, describing the effects of machinery, in this respect, also provides a damning indictment of the kind of welfarist attitudes many on the Left today promote or defend. That welfarism, offers no solution to the workers problems, merely prolongs their misery and, at the same time, degrades and debases them, as well as undermining their independence from capital.

“The competition between hand-weaving and power-weaving in England, before the passing of the Poor Law of 1833, was prolonged by supplementing the wages, which had fallen considerably below the minimum, with parish relief. “The Rev. Mr. Turner was, in 1827, rector of Wilmslow in Cheshire, a manufacturing district. The questions of the Committee of Emigration, and Mr. Turner’s answers, show how the competition of human labour is maintained against machinery. ‘Question: Has not the use of the power-loom superseded the use of the hand-loom? Answer: Undoubtedly; it would have superseded them much more than it has done, if the hand-loom weavers were not enabled to submit to a reduction of wages.’ ‘Question: But in submitting he has accepted wages which are insufficient to support him, and looks to parochial contribution as the remainder of his support? Answer: Yes, and in fact the competition between the hand-loom and the power-loom is maintained out of the poor-rates.’ Thus degrading pauperism or expatriation, is the benefit which the industrious receive from the introduction of machinery, to be reduced from the respectable and in some degree independent mechanic, to the cringing wretch who lives on the debasing bread of charity. This they call a temporary inconvenience.” (“A Prize Essay on the

Comparative Merits of Competition and Co-operation.”
Lond., 1834, p. 29.) (Note 1, p 406)

The conflict between the machine and the worker is most acute where machines are introduced to replace existing handicraft or manufacture, rather than where an improved machine merely replaces an existing one. But, it is a perpetual struggle. Capital continually seeks to replace human labour wherever its peculiarities allow the worker to exercise any kind of power, or to be able to bargain for higher wages.

We see that today in the form of computerised “*expert systems*” whose sole function is to replace expert workers, as well as with the introduction of robots into areas such as surgery. In the *Financial Services Industry*, extremely highly paid workers, operating as traders, are increasingly being replaced by computer systems based on neural nets, which learn with each trade. Just as machines elsewhere have revolutionised the mode of production, so too here. These computer traders have led to what is called “*High Frequency Trading*”. The computers can now buy billions of shares, or other financial assets, and sell them again many times a second, making gains by rapidly trading huge volumes with tiny changes in prices.

Also, part of the reason that elements of *State Capitalism* are being privatised is precisely for the reasons identified by Aglietta, and others, nearly thirty years ago. That is developments in computing and technology mean that various services, like education and healthcare, which previously capital could only provide efficiently by Fordist techniques, based on state owned, mass production,

education and health factories, can now be more efficiently delivered in the private sector by Neo-Fordist, more flexible provision. Its now possible to obtain very expensive Harvard and other University courses over the Internet, for much less than enrolling on the course. In places like Singapore, with ultra high speed broadband, a lot of education is now provided for students in their own homes rather than in schools.

“Whenever a process requires peculiar dexterity and steadiness of hand, it is withdrawn, as soon as possible, from the cunning workman, who is prone to irregularities of many kinds, and it is placed in charge of a peculiar mechanism, so self-regulating that a child can superintend it.” (Quoted from Ure, p 407)

In fact, computer scientists have found that it is many of these expert functions that are the most easily computerised. A doctor is no different from a TV repairman. The diagnosis of both is essentially done by going through a check list, and comparing the answers to a database of possible faults, that can be refined until a likely problem is identified. In fact, a computer, containing a patient's full medical history, is technically more capable of doing that faster, and more reliably. But, also, just as new cars now have computer chips in them, which constantly monitor their operation for faults, so similar chips are now available to constantly monitor humans for high blood pressure, blood sugar levels and so on, and to warn of likely health problems. These developments, along with other technological innovations, in health, mean that the old Fordist model is no longer necessary or appropriate.

““On the automatic plan skilled labour gets progressively superseded.” “The effect of improvements in machinery, not merely in superseding the necessity for the employment of the same quantity of adult labour as before, in order to produce a given result, but in substituting one description of human labour for another, the less skilled for the more skilled, juvenile for adult, female for male, causes a fresh disturbance in the rate of wages.”” (Quoted from Ure, p 407-8)

As Marx set out against Weston, in *“Value, Price and Profit”*, capital always has the whip hand against wage labour, and whenever the latter is able to take advantage of a temporary situation to improve its position, capital responds to reverse it. Machinery has been one of the main ways it has achieved that.

“But machinery not only acts as a competitor who gets the better of the workman, and is constantly on the point of making him superfluous. It is also a power inimical to him, and as such capital proclaims it from the roof tops and as such makes use of it. It is the most powerful weapon for repressing strikes, those periodical revolts of the working-class against the autocracy of capital. According to Gaskell, the steam-engine was from the very first an antagonist of human power, an antagonist that enabled the capitalist to tread under foot the growing claims of the workmen, who threatened the newly born factory system with a crisis. It would be possible to write quite a history of the inventions, made since 1830, for the sole purpose of supplying capital with weapons against the revolts of the working-class. At the head of these in importance, stands the self-acting mule, because it

opened up a new epoch in the automatic system." (p 410-11)

Whenever workers' position has allowed them any kind of leverage, capital has responded by replacing labour with machines. It did so in the print industry, it has done so in mining, and is doing so now with the introduction of automatic trains.

6) The Theory Of Compensation As Regards The Workpeople Displaced By Machinery

"James Mill, MacCulloch, Torrens, Senior, John Stuart Mill, and a whole series besides, of bourgeois political economists, insist that all machinery that displaces workmen, simultaneously and necessarily sets free an amount of capital adequate to employ the same identical workmen." (p 412)

Marx sets out to disprove this contention. Because of the way Marx develops his argument in *Capital*, combining an analysis of the actual historical development of capital and capitalism with its logical exposition, there are a number of occasions where the actual exposition, contains what appear to be logical flaws, which are only corrected as the further exposition develops. That is the case in this particular section.

Firstly, Marx in his analysis of the effects of the machine on employment, introduces the machine as though it had appeared from nowhere. He says,

"Suppose a capitalist to employ 100 workmen, at £30 a year each, in a carpet factory. The variable capital annually laid out amounts, therefore, to £3,000. Suppose,

also, that he discharges 50 of his workmen, and employs the remaining 50 with machinery that costs him £1,500. To simplify matters, we take no account of buildings, coal, &c. Further suppose that the raw material annually consumed costs £3,000, both before and after the change. Is any capital set free by this metamorphosis? Before the change, the total sum of £6,000 consisted half of constant, and half of variable capital. After the change it consists of £4,500 constant (£3,000 raw material and £1,500 machinery), and £1,500 variable capital. The variable capital, instead of being one half, is only one quarter, of the total capital. Instead of being set free, a part of the capital is here locked up in such a way as to cease to be exchanged against labour-power: variable has been changed into constant capital. Other things remaining unchanged, the capital of £6,000, can, in future, employ no more than 50 men. With each improvement in the machinery, it will employ fewer. If the newly introduced machinery had cost less than did the labour-power and implements displaced by it, if, for instance, instead of costing £1,500, it had cost only £1,000, a variable capital of £1,000 would have been converted into constant capital, and locked up; and a capital of £500 would have been set free. The latter sum, supposing wages unchanged, would form a fund sufficient to employ about 16 out of the 50 men discharged; nay, less than 16, for, in order to be employed as capital, a part of this £500 must now become constant capital, thus leaving only the remainder to be laid out in labour-power.” (p 412)

But, the machine itself had to be produced, which in turn requires labour time in the form of constant and variable

capital, that otherwise would not have been employed. Suppose we have a situation with no surplus value. We have £1 = 1 hour of labour-time, and 100 workers at £30 p.a. each. Then:

100 workers = £3000 = 3000 hours.

The machine costs £1500 = 1500 hours = 50 workers.

So, the 50 workers not now employed in carpet production could, in theory, be employed in machine production including the production of the constant capital required to produce the machine etc.

But, secondly, Marx does not account for the role of the machine in producing relative surplus value, in the way he has analysed in previous sections. Surplus value is a form of capital, or more precisely capital is accumulated surplus value. So, in raising surplus value, the machine expands capital, which takes the form of increased employment of workers both in the production of constant and variable capital.

The third objection is simply empirical. Since Marx's time, the amount and effectiveness of machinery has increased many fold, yet it has not resulted in ever increasing amounts of mass unemployment. On the contrary, many more workers are employed today than in Marx's time.

The issue is not really whether capital is "freed", but whether this capital is able to be, and under the specific conditions is, employed. Marx's statement later,

"The labourers, when driven out of the workshop by the machinery, are thrown upon the labour market, and there

add to the number of workmen at the disposal of the capitalists. In Part VII of this book it will be seen that this effect of machinery, which, as we have seen, is represented to be a compensation to the working class, is on the contrary a most frightful scourge. For the present I will only say this: The labourers that are thrown out of work in any branch of industry, can no doubt seek for employment in some other branch. If they find it, and thus renew the bond between them and the means of subsistence, this takes place only by the intermediary of a new and additional capital that is seeking investment;” (p 415)

as it stands, cannot be correct, because this would imply that all of the workers that have previously been displaced and have found other employment, have only done so because large amounts of capital have somehow been formed, from outside the system, and thrown into it. In fact, this large amount of new capital formation is not at all separate from the growing volume of surplus value produced, which, in turn, is a function of the relative surplus value resulting from the introduction of machinery. As stated earlier, Marx deals with some of these issues later in *Capital* in looking at accumulation.

But, in practical terms, there is a considerable amount that is correct in Marx’s analysis. For example, he is right when he says,

“But, suppose, besides, that the making of the new machinery affords employment to a greater number of mechanics, can that be called compensation to the carpet-makers, thrown on the streets?” (p 413)

If all labour were homogeneous then workers could seamlessly move from one job to another. But, it isn't and they can't. The consequence is that workers are of the wrong type and in the wrong place, and so they end up in the streets, and this then itself has repercussions.

“As a matter of fact the apologists do not mean this sort of setting free.

They have in their minds the means of subsistence of the liberated work-people. It cannot be denied, in the above instance, that the machinery not only liberates 50 men, thus placing them at others' disposal, but, at the same time, it withdraws from their consumption, and sets free, means of subsistence to the value of £1,500...” (p 414)

In other words having lost their job, they lost their income, and so their ability to consume. The commodities they would have consumed, so as to reproduce their labour-power, are now “set free”, because the workers who would have bought them, now have no income with which to do so. This is a basic contradiction within capitalism, which is at the heart of capitalist crises. That is that the very measures that capital takes to increase the rate of surplus value, and consequently the produced rate of profit, act to reduce the potential to realise those profits, because in reducing wages, and laying off workers, a large component of the demand for commodities is thereby undermined.

As Marx puts it later in *Capital Volume III, Chapter 15*,

“The creation of this surplus-value makes up the direct process of production, which, as we have said, has no other limits but those mentioned above.”

That was that the only limit to the production of surplus value if the rate of surplus value is fixed, is the size of the workforce, and if the size of the workforce is fixed, is the rate of surplus value. If with a given size of workforce, the demand for labour has reached such a level that wages are pushed up, then the rate of surplus value itself begins to fall, which means crises can break out, because production can become unprofitable. But, if capital responds to the problem of rising wages due to a relative shortage of labour, by introducing labour-saving machines, this may enable the production of surplus value to rise, as wages are pushed down, but then the much increased volume of output that results from the introduction of this technology finds it more difficult to find buyers, because wages have fallen, and unemployment may have risen.

“As soon as all the surplus-labour it was possible to squeeze out has been embodied in commodities, surplus-value has been produced. But this production of surplus-value completes but the first act of the capitalist process of production — the direct production process... Now comes the second act of the process. The entire mass of commodities, i.e., the total product, including the portion which replaces the constant and variable capital, and that representing surplus-value, must be sold. If this is not done, or done only in part, or only at prices below the prices of production, the labourer has been indeed exploited, but his exploitation is not realised as such for the capitalist, and this can be bound up with a total or partial failure to realise the surplus-value pressed out of him, indeed even with the partial or total loss of the capital. The conditions of direct exploitation, and those of realising it, are not identical. They diverge not only in place and time, but also logically.”

As Marx describes in *Theories of Surplus Value* the other factor here is that production (supply) is determined by value, whereas consumption (demand) is determined by use value. This is important, in relation to the elasticity of demand for the produced supply, because under capitalism, the distribution of income is itself a function of the productive relations, so that these incomes are heavily skewed. Those with high levels of income may already have sated their demand for a range of commodities, and so cannot be persuaded to buy more of them at almost any price, whilst others incomes still prevent them from being able to buy them.

“The first are only limited by the productive power of society, the latter by the proportional relation of the various branches of production and the consumer power of society. But this last-named is not determined either by the absolute productive power, or by the absolute consumer power, but by the consumer power based on antagonistic conditions of distribution, which reduce the consumption of the bulk of society to a minimum varying within more or less narrow limits... This internal contradiction seeks to resolve itself through expansion of the outlying field of production. But the more productiveness develops, the more it finds itself at variance with the narrow basis on which the conditions of consumption rest. It is no contradiction at all on this self-contradictory basis that there should be an excess of capital simultaneously with a growing surplus of population. For while a combination of these two would, indeed, increase the mass of produced surplus-value, it would at the same time intensify the contradiction between the conditions under which this surplus-value is produced and those under which it is realised.”

In other words, employing more workers would mean there was more wages, and so more demand for what had been produced, but the increased number of workers employed, would cause wages to rise further, reducing the rate of surplus value, and causing profits to fall.

“The circumstance that they were “freed” by the machinery, from the means of purchase, changed them from buyers into non-buyers. Hence a lessened demand for those commodities — voilà tout. If this diminution be not compensated by an increase from some other quarter, the market price of the commodities falls. If this state of things lasts for some time, and extends, there follows a discharge of workmen employed in the production of these commodities. Some of the capital that was previously devoted to production of necessary means of subsistence, has to become reproduced in another form. While prices fall, and capital is being displaced, the labourers employed in the production of necessary means of subsistence are in their turn “freed” from a part of their wages. Instead, therefore, of proving that, when machinery frees the workman from his means of subsistence, it simultaneously converts those means into capital for his further employment, our apologists, with their cut-and-dried law of supply and demand, prove, on the contrary, that machinery throws workmen on the streets, not only in that branch of production in which it is introduced, but also in those branches in which it is not introduced.” (p 414-5)

In other words, Marx is describing here the Keynesian income multiplier. Workers in one sphere suffer a reduction in income either because their job is de-skilled, or because the number of workers employed itself is

reduced. This reduction in their income, whilst it may result in the short term in a higher rate of surplus value and profit, in the particular industry, leads to a reduction of aggregate demand in the economy, because those workers now have less money to spend. This lower level of aggregate demand then makes it harder for other capitalists to sell their commodities, and thereby to realise their profits. But, as Marx illustrates in *Capital Volume II*, each capitalist is only able to reproduce their own capital, because the capital they advance returns to them via the circuit of money and commodities.

In other words, capitalist A pays £100 in wages to his workers. They spend this £100 buying commodities sold by capitalist B. Capitalist B then spends this £100, buying commodities from Capitalist A, so that by this route A gets back the £100 of variable capital they had advanced as wages. But, if capitalist A only pays out £50 in wages, capitalist B can only receive this £50 from A's workers. Consequently, B only has £50 to spend with A, but the very process of introducing labour saving technology by A, will also have meant that A, has more commodities to sell, as a result of their productivity rising sharply. So, they will have many more commodities to sell, but B's available money to buy them will have been halved, as a direct consequence of the reduction in A's wages.

Moreover,

“Crippled as they are by division of labour, these poor devils are worth so little outside their old trade, that they cannot find admission into any industries, except a few of inferior kind, that are over-supplied with underpaid workmen. Further, every branch of industry attracts each

year a new stream of men, who furnish a contingent from which to fill up vacancies, and to draw a supply for expansion. So soon as machinery sets free a part of the workmen employed in a given branch of industry, the reserve men are also diverted into new channels of employment, and become absorbed in other branches; meanwhile the original victims, during the period of transition, for the most part starve and perish.” (p 415)

But, it should not be taken from this that Marx saw this as a never ending descent. As he points out in *Theories of Surplus Value*, there are no permanent crises under capitalism, and, in fact, this very process of raising the rate of surplus value, and rate of profit, itself leads to a growing accumulation of capital, which means that rather than unemployment continually rising, the level of employment continually rises, aside from periodic crises. Marx details some of the ways, in fact, how the introduction of machinery leads to additional employment.

“Although machinery necessarily throws men out of work in those industries into which it is introduced, yet it may, notwithstanding this, bring about an increase of employment in other industries. This effect, however, has nothing in common with the so-called theory of compensation. Since every article produced by a machine is cheaper than a similar article produced by hand, we deduce the following infallible law: If the total quantity of the article produced by machinery, be equal to the total quantity of the article previously produced by a handicraft or by manufacture, and now made by machinery, then the total labour expended is diminished. The new labour spent on the instruments of labour, on

the machinery, on the coal, and so on, must necessarily be less than the labour displaced by the use of the machinery; otherwise the product of the machine would be as dear, or dearer, than the product of the manual labour. But, as a matter of fact, the total quantity of the article produced by machinery with a diminished number of workmen, instead of remaining equal to, by far exceeds the total quantity of the hand-made article that has been displaced. Suppose that 400,000 yards of cloth have been produced on power-looms by fewer weavers than could weave 100,000 yards by hand. In the quadrupled product there lies four times as much raw material. Hence the production of raw material must be quadrupled. But as regards the instruments of labour, such as buildings, coal, machinery, and so on, it is different; the limit up to which the additional labour required for their production can increase, varies with the difference between the quantity of the machine-made article, and the quantity of the same article that the same number of workmen could make by hand.” (p 417)

Exactly how this affects the numbers employed itself depends upon the composition of capital, and the extent to which machines have been introduced there too.

For example,

“The number of the men condemned to work in coal and metal mines increased enormously owing to the progress of the English factory system; but during the last few decades this increase of number has been less rapid, owing to the use of new machinery in mining.” (p 417)

In other words, the increased level of productivity in other areas, causes the rate of surplus value and rate of profit to rise, and although the number of workers employed in these industries may fall relatively, the absolute number of them employed may rise, because the higher rate of profit means that more capital is accumulate from this greater quantity of surplus value. But, even if more workers are not employed absolutely in these industries, the increase in capital employed within them, and increased requirement for constant capital, that results causes a need for capital accumulation in all those other industries, which supply it with means of production.

Moreover, as Marx sets out in *Capital III, Chapter 14*, where this additional production of surplus value arises, even if it is not employed in the industries which produced it, the consequence is that it forms the basis of capital accumulation in new industries, which tend to have a low organic composition of capital, and which, therefore, has the effect of employing a larger proportion of workers.

One such new branch of industry becomes machine and tool making itself. In 1861, 60,807 people were employed in England and Wales in this industry. It also stimulates those industries that provide inputs. The massive rise in productivity, in cotton spinning, created a surge in demand for US cotton. That in turn stimulated the slave trade. In 1790, there were 697,000 slaves in the US. By 1861, it was nearly 4 million.

Where machinery is introduced, at a stage in the production process that supplies primary or intermediate

products, this leads to a surge in demand for workers in handicraft or manufacture.

“Spinning by machinery, for example, supplied yarn so cheaply and so abundantly that the hand-loom weavers were, at first, able to work full time without increased outlay. Their earnings accordingly rose. Hence a flow of people into the cotton-weaving trade, till at length the 800,000 weavers, called into existence by the Jenny, the throstle and the mule, were overwhelmed by the power-loom. So also, owing to the abundance of clothing materials produced by machinery, the number of tailors, seamstresses and needlewomen, went on increasing until the appearance of the sewing-machine.” (p 418)

At one point, hand loom weavers were earning so much that they would walk around with £5 notes tucked into their hats. A few years later they were starving!

As machinery hugely increases the amount of raw materials produced, and reduces their price, so the number of branches of industry working them up increases, through an extension of the social division of labour. This is intensified by the development of the factory system, which increases specialisation and productivity far more than did manufacture.

Machinery massively increases the production of relative surplus value. This means that the number of capitalists and their dependants increases. It also means that they can buy an increased quantity and range of luxury goods. The fact that the increase in productivity brought about by machinery means that fewer workers are required to produce goods, means that a greater proportion of

society's available labour-time can also be devoted to the production of these luxury goods.

However, it's important to add a note of caution here. In *Volume III of Capital*, Marx says,

“It must never be forgotten that the production of this surplus-value — and the reconversion of a portion of it into capital, or the accumulation, forms an integrated part of this production of surplus-value — is the immediate purpose and compelling motive of capitalist production. It will never do, therefore, to represent capitalist production as something which it is not, namely as production whose immediate purpose is enjoyment or the manufacture of the means of enjoyment for the capitalist. This would be overlooking its specific character, which is revealed in all its inner essence.” (Chapter 15)

This impression can be gained because of the immense wealth and range of luxury goods that the richest capitalists enjoy. But, this is a reflection of the extent to which capitalism has expanded social wealth, the quantity, quality, and variety of use values in total, way beyond any previous mode of production.

Under feudalism, there was no objective imperative driving feudal lords to expand their land ownership. The only drive for that was purely subjective, based on individual greed. The same was true for the peasant. Provided the peasant could provide enough food and other necessities for their family, there was nothing driving them to produce more. This is why changes in production in such societies proceed slowly.

The feudal lord did not need to spend their rental income on expansion, and so was free to spend it on their own conspicuous consumption. The reason this pales, compared with the luxury consumption of capitalists, is not the greater greed of the latter, but the more restricted range of products available to the former.

Unlike the feudal lord, the industrial capitalist is driven not by greed, not by consideration for their own consumption, but by the objective requirement to accumulate capital in order to survive.

As machine production massively increases output, so it creates a surge in demand for inputs, including those which have to be imported, as with US cotton. This establishes new international economic and social relations. This increased international trade also opens up demand for new types of foreign luxury goods by capitalists.

Another consequence of this is that it creates a new demand for workers in the carrying trades, which become important industries in their own right. But, this development, in turn, stimulates the introduction of machinery into this industry too. The steam engine is introduced to power locomotives, barges and steam boats.

But, all of these also require the production of large amounts of infrastructure, the value from which may only be fully realised many years into the future. So, workers are required to work producing railways and depots, canals, ports, roads, and so on. They are also required for the production of gas works, for laying gas and water

pipes, and later building power stations and laying cables. They are required for establishing telegraph and then telephone systems etc.

So, although the introduction of machinery may not “free” capital and labour, in the way its apologists claimed, the massive increase in relative surplus value it produces, and the subsequent huge rise in capital accumulation that engenders, together with the consequent increase in trade, and production of a wider range of products, does create new channels for the newly produced capital to move into, and thereby to employ labour.

In fact, in the 19th century the increased demand for labour, in some of these new areas, could only be satisfied by importing foreign labour, for example, in the form of the Irish navvies. Similarly, after WWII, a whole range of new machines and technologies were introduced that replaced existing labour on a large scale, e.g. in coal mining. Yet, the increase in surplus value that accompanied it, and the increase in trade, and in new productive investment opportunities, that necessarily accompanied it, meant that far from causing rising unemployment, it led to labour shortages. That meant that, in Britain, married women had to be encouraged into the labour market, and the Conservative governments, of the 1950's, actively encouraged immigration, from the West Indies and Asia.

Marx also refers to another class of workers, whose employment probably expanded during this period, as a consequence of the increasing numbers and wealth of capitalists. That is the servant class. Marx estimates the number of workers in 1861 to be about 8 million. Of these

1.2 million were in this servant class, as opposed to around 1.1 million employed in agriculture and a similar number employed in production and mining.

Marx concludes,

“What a splendid result of the capitalist exploitation of machinery!” (p 421)

But, of course, the further advance of machine production saw the demand for industrial labour rise so substantially, with a consequent rise in wages, that the capitalist and middle classes increasingly found they could not afford to employ domestic servants, whilst new consumer domestic machinery removed the need for them anyway. Not only did this expansion of industrial capital, brought about by the increased relative surplus value, created by new machinery, soak up all of the workers from the servant class, but it also soaked up nearly all of the agricultural workers too. Today, less than 1% of the UK population is employed in agriculture.

7) Repulsion And Attraction Of Workpeople By The Factory System. Crises In The Cotton Trade

Here, Marx describes, in more detail, the contradictory nature of the effects of the introduction of machinery. On the one hand, there is no doubt that, for it to be worthwhile, to introduce a machine, the labour-time, required for its production, must be less than the labour-time it replaces. As previously seen, under capitalism, that must be less than the labour-time that is paid for. To this extent, the effect can be no other than to reduce the amount of labour employed, to produce a given quantity

of some particular commodity, including that employed in producing the machine.

However, the machine has other consequences. It raises relative surplus value, and it cheapens commodities so that an increased level of demand for them may arise. In both these ways a new demand for labour-power can arise. So, Marx writes,

“Nevertheless, in spite of the mass of hands actually displaced and virtually replaced by machinery, we can understand how the factory operatives, through the building of more mills and the extension of old ones in a given industry, may become more numerous than the manufacturing workmen and handicraftsman that have been displaced. Suppose, for example, that in the old mode of production, a capital of £500 is employed weekly, two-fifths being constant and three-fifths variable capital, i.e., £200 being laid out in means of production, and £300, say £1 per man, in labour-power. On the introduction of machinery the composition of this capital becomes altered. We will suppose it to consist of four-fifths constant and one-fifth variable, which means that only £100 is now laid out in labour-power. Consequently, two-thirds of the workmen are discharged. If now the business extends, and the total capital employed grows to £1,500 under unchanged conditions, the number of operatives employed will increase to 300, just as many as before the introduction of the machinery. If the capital further grows to £2,000, 400 men will be employed, or one-third more than under the old system. Their numbers have, in point of fact, increased by 100, but relatively, i.e., in proportion to the total capital advanced, they have diminished by 800, for the £2,000 capital would, in the old

state of things, have employed 1,200 instead of 400 men. Hence, a relative decrease in the number of hands is consistent with an actual increase.” (p 422-3)

In previous chapters, it's also been seen how capitalist development means that, as it expands, the amount of constant capital grows, relative to labour-power. But, again, this is a contradictory process. There are times when capital expands purely quantitatively, on the same technical basis, i.e. just more factories are built, more firms arise, and so the demand for labour grows in the same proportion. But, at other times, of more feverish development, that I would term a *Long Wave Boom*, a rash of new technological developments are introduced rapidly. Capital expands not just quantitatively but qualitatively. There may be a sharp reduction in the amount of labour-power employed relatively, as new technologies displace existing workers, some existing firms, or even entire industries, which may disappear. (That was true, for example, about all those people employed in industries related to horse-drawn carriages, that disappeared as motor vehicles were introduced.) But, this occurs simultaneously with a large increase in the absolute quantity of labour-power employed, as whole new industries are developed, and the total level of social production expands at a faster rate.

Marx wrote,

“This first period, during which machinery conquers its field of action, is of decisive importance owing to the extraordinary profits that it helps to produce. These profits not only form a source of accelerated accumulation, but also attract into the favoured sphere of

production a large part of the additional social capital that is being constantly created, and is ever on the look-out for new investments. The special advantages of this first period of fast and furious activity are felt in every branch of production that machinery invades. So soon, however, as the factory system has gained a certain breadth of footing and a definite degree of maturity, and, especially, so soon as its technical basis, machinery, is itself produced by machinery; so soon as coal mining and iron mining, the metal industries, and the means of transport have been revolutionised; so soon, in short, as the general conditions requisite for production by the modern industrial system have been established, this mode of production acquires an elasticity, a capacity for sudden extension by leaps and bounds that finds no hindrance except in the supply of raw material and in the disposal of the produce.” (p 424)

The solution to the last of these constraints – the disposal of the produce – can be and is resolved, by the continual introduction of new types of use values that can be sold as commodities. This is also what Marx talks about, in the *Grundrisse*, when he speaks about the “*Civilising Mission of Capital*”, which forever has to create these new types of use values, for that very reason, to be sold to workers, and by that process continually extends the workers' horizons. The limitation here essentially becomes a technical one, of having sufficient new use values to be introduced, to absorb the surplus capital, so as to avoid overproduction. Again, this is the essential feature of the Long Wave. In periods of boom, technological developments create sufficient new base

technologies to allow that to happen, in periods of long wave downturn, they do not.

It also has other consequences. In these periods, when workers are thrown out of employment, it creates a drive towards emigration, which was seen into North America, India, and Australia. Combined with the existing colonial empires, this provided an impetus for these colonies to become mainly sources of the required raw materials, as well as markets for the manufactured goods. In a way, this replicates the previous division between town and country, and the social division of labour built on it. But, it now creates this social division of labour at a global level. The development of capital created yet another new international division of labour, particularly after WWII.

The seeds of that development could, however, be seen at the time Marx was writing. For example, he writes, of the United States in 1866,

“The economic development of the United States is itself a product of European, more especially of English modern industry. In their present form (1866) the States must still be considered a European colony.”

But, by the time of the *Fourth German Edition*, Engels had appended to this note,

“Since then they have developed into a country whose industry holds second place in the world, without on that account entirely losing their colonial character.” (Note 2, p 425)

The same kind of development has occurred in many former colonies, in the latter part of the 20th century, and

continues to spread into the 21st century. Today, it is Africa's turn to experience rapid industrial development.

The reason for the scramble for sources of cheap raw materials, and for markets for goods, stems directly from the competition between relatively large numbers of companies, each producing essentially homogeneous commodities (i.e. one yard of cotton drill is essentially the same as any other), and each forced to try to expand its market share on the basis of lower prices.

“The enormous power, inherent in the factory system, of expanding by jumps, and the dependence of that system on the markets of the world, necessarily beget feverish production, followed by over-filling of the markets, whereupon contraction of the markets brings on crippling of production. 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.” (p 425-7)

In contrast to Lenin's argument, in *"Imperialism, The Highest Stage of Capitalism"*, it is, this pre-monopoly stage of capitalism which explains the drive to secure colonial possessions, and indeed, as Bill Warren has pointed out in *"Imperialism: Pioneer of Capitalism"*, it was during this pre-monopoly stage of capitalism that the world **was** divided up into colonial empires.

In fact, as Engels sets out in his *"Critique Of The Erfurt Programme"*, by the end of the 19th century, the development of large companies and corporations brings to an end this period of privately owned capital, but also of the *"planlessness"*, described here by Marx. From the beginning of the 20th century, with the economy being dominated by a relatively small number of huge corporations, the nature of competition within this more *"planned"* capitalism changes. In place of destructive price competition, these oligopolies seek to increase their profits by an increased focus on innovation, as a means of reducing costs. They seek to defend and extend their market share on the basis of a similar use of innovation, to distinguish their own brand from other commodities, of a similar type, by a focus on raising quality and choice, a distinction they attempt to heighten, via extensive use of advertising and marketing.

The Fordist model, adopted by developed economies in the 20th century, particularly after WWII, attempts to extend this planning principle, developed within the enterprise, to the economy as a whole. Welfare states provide a high degree of regulation of workers income and expenditure, so as to avoid large swings in aggregate demand; central banks via monetary policy, help prevent deflation, and falls in nominal prices, which

are destabilising and destructive of oligopoly profits; the incorporation of the trades unions, via collective bargaining and mutuality agreements, ensure continual rises in productivity and relative surplus value, in return for annual real wage increases, thereby creating stability, and steadily rising aggregate demand.

This is not to say that by these means capitalism has become crisis free. Far from it. The same tendency towards overproduction, that Marx indicates above, in relation to 19th century privately owned, competitive capitalism, applies even more to 20th and 21st century, collectively owned, monopoly capitalism, but the manifestation of that tendency is necessarily different. In the former, it leads each enterprise to seek to overcome the limitations of the market, by trying to win a larger share of it, by even more production, and lower prices, which acts to only accentuate the overproduction, and intensify the collapse. In the latter, it leads to enterprises reducing their output in a planned way, slowing their investments, and laying workers off, in order to reduce their costs, and prevent falls in prices.

Andrew Kliman in his book *“The Failure of Capitalist Production”* is absolutely correct in this regard, when he writes,

“Companies’ decisions about how much output to produce are based on projections of demand for the output. Since technical progress does not affect demand – buyers care about the characteristics of products, not the processes used to produce them – it will not cause companies to increase their levels of output, all else being equal.”(Note 4, P 16)

However, it does not mean that these same companies will not invest more, under such conditions, so as to try to reduce their costs of production, or to develop new products, in the hope of capturing a larger market share. The question again becomes one determined by the phase of the long wave cycle, i.e. are there sufficient new base technologies in existence to bring about large scale restructuring of production to reduce costs, and to produce a large range of truly new use values that can find a market at prices that enable the capital consumed in their production to be replaced, and to produce a sufficient profit.

But, of course, this very process of reducing the level of planned investment, and so on has the effect of reducing aggregate demand, which in turn leads to a downward spiral, unless checked by some form of action, by the state, in the form of Keynesian fiscal, or Friedmanite monetary stimulus, or both. Yet, even the effectiveness of these measures, as was seen in the 1970's and 80's, is limited by the long wave conjuncture. During the long wave downturn, they are likely to lead to "*crowding out*", or to stagflation rather than robust growth. Where they do promote growth, as happened in the 1990's, it is inflationary growth, leading to its own problems, which are witnessed today, in the huge debt overhang affecting Europe and North America.

The consequences of this are even more severe for those sectors of the economy where these 19th century relations still persist, i.e. in the small business sector.

Marx continues,

“A necessary condition, therefore, to the growth of the number of factory hands, is a proportionally much more rapid growth of the amount of capital invested in mills. This growth, however, is conditioned by the ebb and flow of the industrial cycle. It is, besides, constantly interrupted by the technical progress that at one time virtually supplies the place of new workmen, at another, actually displaces old ones. This qualitative change in mechanical industry continually discharges hands from the factory, or shuts its doors against the fresh stream of recruits, while the purely quantitative extension of the factories absorbs not only the men thrown out of work, but also fresh contingents. The workpeople are thus continually both repelled and attracted, hustled from pillar to post, while, at the same time, constant changes take place in the sex, age, and skill of the levies.” (p 427-8)

And, this uncertainty and disruption continues to characterise capitalism today. Changes within the structure of capital, and the uneven development of capital, and of the employment of technology within it, continually change the nature of the demand for labour-power.

The kinds of changes that occurred in the 19th century, with large numbers thrown off the land, and into long hours of factory work, have been mirrored, over the last thirty years, by the large numbers thrown out of relatively stable employment, in manufacturing industry, into unstable, temporary, and casual employment, in service industry, as it has become dominant.

Marx describes the continual fluctuations between prosperity and depression, in the years between 1815

and 1860, in the textile industry. These fluctuations often occurred from one year to the next, as opposed to the more prolonged trade cycle witnessed in later years. During this period, new businesses, often run by former overlookers, would be set up, during periods of prosperity, only to be crushed when it ended, partly due to being under capitalised. In order to save money, capitalists would buy cheaper cotton, and use cheaper ancillary materials, only to find this raised costs, because of the poorer quality, and because it caused the machines to break down. They would try to recoup this cost from workers wages, pushing them below the value of labour-power. This was abetted by the fact that employers also owned workers' cottages, and deducted rent directly from wages. This was also the period of the *Truck System*, when employers paid wages in tokens only redeemable at the company owned shop. It was in response to this, and the poor quality of goods available to them, as a consequence of this monopoly, that workers established their own co-operative stores, and agitated for laws against the *Truck System*. Ironically, today the trades unions defend the modern truck system, operated by the capitalist state, in the form of the *Welfare State*.

As Engels describes, in his later prefaces to "*The Condition of The Working Class in England*", another consequence of the development of capital, beyond these early, small scale forms of capital, was that the bigger capitalists abandoned these kinds of "*penny-pinching*" measures as counter-productive. They embraced the Factory Acts and even trades unions. In so

doing they strengthened their own position. As Engels put it,

“And in proportion as this increase took place, in the same proportion did manufacturing industry become apparently moralised. The competition of manufacturer against manufacturer by means of petty thefts upon the workpeople did no longer pay. Trade had outgrown such low means of making money; they were not worth while practising for the manufacturing millionaire, and served merely to keep alive the competition of smaller traders, thankful to pick up a penny wherever they could. Thus the truck system was suppressed, the Ten Hours’ Bill was enacted, and a number of other secondary reforms introduced — much against the spirit of Free Trade and unbridled competition, but quite as much in favour of the giant-capitalist in his competition with his less favoured brother. Moreover, the larger the concern, and with it the number of hands, the greater the loss and inconvenience caused by every conflict between master and men; and thus a new spirit came over the masters, especially the large ones, which taught them to avoid unnecessary squabbles, to acquiesce in the existence and power of Trades’ Unions, and finally even to discover in strikes — at opportune times — a powerful means to serve their own ends. The largest manufacturers, formerly the leaders of the war against the working-class, were now the foremost to preach peace and harmony. And for a very good reason. The fact is that all these concessions to justice and philanthropy were nothing else but means to accelerate the concentration of capital in the hands of the few, for whom the niggardly extra extortions of former years had lost all importance and had become actual

nuisances; and to crush all the quicker and all the safer their smaller competitors, who could not make both ends meet without such perquisites. Thus the development of production on the basis of the capitalistic system has of itself sufficed — at least in the leading industries, for in the more unimportant branches this is far from being the case — to do away with all those minor grievances which aggravated the workman's fate during its earlier stages.”

(1892 Preface To the English Edition of “The Condition Of the Working Class in England”)

8) Revolution Effected In Manufacture, Handicrafts, And Domestic Industry By Modern Industry

A. Overthrow of Co-operation Based on Handicraft, and on the Division of Labour

Machine industry does away with the division of labour of handicraft and manufacture. Increasingly, the machine incorporates the several processes, that division of labour had established, into one continuous process, as was seen with the envelope machine. Wherever human motive power is replaced by machinery, this sees the introduction of the factory system, because it is only efficient to use this motive power – water, steam, electric, etc. - to drive many machines, and carry on production on a large scale.

However, there are exceptions. Agriculture provides one example. The introduction of expensive machinery tends to drive towards larger farms. However, its possible for a number of smaller farms to pool their resources to buy equipment and then share its use. There were even

experiments to do this in providing steam power to cottage based weavers.

“In the Coventry silk weaving industry the experiment of “cottage factories” was tried. In the centre of a square surrounded by rows of cottages, an engine-house was built and the engine connected by shafts with the looms in the cottages. In all cases the power was hired at so much per loom. The rent was payable weekly, whether the looms worked or not. Each cottage held from 2 to 6 looms; some belonged to the weaver, some were bought on credit, some were hired. The struggle between these cottage factories and the factory proper, lasted over 12 years. It ended with the complete ruin of the 300 cottage factories.” (p 433)

There were also hydraulic power systems developed in Manchester, London and Kingston upon Hull, which provided a clean alternative to steam engines, and powered machinery, bridges, cranes, lifts and other machines across those cities.

Where the cost of the motive power falls, the potential for using it, on a smaller scale, opens up. For example, the introduction of the internal combustion engine, and electric motors, makes possible the economic powering of individual machines without this needing to be done on a massive scale.

There are a number of similar developments that can be seen in more recent times. Some remaining areas of domestic production were transferred to “*factories*” and then back to the home. For example laundry. In the post WWII period, when capital needed more labour power,

and encouraged married women to enter the workforce, the task of washing clothes was transferred to industrial laundries, like that established by the Co-op. This was supplemented, and then replaced, by the introduction of laundrettes, which provided industrial scale washers and dryers. But, as the cost of producing these fell, the machines were introduced into the home, and the work returned to the domestic sphere.

A similar situation has occurred in relation to the media. The huge cheapening of equipment means that the development of large scale media production has broken down, with much production farmed out to small scale, almost handicraft or manufacture type production, by small companies or even to individuals – e.g. citizen journalism, blogging etc.

Cheap electric power, able to power the most important machines of the modern age – computers – connected via the Internet, which functions as the transmission mechanism, described by Marx, means that the majority of modern, high value, intellectual production can be done at home, and on the same kind of co-operative basis, based on a division of labour, as happened with handicraft and manufacture. One person having produced film footage can download it, to their computer, send it to a sound engineer, who can add the soundtrack etc., and then send it to an editor and so on.

Book keepers and payroll clerks can sit at home, with a computer, and process data and so on. Software engineers can work on specific pieces of code. In parts of the world like Singapore, with 1 Gig broadband speeds, even education can now be provided at home, with one

teacher able to provide lessons to vast numbers of students.

Moreover, these developments mean that many of the people employed to do this work can be employed on an individual rather than collective basis. In other words, they can be paid for the provision of a commodity other than labour power. This returns such producers to the position of that of the peasant employed in handicraft production.

B. Reaction of the Factory System on Manufacture and Domestic Industries

The methods employed by the factory system, of breaking down the process of production, and then applying science to determine how they can be most effectively performed, spreads out into all areas of economic activity.

These changes break down the composition of the collective labourer, based on the division of labour, under manufacturing. They create the conditions for the employment of women and children as cheap labour, and all the excesses associated with that in the early stages. But, when that becomes more regulated, within the factories, it leaves its scope in the other sectors unaltered. Domestic industry, under handicraft or manufacture, is quite different to that which applies under machine industry.

“This modern so-called domestic industry has nothing, except the name, in common with the old-fashioned domestic industry, the existence of which pre-supposes independent urban handicrafts, independent peasant

farming, and above all, a dwelling-house for the labourer and his family. That old-fashioned industry has now been converted into an outside department of the factory, the manufactory, or the warehouse. Besides the factory operatives, the manufacturing workmen and the handicraftsman, whom it concentrates in large masses at one spot, and directly commands, capital also sets in motion, by means, of invisible threads, another army; that of the workers in the domestic industries, who dwell in the large towns and -are also scattered over the face of the country.” (p 434)

This domestic industry is particularly oppressive because of its nature. In the factory, the machine removes much of the heavy work. The Factory Acts eventually place limits on the conditions, and the number of workers collected together, and organised in trades unions, facilitates the workers in defending themselves against encroachments on those limits. Atomised and isolated, the domestic workers lack these safeguards.

“This exploitation is more shameless in the so-called domestic industry than in manufactures, and that because the power of resistance in the labourers decreases with their dissemination; because a whole series of plundering parasites insinuate themselves between the employer and the workman; because a domestic industry has always to compete either with the factory system, or with manufacturing in the same branch of production; because poverty robs the workman of the conditions most essential to his labour, of space, light and ventilation; because employment becomes more and more irregular; and, finally, because in these the last resorts of the masses made “redundant” by modern

industry and Agriculture, competition for work attains its maximum.” (p 435)

C. Modern Manufacture

Marx then gives extensive examples of these kinds of employment and the abuses associated with them. As Marx says, many of these have already been elaborated in the chapter on *The Working Day*. More still are given by Engels in “*The Condition of the Working Class in England*”. For that reason, I do not intend detailing them here.

E. Passage of Modern Manufacture, and Domestic Industry into Modern Mechanical Industry. The Hastening of This Revolution by the Application of the Factory Acts to those Industries

“The cheapening of labour-power, by sheer abuse of the labour of women and children, by sheer robbery of every normal condition requisite for working and living, and by the sheer brutality of overwork and night-work, meets at last with natural obstacles that cannot be overstepped. So also, when based on these methods, do the cheapening of commodities and capitalist exploitation in general. So soon as this point is at last reached — and it takes many years — the hour has struck for the introduction of machinery, and for the thenceforth rapid conversion of the scattered domestic industries and also of manufactures into factory industries.” (p 442)

In 1861, around one million people were employed outside the factory system, in manufacture and domestic production of clothing alone. Many of these, Marx says,

are workers that had been “set free” as a result of the introduction of machines into factories.

“The production of wearing apparel is carried on partly in manufactories in whose workrooms there is but a reproduction of that division of labour, the membra disjecta of which were found ready to hand; partly by small master-handicraftsmen; these, however, do not, as formerly, work for individual consumers, but for manufactories and warehouses, and to such an extent that often whole towns and stretches of country carry on certain branches, such as shoemaking, as a speciality; finally, on a very great scale by the so-called domestic workers, who form an external department of the manufactories, warehouses, and even of the workshops of the smaller masters.” (p 442-3)

Now, the raw materials were provided by machine industry and the mass of the workers to process them, workers that had been replaced by it. This vast reserve army was now available for capital to attract or repel according to the needs of market conditions.

“The decisively revolutionary machine, the machine which attacks in an equal degree the whole of the numberless branches of this sphere of production, dressmaking, tailoring, shoemaking, sewing, hat-making, and many others, is the sewing-machine.” (p 443)

That is perhaps fitting because thousands of years earlier, one of the most important tools developed was the bone needle, which made it possible for the first time, to create fitted clothing as opposed to merely draped animal skins.

As with the introduction of machinery elsewhere, the wages of the machine workers rises compared to that of the domestic hand workers. The more highly skilled, usually male workers sinks, unable to compete with the machines. The majority of the machine workers are young women and girls. The elderly women and young children are driven out.

On the one hand, Marx describes the rise in London, in the ten years up to 1864, of starvation which coincided with the introduction of the sewing machine. That, as a result of those thrown out of work. On the other, these new machinists worked in poor conditions, and for long hours, though not as long as for those previously employed in domestic production.

Exactly how the sewing machine changed the production, in each area, depended on how it was previously organised, i.e. on the basis of manufacture or handicraft, simple co-operation and so on, and this varied from one type of product to another.

“In tailoring, shirtmaking, shoemaking, &c., all the forms are intermingled. Here the factory system proper.” (p 444-5)

As more capital is invested, in sewing machines, so these machines produce a glut of commodities. The domestic workers are expropriated, as they sell their own machines. This leads to an overproduction of machines. The machine makers then turn to renting machines, thereby destroying the small scale machine owners. In the meantime, continual changes in the production of machines reduces their value,

“...and their ever-increasing cheapness, depreciate day by day the older makes, and allow of their being sold in great numbers, at absurd prices, to large capitalists, who alone can thus employ them at a profit.” (p 445)

On the one hand, this process of concentration, into larger workplaces, drives towards the introduction of steam power, to drive a large number of machines, but at the same time, the introduction of steam provides another advantage over the small producers, further stimulating concentration.

“Thus England is at present experiencing, not only in the colossal industry of making wearing apparel, but in most of the other trades mentioned above, the conversion of manufacture, of handicrafts, and of domestic work into the factory system, after each of those forms of production, totally changed and disorganised. Under the influence of modern industry, has long ago reproduced, and even overdone, all the horrors of the factory system, without participating in any of the elements of social progress it contains.” (p 446)

Marx sets out the basis of Engels' later comment, in the 1892 Preface to *“The Condition of the Working Class”*, that the large employers embraced the Factory Acts as a means of destroying their smaller competitors.

“This industrial revolution which takes place spontaneously, is artificially helped on by the extension of the Factory Acts to all industries in which women, young persons and children are employed. The compulsory regulation of the working-day as regards its length, pauses, beginning and end, the system of relays of

children, the exclusion of all children under a certain age, &c., necessitate on the one hand more machinery and the substitution of steam as a motive power in the place of muscles. On the other hand, in order to make up for the loss of time, an expansion occurs of the means of production used in common, of the furnaces, buildings, &c., in one word, greater concentration of the means of production and a correspondingly greater concourse of workpeople. The chief objection, repeatedly and passionately urged on behalf of each manufacture threatened with the Factory Act, is in fact this, that in order to continue the business on the old scale a greater outlay of capital will be necessary. But as regards labour in the so-called domestic industries and the intermediate forms between them and Manufacture, so soon as limits are put to the working-day and to the employment of children, those industries go to the wall. Unlimited exploitation of cheap labour-power is the sole foundation of their power to compete.” (p 446-7)

The equivalent today, in Britain, is the extent to which welfarism subsidises the worst employers. So long as bad employers can pay low wages, and still attract workers, whose income is bolstered by transfers from other workers, in the form of Child Benefits, Tax Credits, and so on, those – usually small, inefficient – employers will do so. That, in itself, holds back the clearing out of these types of inefficient capital, and their replacement with efficient, more high value production, able to pay better wages to its workers.

A similar process was described by Marx, in relation to earthenware manufacture, where employers objected to the limitation and pausing of the working day, on the

grounds that it was not compatible with the production process.

“In 1864, however, they were brought under the Act, and within sixteen months every “impossibility” had vanished.

‘The improved method,” called forth by the Act, “of making slip by pressure instead of by evaporation, the newly-constructed stoves for drying the ware in its green state, &c., are each events of great importance in the pottery art, and mark an advance which the preceding century could not rival.... It has even considerably reduced the temperature of the stoves themselves with a considerable saving of fuel, and with a readier effect on the ware.’

In spite of every prophecy, the cost-price of earthenware did not rise, but the quantity produced did, and to such an extent that the export for the twelve months, ending December, 1865, exceeded in value by £138,628 the average of the preceding three years.” (p 447)

How many firms that survive in Britain today, only on the basis of the low wages and poor conditions of their workers, would have to invest in and develop more efficient methods, if the income of those workers were no longer supplemented by transfers from other workers?

A similar regulation occurs in respect of the peaks and troughs of employment during the year. Marx describes how, in addition to the normal business cycle, improved means of communication had led to buyers giving orders at short notice, to suppliers, for large orders. Together with changes in fashion, this meant suppliers needed to quickly employ workers, and work them for long hours, to

complete the orders. Then these workers would be laid off, cast back into the reserve army. Today, in Britain the extent to which conditions have reverted to those of the 19th century is shown by the fact, that around 800,000 people are employed on zero hours contracts, that place them in exactly the same situation as the workers described above. The employers that employ such contracts justify them on the basis that they could not make profits without them, as though society owes them the lucrative living they enjoy, even at the expense of the livelihood and health of tens of thousands of other members of society.

But, the introduction of the Factory Acts prevented this overwork during given periods, which meant work, over the year, itself had to be spread out, and this was itself more compatible with the needs of large scale machine industry, that production should be, more or less, at a steady rate, and continuous.

“The thoroughly conscientious investigations of the Children’s Employment Commission prove that the effect of the regulation of the hours of work, in some industries, was to spread the mass of labour previously employed more evenly over the whole year that this regulation was the first rational bridle on the murderous, meaningless caprices of fashion, caprices that consort so badly with the system of modern industry; that the development of ocean navigation and of the means of communication generally, has swept away the technical basis on which season-work was really supported, and that all other so-called unconquerable difficulties vanish before larger buildings, additional machinery, increase in the number of workpeople employed, and the alterations caused by all

these in the mode of conducting the wholesale trade. But for all that, capital never becomes reconciled to such changes — and this is admitted over and over again by its own representatives — except “under the pressure of a General Act of Parliament” for the compulsory regulation of the hours of labour.” (p 450-1)

9) The Factory Acts. Sanitary And Educational Clauses Of The Same. Their General Extension In England

Although the Factory Acts were fought for by workers, and implemented by a capitalist state, in the face of opposition by capitalists, at an individual level, those Acts were themselves in the interests of *Capital in General*, and particularly the bigger capitalists. They flowed necessarily from the needs of capitalism, as machine industry developed, just as later was the case with the Welfare State.

“Factory legislation, that first conscious and methodical reaction of society against the spontaneously developed form of the process of production, is, as we have seen, just as much the necessary product of modern industry as cotton yarn, self-actors, and the electric telegraph.” (p 451)

This is not at first apparent, as a modern machine industry is introduced. Even as the working day is limited, the capitalists seek to intensify labour, and to cut costs in other ways. Marx highlights the way capital saved money, by providing workers with insufficient breathing space, lack of other sanitation in the factory, lack of safety

provision etc., which had a high cost in death, injuries and disease for workers.

“The sanitary officers, the industrial inquiry commissioners, the factory inspectors, all harp, over and over again, upon the necessity for those 500 cubic feet, and upon the impossibility of wringing them out of capital. They thus, in fact, declare that consumption and other lung diseases among the workpeople are necessary conditions to the existence of capital.” (p 453)

The other aspect of the Acts was the education provisions. The experience was salutary, and provided the basis for Marx’s view of how workers’ education should be provided. He cites the finding that,

“The factory inspectors soon found out by questioning the schoolmasters, that the factory children, although receiving only one half the education of the regular day scholars, yet learnt quite as much and often more.” (p 454)

Referring to a speech by Senior, Marx notes,

“He there shows, amongst other things, how the monotonous and uselessly long school hours of the children of the upper and middle classes, uselessly add to the labour of the teacher, “while he not only fruitlessly but absolutely injuriously, wastes the time, health, and energy of the children.” From the Factory system budded, as Robert Owen has shown us in detail, the germ of the education of the future, an education that will, in the case of every child over a given age, combine productive labour with instruction and gymnastics, not only as one of the methods of adding to the efficiency of production, but

as the only method of producing fully developed human beings.” (p 454)

At the same time, children employed in the modern factories were kept, day in day out, to the same repetitive tasks that provided them with no useful skill.

The previous modes of production, which developed the different trades, were essentially conservative whereas modern capitalist production is revolutionary. Previously, the trades were secretive, whereas modern industry is based on throwing open the productive process, analysing it, and applying science to it.

“The principle which it pursued, of resolving each process into its constituent movements, without any regard to their possible execution by the hand of man, created the new modern science of technology.” (p 456)

This creates all of the vicissitudes of capitalism, previously described, but, Marx continues,

“This is the negative side. But if, on the one hand, variation of work at present imposes itself after the manner of an overpowering natural law, and with the blindly destructive action of a natural law that meets with resistance at all points, modern industry, on the other hand, through its catastrophes imposes the necessity of recognising, as a fundamental law of production, variation of work, consequently fitness of the labourer for varied work, consequently the greatest possible development of his varied aptitudes. It becomes a question of life and death for society to adapt the mode of production to the normal functioning of this law. Modern industry, indeed, compels society, under penalty of death,

to replace the detail-worker of to-day, grappled by life-long repetition of one and the same trivial operation, and thus reduced to the mere fragment of a man, by the fully developed individual, fit for a variety of labours, ready to face any change of production, and to whom the different social functions he performs, are but so many modes of giving free scope to his own natural and acquired powers.

One step already spontaneously taken towards effecting this revolution is the establishment of technical and agricultural schools, and of “écoles d’enseignement professionnel,” in which the children of the working-men receive some little instruction in technology and in the practical handling of the various implements of labour.” (p 458)

In fact, the more capitalist production and society has developed, in this way, with increasing diversity and technological complexity, the more capital is forced to extend and deepen this education and training for workers. Moreover, the more capital is forced to invest in this education and training, the more it is forced to ensure that the workers, in whom it has invested such resources, are kept alive and healthy, so as to reproduce that value. There is no point spending tens of thousands of pounds in educating new workers, if they die young, before they have had chance to reproduce that value. That is why industrial capital is led naturally to introduce the Welfare State in order to ensure that workers health and education is ensured at the necessary minimum level. The first National Insurance scheme was introduced in Prussia in the first half of the 19th century, and as part of

the industrialisation of Germany, Bismark introduced such a scheme nationally.

By financing such welfare states, via a state run national insurance scheme, capital ensures that workers pay for it out of their wages collectively, so as to ensure that the required minimum level of consumption is ensured to meet the needs of capital. That is necessary, because we know, for example, that, given the choice, in relation to things such as dental care, workers will not necessarily devote the necessary amount of their income to healthcare, as opposed to other forms of consumption. In this way, welfare states operate in the same way that the *Truck System* operated in the 19th century.

Modern industry was having other effects. The state had kept out of relations within the home, but the exploitation of children, by their parents, within the system, eventually provoked a response for their protection. But, also alongside all of the horrors that went along with the exploitation of women and children, in the workplace, it created a new economic relationship that undermined their millennia long dependence upon paternalism.

Two things bring about the regulation of capitalist production, at the level of social production.

“There are two circumstances that finally turn the scale: first, the constantly recurring experience that capital, so soon as it finds itself subject to legal control at one point, compensates itself all the more recklessly at other points; secondly, the cry of the capitalists for equality in the conditions of competition, i.e., for equal restraint on all exploitation of labour.” (p 460)

Marx quotes the *Children's Employment Commission*, in its submission on extending the scope of the Factory Acts, and the effect it would have on adult workers, and the beneficial effect it would have for capital in general.

“It would enforce upon them regular and moderate hours; it would lead to their places of work being kept in a healthy and cleanly state; it would therefore husband and improve that store of physical strength on which their own well-being and that of the country so much depends...” (p 462)

As Marx had set out previously, what capital insists on, above all else, is a level playing field for all exploitation. Though, of course, such a level playing field benefits the bigger capitalists, who can afford to play on it. It was this principal that led Winston Churchill to introduce the first minimum wage back in 1909, saying,

“It is a national evil that any class of Her Majesty’s subjects should receive less than a living wage in return for their utmost exertions... where you have what we call sweated trades, you have no organisation, no parity of bargaining, the good employer is undercut by the bad and the bad by the worst; the worker, whose whole livelihood depends upon the industry, is undersold by the worker who only takes up the trade as a second string... where these conditions prevail you have not a condition of progress, but a condition of progressive degeneration.”

(Hansard HC vol 155, col 1888 (24 April 1906))

But, this principle is also accepted by Libertarians too. Hayek, in *“The Road To Serfdom”*, wrote,

“...but there can be no doubt that some minimum of food, shelter and clothing, sufficient to preserve health and capacity to work, can be assured to everybody...”

Nor is there any reason why the state should not assist the individuals in providing for these common hazards of life against which, because of their uncertainty, few individuals can make adequate provision.” (p 90)

Elsewhere echoing Marx’s point that what capital requires is a level playing field, Hayek writes,

“Similarly, with respect to most of the general and permanent rules which the state may establish with regard to production, such as building regulations or factory laws: these may be wise or unwise in the particular instance, but they do not conflict with liberal principles so long as they are intended to be permanent and are not used to favour or harm particular people.” (p 60)

It was under these conditions that the *Factory Acts Extension Act*, and *Workshops Regulation Act* of 1867 were introduced, covering all factories and workshops, including employment of children in the home.

But, both still remained inadequate. The former contained many exceptions, introduced as a compromise, whilst the latter was left to be implemented by municipal authorities, who failed in their responsibility. Even when it was taken away from them and given to the Factory Inspectorate, the latter were given hardly any extra staff to cope with the added workload.

“What strikes us, then, in the English legislation of 1867, is, on the one hand, the necessity imposed on the parliament of the ruling classes, of adopting in principle measures so extraordinary, and on so great a scale, against the excesses of capitalistic exploitation; and on the other hand, the hesitation, the repugnance, and the bad faith, with which it lent itself to the task of carrying those measures into practice.” (p 464)

Some of the reasons for this are to be found in the politics involved, deriving from the vested interests in each industry. For example, as Marx points out, one of the reasons the Factory Acts were passed was because the *Tory* representatives of the old landlord class took revenge on the *Liberal* representatives of capital, for inflicting the defeat on them of the repeal of the *Corn Laws*. But, as Marx points out in relation to mining.

“The Inquiry Commission of 1862 also proposed a new regulation of the mining industry, an industry distinguished from others by the exceptional characteristic that the interests of landlord and capitalist there join hands. The antagonism of these two interests had been favourable to Factory legislation, while on the other hand the absence of that antagonism is sufficient to explain the delays and chicanery of the legislation on mines.” (p 464)

Marx then details these delays and chicanery, in relation to a series of pieces of legislation, relating to mining.

10) Modern Industry and Agriculture

“If the use of machinery in agriculture is for the most part free from the injurious physical effect it has on the factory

operative, its action in superseding the labourers is more intense, and finds less resistance, as we shall see later in detail. In the counties of Cambridge and Suffolk, for example, the area of cultivated land has extended very much within the last 20 years (up to 1868), while in the same period the rural population has diminished, not only relatively, but absolutely...

In the sphere of agriculture, modern industry has a more revolutionary effect than elsewhere, for this reason, that it annihilates the peasant, that bulwark of the old society, and replaces him by the wage-labourer. Thus the desire for social changes, and the class antagonisms are brought to the same level in the country as in the towns. The irrational, old-fashioned methods of agriculture are replaced by scientific ones. Capitalist production completely tears asunder the old bond of union which held together agriculture and manufacture in their infancy. But at the same time it creates the material conditions for a higher synthesis in the future, viz., the union of agriculture and industry on the basis of the more perfected forms they have each acquired during their temporary separation.” (p 473-4)

Marx describes the separation of Man from Nature, and its effects on the environment, in a way only more recently discussed by environmentalists. In the past, Marx says, the products of Nature, consumed by Man, in the form of food and clothing, were naturally returned to it. But, now, with masses of people concentrated in the towns, this does not happen, with a consequent effect on the fertility of the soil. That process contributes to the

deterioration of the health of the town worker and the intellectual life of the rural labourer.

“In agriculture as in manufacture, the transformation of production under the sway of capital, means, at the same time, the martyrdom of the producer; the instrument of labour becomes the means of enslaving, exploiting, and impoverishing the labourer; the social combination and organisation of labour-processes is turned into an organised mode of crushing out the workman’s individual vitality, freedom, and independence. The dispersion of the rural labourers over larger areas breaks their power of resistance while concentration increases that of the town operatives...

Capitalist production, therefore, develops technology, and the combining together of various processes into a social whole, only by sapping the original sources of all wealth — the soil and the labourer.” (p 474-5)

Part V

The Production Of Absolute and Relative Surplus Value

Chapter 16 - Absolute and Relative Surplus Value

Marx turns to examine absolute and relative surplus-value from a different angle to that he used earlier. He does so by returning to the question of the labour process, and the definition of productive labour. In previous modes of production, where production was engaged in by individuals, the labour process is one in which each individual interacts with nature, for the purpose of the production of some material product. This is impossible without the individual bringing to bear both their manual and mental abilities. The definition of productive labour is then determined accordingly as the production of some material product.

However, as co-operative labour develops, alongside a division of labour, this is no longer necessarily the case. At the level of the collective worker, the object is still the production of some material product, but, at the level of the individual worker, this is not so. There is a division between manual and mental labour. But, the mental labour constitutes productive labour just as much as does the manual labour.

Moreover, under capitalism, it is not production per se that is the object but the production of surplus value, the means by which capital expands. So, the definition of productive labour now becomes that which produces surplus value. As Marx says, this is covered in much more detail in *Theories of Surplus Value*.

To illustrate, Marx writes,

“If we may take an example from outside the sphere of production of material objects, a schoolmaster is a productive labourer when, in addition to belabouring the heads of his scholars, he works like a horse to enrich the school proprietor. That the latter has laid out his capital in a teaching factory, instead of in a sausage factory, does not alter the relation. Hence the notion of a productive labourer implies not merely a relation between work and useful effect, between labourer and product of labour, but also a specific, social relation of production, a relation that has sprung up historically and stamps the labourer as the direct means of creating surplus-value.” (p 477)

Nor does it matter whether the owner of this teaching factory is a private capitalist or a state capitalist. Andrew Kliman is absolutely correct on this point. He writes,

*“Government provision of, and people's entitlement to, some goods and services is now frequently called 'decommodification', but it is actually nothing of the sort. Before the Government can provide these things, it must either buy them or produce them. If it buys these things, they obviously remain commodities. They continue to be produced in order to expand value. This means they continue to be produced in a way that minimises cost and maximises production, and the consequences of this – exploitation, poor working conditions, unemployment and the falling tendencies of prices and the rate of profit – continue to exist as well. And **Marx (Marx and Engels Collected Works Vol. 24 pp 531-59)** argued that **'Where the state itself is a capitalist producer, as in the exploitation of mines, forests etc., its product is a “commodity” and hence possesses the specific character of every other commodity.'** This is not so*

because he defined it to be so, but because a government that acts as a capitalist producer minimises costs, maximises production, and in general behaves just like a private capitalist. Nothing is different in this case except that the moneys that purchase the 'de-commodified' commodities that the government produces are called tax contributions rather than sales revenues.” (Note 16 to Chapter 1, “The Failure of Capitalist Production”)

Engels also makes this point. In “*Anti-Duhring*” he writes,

“The modern state, no matter what its form, is essentially a capitalist machine, the state of the capitalists, the ideal personification of the total national capital. The more it proceeds to the taking over of productive forces, the more does it actually become the national capitalist, the more citizens does it exploit. The workers remain wage-workers - proletarians. The capitalist relation is not done away with. It is rather brought to a head” (p 360).

Alan Freeman, in 1991, in “*Quantitative Marxism*”, shows that, in the UK, during the whole post-war period, the social wage was negative. In other words, workers were paying more in “*taxes*”, for these various services, than they received back in value from them, emphasising once again that the state capitalist produces them as commodities, and extracts surplus value from the workers it employs to provide them.

In what sense does a miner go from being a productive worker one day, to becoming an unproductive worker the next, just because the capitalist state has become his employer? Clearly he does not. The same is true for

steelworkers, rail workers, nurses, doctors, teachers etc. All of these workers are involved in producing commodities. They may provide them as a worker employed by a private employer or by a state capitalist employer. In either case, they are employed by capital, they produce commodities, and they produce surplus value. Whether that surplus value is appropriated by their own employer (be it a private employer or the state) is irrelevant, because as Marx demonstrates, in his *Transformation of Values into Prices of Production*, the total surplus value, produced by all workers, is shared out, by capital, in accordance with the capital employed, via market prices. In reality, the existence of monopoly power, and the way in which capital uses the state to meet its needs, means that the actual allocation of surplus value is more complicated than that, but the underlying principle remains that the total surplus value produced forms the basis of the total of profits, interest, rent and taxes.

All capital, be it small scale capital or state capital, produces use values, because as Marx says, nothing can be a commodity unless it is also a use value. Someone must want it. All capital is, therefore, forced to organise its production to produce to meet the needs of consumers (be they end consumers or other businesses buying inputs), because unless they do so, they do not sell their products, and they do not realise their profits. To claim there is something different about state capitalist production, because it produces use values, rather than things to sell, is simply wrong. Moreover, what the capitalist state does, in relation to commodities like education and health, is that it uses its monopoly position

to sell these commodities, to workers, as a captive market, in the same way that 19th century capitalists did via the *Truck System*. It is not at all true to say that these use values are produced primarily to meet workers or consumers needs, or that they are provided free. The only needs they are produced to meet are the needs of capital, which is why they are reduced, whenever capital experiences a prolonged or serious economic crisis, which reduces its needs for labour-power.

They are merely important commodities, required for the reproduction of labour-power, and as such capital forces workers to buy them in sufficient quantity and quality to meet its needs, and to pay for them via taxes. The situation was even clearer in regard to state owned industries such as coal, energy and steel, where market prices, to domestic private industries, were set at such low levels as to ensure a direct transfer of the surplus value created by state workers to private capital.

Marx summarises his definition of absolute and relative surplus value.

“The prolongation of the working-day beyond the point at which the labourer would have produced just an equivalent for the value of his labour-power, and the appropriation of that surplus-labour by capital, this is production of absolute surplus-value. It forms the general groundwork of the capitalist system, and the starting-point for the production of relative surplus-value. The latter presupposes that the working-day is already divided into two parts, necessary labour, and surplus-labour. In order to prolong the surplus-labour, the necessary labour is shortened by methods whereby the

equivalent for the wages is produced in less time. The production of absolute surplus-value turns exclusively upon the length of the working-day; the production of relative surplus-value, revolutionises out and out the technical processes of labour, and the composition of society. It therefore presupposes a specific mode, the capitalist mode of production, a mode which, along with its methods, means, and conditions, arises and develops itself spontaneously on the foundation afforded by the formal subjection of labour to capital. In the course of this development, the formal subjection is replaced by the real subjection of labour to capital.” (p 477-8)

Marx refers to intermediate forms of production, where capital has not yet subordinated labour to it, but where a surplus product is still extracted from the producers.

“By the side of independent producers who carry on their handicrafts and agriculture in the traditional old-fashioned way, there stands the usurer or the merchant, with his usurer’s capital or merchant’s capital, feeding on them like a parasite. The predominance, in a society, of this form of exploitation excludes the capitalist mode of production; to which mode, however, this form may serve as a transition, as it did towards the close of the Middle Ages.” (p 478)

Marx points out that although these modes of production, where merchants' and usurers' capital predominate, exclude the possibility of capitalism, after capitalism has developed, these older forms can still arise alongside it. That is the case with domestic industry, for example, but is probably even more striking in the case of slavery. But,

as Marx points out, in these cases, *“their physiognomy is totally changed.”* (p 478)

Formal subjection of labour, whereby the previously independent producer became a wage labourer, is sufficient for the production of absolute surplus value. But, it is when this becomes a real subjection of labour to capital, i.e. when the worker can only sell their labour-power as factory labour, that it coincides with the extraction of relative surplus value.

This begins on an individual basis, as a means of extracting relative surplus value, by individual capitalists, who do so by reducing the value of their commodity below its social value, i.e. below its exchange value. But, this feature of capitalism ends when this method has become generalised across all the major branches of production. This then becomes the predominant form of production, and means of extracting relative surplus value. Then relative surplus value, in its previous specific sense, can only arise where capital seizes upon areas of production, not previously subject to capitalist production, or by further revolutionising the methods of production.

“Once the capitalist mode of production is established and become general, the difference between absolute and relative surplus-value makes itself felt, whenever there is a question of raising the rate of surplus-value. Assuming that labour-power is paid for at its value, we are confronted by this alternative: given the productiveness of labour and its normal intensity, the rate of surplus-value can be raised only by the actual prolongation of the working-day; on the other hand, given the length of the working-day, that rise can be effected

only by a change in the relative magnitudes of the components of the working-day, viz., necessary labour and surplus-labour; a change which, if the wages are not to fall below the value of labour-power, presupposes a change either in the productiveness or in the intensity of the labour.” (p 479)

Given that we have seen previously the process by which the duration of a normal working day becomes fixed, it is clear that any rise in the rate of exploitation can now only be secured through the extraction of relative surplus value. The intensity of labour can be raised, but this implies a reduction in the number of hours worked, if it is to be permanent, and vice versa.

However, in periods of high unemployment, or where capital may be able to access new reserves of labour, through immigration etc., it may, for a time, be able to still combine an increase in intensity with an increase in the length of the working day, because it can simply wear out the labour faster, and replace it from the reserve. The extension of the day can be achieved openly, or by encouraging workers to take work home, to work on the train in to work and so on. It can also be achieved by raising the retirement age, thereby increasing the working life, rather than working day.

Marx explains this point, by the use of value theory, to explore the situation across all modes of production. He describes the division of the working day into necessary and surplus labour, as previously defined.

“If the labourer wants all his time to produce the necessary means of subsistence for himself and his race,

he has no time left in which to work gratis for others. Without a certain degree of productiveness in his labour, he has no such superfluous time at his disposal; without such superfluous time, no surplus-labour, and therefore no capitalists, no slave-owners, no feudal lords, in one word, no class of large proprietors.” (p 479)

Marx echoes Engels, from “*The Origin Of The Family, Private Property and The State*”, where he describes how class society, i.e. slavery, could only arise when society had developed its productive ability to a certain level, whereby one individual could produce more than was required for their own reproduction. Prior to that, there was no point having slaves, because they could produce no surplus.

A requirement for this is, in fact, that labour has become socialised, because, without that, it cannot raise itself to the necessary level of productivity.

“Along with the progress in the productiveness of labour, that small portion of society increases both absolutely and relatively. Besides, capital with its accompanying relations springs up from an economic soil that is the product of a long process of development. The productiveness of labour that serves as its foundation and starting-point, is a gift, not of nature, but of a history embracing thousands of centuries.” (p 479-80)

The productiveness of labour, besides the development of social production, is limited by physical factors. These, Marx says, divide into two categories. Firstly, natural – the fertility of the soil and water – and secondly natural

instruments of labour – waterfalls, navigable rivers, wood, metal, coal etc.

“At the dawn of civilisation, it is the first class that turns the scale; at a higher stage of development, it is the second. Compare, for example, England with India, or in ancient times, Athens and Corinth with the shores of the Black Sea.” (p 480)

Marx then refers to the advantages of ancient Egypt in these regards, that facilitated its development.

“Nevertheless the grand structures of ancient Egypt are less due to the extent of its population than to the large proportion of it that was freely disposable. Just as the individual labourer can do more surplus-labour in proportion as his necessary labour-time is less, so with regard to the working population. The smaller the part of it which is required for the production of the necessary means of subsistence, so much the greater is the part that can be set to do other work.

Capitalist production once assumed, then, all other circumstances remaining the same, and given the length of the working day, the quantity of surplus-labour will vary with the physical conditions of labour, especially with the fertility of the soil.” (p 180-1)

But, for stimulating capitalist development, it is not the most fertile soil that provides the best conditions. Where nature provides its gifts too freely and abundantly, there is no imperative to develop Man's own productive powers.

“It is not the tropics with their luxuriant vegetation, but the temperate zone, that is the mother-country of capital. It is not the mere fertility of the soil, but the differentiation of the soil, the variety of its natural products, the changes of the seasons, which form the physical basis for the social division of labour, and which, by changes in the natural surroundings, spur man on to the multiplication of his wants, his capabilities, his means and modes of labour. It is the necessity of bringing a natural force under the control of society, of economising, of appropriating or subduing it on a large scale by the work of man’s hand, that first plays the decisive part in the history of industry.”
(p 481)

Marx cites the irrigation works necessary in Egypt, Lombardy, Holland, India and Persia. The need to predict the rise and fall of the Nile is what led the Egyptians to develop the science of astronomy. It was the need to conduct hydraulic works on a large scale, in places like India and China, which could only be done by the state, which led to the development of the *Asiatic Mode of Production*. Marx writes,

“One of the material bases of the power of the state over the small disconnected producing organisms in India, was the regulation of the water supply. The Mahometan rulers of India understood this better than their English successors. It is enough to recall to mind the famine of 1866, which cost the lives of more than a million Hindus in the district of Orissa, in the Bengal presidency.” (Note 3, p 481)

A good account of Marx’s analysis of the Asiatic Mode of Production is provided in *“Marx and the Third World”* By

Umberto Melotti.

“Favourable natural conditions alone, give us only the possibility, never the reality, of surplus-labour, nor, consequently, of surplus-value and a surplus-product. The result of difference in the natural conditions of labour is this, that the same quantity of labour satisfies, in different countries, a different mass of requirements, consequently, that under circumstances in other respects analogous, the necessary labour-time is different. These conditions affect surplus-labour only as natural limits, i.e., by fixing the points at which labour for others can begin.”
(p 482)

Marx also quotes Massie in this regard,

““There are no two countries which furnish an equal number of the necessaries of life in equal plenty, and with the same quantity of labour. Men’s wants increase or diminish with the severity or temperateness of the climate they live in; consequently, the proportion of trade which the inhabitants of different countries are obliged to carry on through necessity cannot be the same, nor is it practicable to ascertain the degree of variation farther than by the degrees of Heat and Cold; from whence one may make this general conclusion, that the quantity of labour required for a certain number of people is greatest in cold climates, and least in hot ones; for in the former men not only want more clothes, but the earth more cultivating than in the latter.” (An Essay on the Governing Causes of the Natural Rate of Interest. Lond. 1750. p. 60.) *The author of this epoch-making anonymous work is J. Massy. Hume took his theory of interest from it.”* (Note 1, p 482)

But, the fact that under certain conditions, Men's needs are easily met does not mean that this automatically results in a large surplus. It only creates the potential. Marx cites the example of natives, able to live by working just 12 hours a week, and living off a sago tree.

“Nature’s direct gift to him is plenty of leisure time. Before he can apply this leisure time productively for himself, a whole series of historical events is required; before he spends it in surplus-labour for strangers, compulsion is necessary. If capitalist production were introduced, the honest fellow would perhaps have to work six days a week, in order to appropriate to himself the product of one working day. The bounty of Nature does not explain why he would then have to work 6 days a week, or why he must furnish 5 days of surplus-labour. It explains only why his necessary labour-time would be limited to one day a week. But in no case would his surplus-product arise from some occult quality inherent in human labour.”
(p 482-3)

It is only on the basis of this historical development that, when we arrive at capitalism, *“... the idea easily takes root that it is an inherent quality of human labour to furnish a surplus-product.”* (p 482)

Marx then examines the inadequacy of bourgeois economics, in relation to the source of surplus value. The Mercantilists had argued that it arose as a result of price being above the cost of production. This could not hold because its clear that if A sells a commodity to B, at a price £10 above its cost of production, and B sells a commodity to A, likewise at a price £10 above its cost of production, the *“profit”* made by each cancels out. It is as

though they had simply exchanged these commodities at their cost prices.

The Ricardian School, went beyond that theory and recognised that surplus value stemmed from the productiveness of labour, though Ricardo himself simply assumed and accepted its existence. However, they failed to pursue that logic to its conclusion to identify the source of surplus value in the exploitation by capital of that labour. And for good reason.

“In fact these bourgeois economists instinctively saw, and rightly so, that it is very dangerous to stir too deeply the burning question of the origin of surplus-value.” (p 483)

Marx is scathing of John Stuart Mill.

“Mill says:

'The cause of profit is that labour produces more than is required for its support.'

So far, nothing but the old story; but Mill wishing to add something of his own, proceeds:

'To vary the form of the theorem; the reason why capital yields a profit, is because food, clothing, materials and tools, last longer than the time which was required to produce them.

He here confounds the duration of labour-time with the duration of its products. According to this view, a baker whose product lasts only a day, could never extract from his workpeople the same profit, as a machine maker whose products endure for 20 years and more. Of course it is very true, that if a bird's nest did not last longer than

the time it takes in building, birds would have to do without nests.”

Marx continues, quoting Mill again,

“We thus see,’ he proceeds, ‘that profit arises, not from the incident of exchange, but from the productive power of labour; and the general profit of the country is always what the productive power of labour makes it, whether any exchange takes place or not. If there were no division of employments, there would be no buying or selling, but there would still be profit.’

For Mill then, exchange, buying and selling, those general conditions of capitalist production, are but an incident, and there would always be profits even without the purchase and sale of labour-power!

‘If, he continues, ‘the labourers of the country collectively produce twenty per cent more than their wages, profits will be twenty per cent, whatever prices may or may not be.’ This is, on the one hand, a rare bit of tautology; for if labourers produce a surplus-value of 20% for the capitalist, his profit will be to the total wages of the labourers as 20:100. On the other hand, it is absolutely false to say that **‘profits will be 20%.’** They will always be less, because they are calculated upon the **sum total** of the capital advanced. If, for example, the capitalist have advanced £500, of which £400 is laid out in means of production and £100 in wages, and if the rate of surplus-value be 20%, the rate of profit will be 20:500, i.e., 4% and not 20%.” (p 483-4)

Marx criticises Mill for arguing that capitalist relations are universal. A peculiar claim, as Marx remarks, given that, at that time, it was only the case for a small percentage of the Earth! Mill had also suggested that instead of the capitalist paying wages to the worker, it would be possible for the worker, if he had the means, to wait until they had produced the commodity, and then be paid its full value. Mill notes that, in this case, the labourer is really a capitalist providing some of the funds needed for production.

Marx notes,

“Mill might have gone further and have added, that the labourer who advances to himself not only the necessaries of life but also the means of production, is in reality nothing but his own wage-labourer. He might also have said that the American peasant proprietor is but a serf who does enforced labour for himself instead of for his lord.” (p 484)

In other words, what Marx is criticising here is that Mill, in no sense, grasps the idea of economic relations also being social relations. What Marx is getting at, is that a surplus product does not simply arise automatically, and certainly its appropriation, by some other person, is not some simple economic reality that arises spontaneously. It is determined by social relations, which themselves arise as part of a long process of historical development. That these social relations, and this historical development, is itself a product of economic relations that arise *“behind men's backs”*, as a consequence of changes in the productive forces, is the key to understanding Marx's *Historical Materialism*. In short, it is

a dialectical process by which one development, acts as a feedback loop on to the other.

The natives living off the sago tree, had the potential of surplus labour, but there was no imperative that drove them to engage in it. They were masters of their own destiny, in that regard. But, had the land and the trees on it, been owned by a landlord, then they would have been forced to pay rent to that lord for being able to obtain their subsistence from the tree. The rent would be in the form of surplus labour, labour undertaken over and above what was required for their own subsistence, but required for the subsistence of the landlord. The same is true of the US peasants. They were able to acquire land for nothing, or for very little, during European colonisation. As a result, all the labour they undertook, on that land, was for their own benefit. But, as soon as all the land in the US, like the land in Europe, becomes the property of a small class of people, that small class is able to charge those who farm it a rent. They are able to force the producers to do surplus labour for them. This force might not be the same kind of force as that used by a slave owner against a slave, but it is force all the same, it is the force that stems from economic power, consequent upon property ownership. This is also the basis of Marx's differentiation between labour being formally subjected to capital, and then its real subjection to capital, when the worker has no real alternative but to supply their labour-power as factory labour.

Mill goes on to argue that the worker was really a capitalist too, who lends a part of his labour-power to the capitalist by selling it below the market price, and then receives it back with interest! But, as Marx has

demonstrated, workers do not sell their labour power below its market price. It is the fact that the value they produce is greater than the value of their labour power which is the source of the surplus value.

Chapter 17 - Changes of Magnitude in the Price of Labour-Power and in Surplus Value

Marx begins by reducing things to their basic level, and imposing a number of simplifying constraints. As previously established, the value of labour power, as with any other commodity, is determined by the socially necessary labour-time required for its production. In the case of labour-power, this is the labour-time required to ensure the reproduction of the labourers themselves – including the new generation of workers. That is the time required to produce their food, clothing, shelter etc.

The quantity of these necessaries is known, for “*any given epoch*”, Marx argues, and so can be treated as constant.

“What changes, is the value of this quantity.” (p 486)

Actually, we might want to challenge the term “*epoch*” here, which suggests a rather long period of time. The quantity of necessaries changed little over centuries during feudalism, and little more, perhaps, during the 19th century, but that can hardly be said about the 20th century. In fact, Fordism was based on the principle that real wages would rise each year, i.e. the quantity of necessaries would rise. This was achievable, provided workers' productivity rose, each year, by a greater amount. This does not undermine Marx's thesis, it simply introduces more complexity.

There are two other factors involved in determining the value of labour-power, Marx argues. Firstly, the cost of developing the labour-power. That is the cost of providing education and training, so that it meets the needs of capital. Obviously, this too varies over time, as well as across different types of concrete labour. More expense is involved in educating and training a brain surgeon than a joiner, for example. This also illustrates the difference between the value created by complex labour, and the value of that labour-power, as concrete labour. In other words, the difference between the multiple of one hour of complex labour to one hour of abstract labour, and the value of the labour-power of one form of concrete labour to another.

For example, one hour of David Beckham's labour might equal 1000 hours of abstract labour-time. At the same time, one hour of a brain surgeon's labour might only equal 100 hours of abstract labour-time. Those different multiples, Marx says, are determined, concretely, in the market, by how much consumers are prepared to pay for the product of one hour of Beckham's labour compared to that of the brain surgeon. But, the value of the labour-power of each could see that situation reversed! The value of the brain surgeon's labour-power might be £10,000 p.a., whilst that of Beckham only £5,000, because although both require essentially the same amount of food, clothing and shelter, the brain surgeon requires much more education and training.

In both cases, however, it's likely as seen in previous chapters, that the specific nature of both these types of labour, enables their sellers to obtain wages above that value, thereby sharing in some of the higher value of their

product, that would otherwise be appropriated by the capitalist that employs them. As with other types of such labour, it provides a powerful incentive for those capitalists to try to replace that labour, or undermine its specific characteristics that give the worker leverage. So, for example, capital is introducing surgical robots, whilst it is now able, via the internet and satellite TV to sell an hour of Beckham's labour, not just to 40,000 people on a Saturday afternoon, but to millions of people worldwide, 24 hours a day. Essentially, Beckham's labour then becomes replaced by a digitised copy of it.

The second additional factor, determining the value of labour power, is this natural diversity, including that between man and woman, adults and children.

For the purpose of simplicity, in developing his analysis, Marx excludes both these factors, as well as the situation referred to earlier, where some specific labour is raised to a higher power, as a result of the introduction of machinery, in a single factory. Marx, obviously does not diminish the importance of these factors, writing,

“The employment of these different sorts of labour-power, an employment which is, in its turn, made necessary by the mode of production, makes a great difference in the cost of maintaining the family of the labourer, and in the value of the labour-power of the adult male.” (p 486)

It is just a preliminary, simplifying assumption, as are his further constraints.

“I assume (1) that commodities are sold at their value; (2) that the price of labour-power rises occasionally above its value, but never sinks below it.” (p 486)

On the basis of these assumptions, the previous analysis has provided a number of conclusions. The quantity of surplus value, and of wages, and the relation of one to the other is determined by:

1. The length of the working day. With a given intensity of labour, the quantity of surplus value will rise absolutely and relative to wages, the longer the working day.
2. With a fixed length of working day, the amount of surplus value will rise absolutely, and relative to wages, the more intensively labour is worked i.e. the more labour is expended in a given period. This is achieved by speeding up the pace of work, reducing the periods when labour is not being expended etc. There are limits to 1) and 2), which establish a normal working day, and mean that increases in 1) have to be compensated by reductions in 2) and vice versa.
3. Surplus value increases relative to wages as a consequence of an increased productivity of labour arising from the more developed condition of the instruments of labour. It may increase absolutely too, but this depends upon the effects of the introduction of this machinery on the quantity of living labour then employed. If a lot of living labour is displaced by the machinery, then even with a higher rate of surplus value, the amount of surplus value created may fall.

All of these interact to provide a range of consequences, which Marx then analyses.

1) Length Of The Working-Day And Intensity Of Labour Constant. Productiveness Of Labour Variable.

Marx identifies three laws.

1. *A working day, of a given length, always produces the same amount of new value. (NB. As with the statements above, this assumes, of course, that the labour-time expended was socially necessary. Labour-time expended on production that is not demanded, or which is faulty, does not create new value, or creates new value only of a diminished amount.)*

Value is a measure of socially necessary labour-time. If a greater quantity of items are produced during this period, because the labour has become more productive, this does not change the amount of value produced in this time, it only means that value is spread across a larger number of items so that the value of each unit is reduced.

2. *“Surplus value and the value of labour-power vary in opposite directions. A variation in the productiveness of labour, its increase or diminution, causes a variation in the opposite direction in the value of labour-power, and in the same direction in surplus value.” (p 487)*

A working day of say 10 hours produces a constant amount of new value = 10 hours, assuming we are talking about average labour. If £1 = 1 hour, this equals £10. This time, and this new value is divided into necessary and surplus labour-time, the value of

labour-power (wages) and surplus value. Consequently, if one of the components of this constant quantity rises, the other must fall. If initially, they are equal, £5 wages, and £5 surplus value, then if wages rise to £6 (because the cost of food, clothing, shelter etc. rises) then surplus value must fall to £4. Similarly, surplus value cannot rise from £5 to £6, without wages falling to £4. But, wages are fixed by the costs of reproducing the labour power. Marx assumes here that they cannot fall below the value of labour power. In other words, we have two constant magnitudes – the total value of the 10 hours = £10, and the value of the labour power. Everything else remaining the same, only the surplus value is a variable quantity.

However, as was demonstrated previously, the value of labour-power can fall, if the value of necessaries fall, or if the productivity of labour rises, reducing the portion of the working day required to reproduce it. If the productivity of labour rises by 40%, then what previously took five hours to produce, can now be produced in three. So, the workers necessaries can now be produced in three hours = £3. That means that surplus labour-time can rise from five hours to 7 hours, surplus value rises from £5 to £7, but the workers real wages remain constant.

“It follows from this, that an increase in the productiveness of labour causes a fall in the value of labour-power and a consequent rise in surplus value, while, on the other hand, a decrease in such productiveness causes a rise in the value of labour-power, and a fall in surplus value.” (p 488)

This law was first developed by Ricardo, but Marx correctly points out that he failed to note that although the two components move in opposite directions by the same amount, they do not move in the same proportion. That depends on the original amounts. For example, if originally wages were £4 and surplus value £6, a 50% rise in productivity would reduce wages to £2, and increase surplus value to £8. However, this a $2/4 = 50\%$ reduction in wages, but only a $2/6 = 33.3\%$ rise in surplus value. The opposite is the case had the original figures been reversed.

3. *“Increase or diminution in surplus value is always consequent on, and never the cause of, the corresponding diminution or increase in the value of labour-power.” (p 488)*

Marx also notes here,

“To this third law MacCulloch has made, amongst others, this absurd addition, that a rise in surplus value, unaccompanied by a fall in the value of labour-power, can occur through the abolition of taxes payable by the capitalist. The abolition of such taxes makes no change whatever in the quantity of surplus value that the capitalist extorts at first-hand from the labourer. It alters only the proportion in which that surplus value is divided between himself and third persons. It consequently makes no alteration whatever in the relation between surplus value and value of labour-power. MacCulloch's exception therefore proves only his misapprehension of the rule, a misfortune that as often happens to him

in the vulgarisation of Ricardo, as it does to J. B. Say in the vulgarisation of Adam Smith.” (Note 1, p 488)

This presages Marx’s analysis of “*Capital in General*”, in *Volume III*, where Marx examines the division of surplus value between different sections of the exploiting classes – Interest to Money Capital, Profit to Productive and Commercial Capital, Rent to Landed Property, and Taxes to the Capitalist State.

“If, then, as we have already seen, there can be no change of absolute magnitude in the value of labour-power, and in surplus value, unaccompanied by a change in their relative magnitudes, so now it follows that no change in their relative magnitudes is possible, without a previous change in the absolute magnitude of the value of labour-power.” (p 489)

This can only be brought about by a change in the productivity of labour. (That is if we leave aside things like the fall in food prices resulting from abolition of the Corn Laws.) It is the change in the value of labour power which provides the limiting factor to the change in surplus value. Moreover, Marx points out that other factors may affect the way the law operates in practice. The value of labour-power might fall from £5 to £3, and yet wages only fall to £4, for example.

“The amount of this fall, the lowest limit of which is 3 shillings (the new value of labour-power), depends on the relative weight, which the pressure of capital on the one side, and the resistance of the labourer on the other, throws into the scale.” (p 489)

It is here that the organisation of the workers, into trades unions, was able to play a role, at the margin, in the determination of wages in the short term. But, it is only marginal and only short term, for the reasons Marx and Engels set out.

Engels wrote,

“The history of these Unions is a long series of defeats of the working-men, interrupted by a few isolated victories. All these efforts naturally cannot alter the economic law according to which wages are determined by the relation between supply and demand in the labour market. Hence the Unions remain powerless against all great forces which influence this relation. In a commercial crisis the Union itself must reduce wages or dissolve wholly; and in a time of considerable increase in the demand for labour, it cannot fix the rate of wages higher than would be reached spontaneously by the competition of the capitalists among themselves.”

(Engels - “The Condition Of The Working Class in England” Chapter 10)

Whilst Marx wrote,

“I think I have shown that their struggles for the standard of wages are incidents inseparable from the whole wages system, that in 99 cases out of 100 their efforts at raising wages are only efforts at maintaining the given value of labour, and that the necessity of debating their price with the capitalist is inherent to their condition of having to sell themselves as commodities. By cowardly giving way in their everyday conflict with capital, they would certainly

disqualify themselves for the initiating of any larger movement.

*At the same time, and quite apart from the general servitude involved in the wages system, the working class ought not to exaggerate to themselves the ultimate working of these everyday struggles. They ought not to forget that they are fighting with effects, but not with the causes of those effects; that they are retarding the downward movement, but not changing its direction; that they are applying palliatives, not curing the malady. They ought, therefore, not to be exclusively absorbed in these unavoidable guerilla fights incessantly springing up from the never ceasing encroachments of capital or changes of the market. They ought to understand that, with all the miseries it imposes upon them, the present system simultaneously engenders the **material conditions** and the **social forms** necessary for an economical reconstruction of society. Instead of the **conservative** motto: “**A fair day's wage for a fair day's work!**” they ought to inscribe on their banner the **revolutionary** watchword: “**Abolition of the wages system!**”*

(Marx - “Value, Price and Profit” Chapter 14)

In the end, as Marx and Engels set out, it is the demand for and supply of labour power which determines, and that is a consequence of the rate of accumulation of capital, which in turn depends on the rate of profit, and the opportunity for investing new capital in profitable ventures.

Marx also gives a variation of the situation described previously, where a rise in productivity allows real wages

to remain constant, while nominal wages fall and surplus value rises. If productivity doubles, but nominal wages remain constant, then the working day remains 5 hours for wages, and 5 hours for surplus value. But now, twice as many use values can be bought with these £5's. The workers' real wage has doubled, and the capitalist can buy twice as many luxuries, or twice as much constant capital, to expand production.

“In this way it is possible with an increasing productiveness of labour, for the price of labour-power to keep on falling, and yet this fall to be accompanied by a constant growth in the mass of the labourer's means of subsistence. But even in such case, the fall in the value of labour-power would cause a corresponding rise of surplus value, and thus the abyss between the labourer's position and that of the capitalist would keep widening.”
(p 490)

As stated previously, this was precisely the basis upon which Fordism operated, in the 20th century, particularly after WWII. These three laws, set out by Marx, were originally developed by Ricardo, but Marx sets out the limitations of Ricardo's understanding of them.

Ricardo does not take account of changes in the length of the working day, or its intensity, so only the productivity of labour acts as a variable factor. Ricardo does not analyse the source or nature of surplus value, separate from his analysis of interest, rent and profit. Instead he simply takes its existence for granted. It also leads him to confuse the rate of profit with the rate of surplus value. The latter is surplus value expressed as a proportion of

wages, whilst the former is surplus value expressed as a proportion of total capital advanced.

“I shall show in Book III. that, with a given rate of surplus value, we may have any number of rates of profit, and that various rates of surplus value may, under given conditions, express themselves in a single rate of profit.”
(p 491)

Marx then analyses the effects of changes in these variables.

2) Working-Day Constant. Productiveness Of Labour Constant. Intensity Of Labour Variable

Marx again makes clear the difference between increasing the intensity of labour – undertaking more labour in a given length of time – which is a means of extracting absolute surplus value, and increasing the productivity of labour, which increases relative surplus value.

“Increased intensity of labour means increased expenditure of labour in a given time. Hence a working-day of more intense labour is embodied in more products than is one of less intense labour, the length of each day being the same. Increased productiveness of labour also, it is true, will supply more products in a given working-day. But in this latter case, the value of each single product falls, for it costs less labour than before; in the former case, that value remains unchanged, for each article costs the same labour as before. Here we have an increase in the number of products, unaccompanied by a fall in their individual prices: as their number increases, so does the sum of their prices. But in the case of

increased productiveness, a given value is spread over a greater mass of products. Hence the length of the working-day being constant, a day's labour of increased intensity will be incorporated in an increased value, and, the value of money remaining unchanged, in more money.” (p 491)

How much value is created then, in a given working day, depends upon the extent to which the intensity of labour varies from the normal intensity in the society. As illustrated previously, if 1000 units are produced, at a normal level of intensity, in 12 hours, but using the same instruments of labour etc., these same 1000 units are instead produced in 10 hours, by increasing the intensity of the labour – speeding up the pace of work, reducing the unproductive time by various means – then this 10 hours of labour represents in fact, 12 hours of labour-time, and has that value. But, if the intensity is increased, whilst the length of the working day remains the same, then more value is created in that time than previously. Now a 12 hour day might actually represent, 13,14, or 15 hours of labour-time depending on the intensity of the labour.

Moreover, this increased value, created during the day, means that both wages and surplus value can increase simultaneously. That might mean that both rise equally, or that wages rise more than surplus value and vice versa, or that one rises whilst the other does not.

But, as Marx points out, the fact that wages rise by this means, does not mean they necessarily rise above the value of labour-power. The opposite may be true. The value of labour-power is determined by the cost of its

reproduction. Part of that cost is what is required to cover its wear and tear. But, that wear and tear might increase disproportionately if the labour is used too long, or too intensively. As seen earlier, the worker requires a certain number of hours a day rest, to recuperate their powers. Encroaching on that can mean the worker is worn out prematurely.

“If the intensity of labour were to increase simultaneously and equally in every branch of industry, then the new and higher degree of intensity would become the normal degree for the society, and would therefore cease to be taken account of. But still, even then, the intensity of labour would be different in different countries, and would modify the international application of the law of value. The more intense working-day of one nation would be represented by a greater sum of money than would the less intense day of another nation.” (p 492)

3) Productiveness And Intensity Of Labour Constant. Length Of The Working-Day Variable

Marx sets out 3 laws.

“(1.) The working-day creates a greater or less amount of value in proportion to its length — thus, a variable and not a constant quantity of value.

(2.) Every change in the relation between the magnitudes of surplus value and of the value of labour-power arises from a change in the absolute magnitude of the surplus-labour, and consequently of the surplus value.

(3.) The absolute value of labour-power can change only in consequence of the reaction exercised by the

prolongation of surplus-labour upon the wear and tear of labour-power. Every change in this absolute value is therefore the effect, but never the cause, of a change in the magnitude of surplus value.” (p 492)

He then examines the effects of shortening and lengthening the working day.

1) Shortening.

The value of labour power, and the amount of necessary labour-time, remain the same. A worker requires the same amount of necessaries, whether they work a normal working day, or only half of it. They only require more if their labour-time extends beyond the normal working day, or beyond its normal intensity. Surplus labour and surplus value are reduced, as a result. It falls both absolutely and relative to wages.

Only by reducing wages below the value of labour power could capital avoid this fall in surplus value.

“All the usual arguments against the shortening of the working-day, assume that it takes place under the conditions we have here supposed to exist; but in reality the very contrary is the case: a change in the productiveness and intensity of labour either precedes, or immediately follows, a shortening of the working-day.” (p 493)

Wages are the phenomenal form of the value of labour-power, and appear not as the value of labour-power, but as the price of labour, a term, which Marx explains is meaningless and irrational. But, in the form of the price of labour, wages appear as such a price for a certain

amount of labour provided. The consequence of shortening the working-day by the introduction of various forms of part-time, or casual working, such as zero hours contracts on the reproduction of labour-power can, therefore, be seen.

As the value of labour-power, wages need to be sufficient to ensure that this commodity can be reproduced. The cost of reproducing labour-power does not fall (or only marginally at best) if it is employed for 2 hours a day as opposed to 8 hours per day. Because the reproduction of labour-power cannot be divorced from the reproduction of the worker themselves, a minimum fixed amount for the value of labour-power exists, and this amount must be met, if the labour-power is to be reproduced. If in order to live, workers need say £200 per week to buy the food, clothing and shelter they require then that is the value of their labour-power, whether they work 10 hours per week or 100 hours per week.

If workers were to be generally reduced to working zero hours contracts, with an average of just 2 hours work per day, then the average hourly rate of wages would have to rise to £20 per hour, so that they were able to reproduce their labour-power. Without that capital would find that the supply of labour-power disappeared. It is another reason that low paying employers, and those that utilise zero hours contracts should not be subsidised via in work benefits paid by the state.

2) Lengthening.

If the working day is 10 hours = £10, and necessary labour and surplus labour both equal 5 hours = £5 each,

then, if the working day is increased to 12 hours = £12, wages remain £5, whilst surplus value rises to £7. This assumes the value of labour-power does not rise as a consequence of this increase. Surplus value rises absolutely and relative to wages. Conversely, although wages have not fallen absolutely, they have fallen relative to surplus value.

The increased amount of new value produced, as a result of this longer working day, means that both wages and surplus value could rise simultaneously.

“This simultaneous increase is therefore possible in two cases, one, the actual lengthening of the working-day, the other, an increase in the intensity of labour unaccompanied by such lengthening.” (p 493)

As with increased intensity of labour, the price of labour power (wages) may fall below the value of labour-power even though wages remain constant or even rise.

“The value of a day's labour-power is, as will be remembered, estimated from its normal average duration, or from the normal duration of life among the labourers, and from corresponding normal transformations of organised bodily matter into motion, in conformity with the nature of man. Up to a certain point, the increased wear and tear of labour-power, inseparable from a lengthened working-day, may be compensated by higher wages. But beyond this point the wear and tear increases in geometrical progression, and every condition suitable for the normal reproduction and functioning of labour-power is suppressed. The price of

labour-power and the degree of its exploitation cease to be commensurable quantities.” (p 493-4)

4) Simultaneous Variations In The Duration, Productiveness, And Intensity Of Labour

As Marx says, there are numerous combinations of the variables described above, with any two being variable whilst the third is constant, or all three may be variable. They may vary in the same or opposite directions, intensifying or mitigating the effects of each other by varying degrees. The examples above show how these changes would operate in all these circumstances. Marx sets out two important cases.

A) Diminishing productiveness of labour with a simultaneous lengthening of the working-day.

Marx refers here to those industries whose products determine the value of labour-power. For example, diminishing fertility of the soil raises the price of food, and thereby the value of labour-power.

If the length of working day remained the same, this would mean that surplus value would fall. Suppose a 10 hour working day = £10. If wages equal £5 and surplus value £5, then, if as a consequence of this fall in productivity, wages rise to £6, surplus value falls to £4.

Capital can compensate by lengthening the working day. If the day is raised from 10 hours to 11 hours, wages remain £6, whilst surplus value is restored to £5. However, surplus value has still fallen relative to wages. It was previously 5:5, and is now 6:5, even though surplus value has been restored to its former level.

The proportion between wages and surplus value can be restored by increasing the length of working day even further. If the day is increased to 12 hours, then we have 6 hours necessary labour-time = £6, and 6 hours surplus labour-time = £6. But, now surplus value is higher than it was originally, having increased from £5 to £6.

If the working day is increased further then both the absolute and relative value of surplus value can rise.

Marx notes,

“In the period between 1799 and 1815 the increasing price of provisions led in England to a nominal rise in wages, although the real wages, expressed in the necessaries of life, fell. From this fact West and Ricardo drew the conclusion, that the diminution in the productiveness of agricultural labour had brought about a fall in the rate of surplus value, and they made this assumption of a fact that existed only in their imaginations, the starting-point of important investigations into the relative magnitudes of wages, profits, and rent. But, as a matter of fact, surplus value had at that time, thanks to the increased intensity of labour, and to the prolongation of the working-day, increased both in absolute and relative magnitude. This was the period in which the right to prolong the hours of labour to an outrageous extent was established; the period that was especially characterised by an accelerated accumulation of capital here, by pauperism there.” (p 495)

B) Increasing intensity and productiveness of labour with simultaneous shortening of the working-day.

Both increase the quantity of items produced, though, as described earlier, one reduces the value of those items, whilst the other does not. Both reduce the amount of time required to meet the needs of the worker, and thereby increase the amount of surplus value.

If the working day shrank to the minimum now required to produce the workers' needs, surplus labour and surplus value would disappear. That is not possible under capitalism, whose purpose is the production of surplus value. Marx then describes part of the reality of socialism by comparison.

“Only by suppressing the capitalist form of production could the length of the working-day be reduced to the necessary labour time. But, even in that case, the latter would extend its limits. On the one hand, because the notion of “means of subsistence” would considerably expand, and the labourer would lay claim to an altogether different standard of life. On the other hand, because a part of what is now surplus-labour, would then count as necessary labour; I mean the labour of forming a fund for reserve and accumulation.” (p 496)

Marx expands these ideas in the *“Critique of the Gotha Programme”*.

Marx continues.

“The more the productiveness of labour increases, the more can the working-day be shortened; and the more the working-day is shortened, the more can the intensity of labour increase. From a social point of view, the productiveness increases in the same ratio as the economy of labour, which, in its turn, includes not only

economy of the means of production, but also the avoidance of all useless labour. The capitalist mode of production, while on the one hand, enforcing economy in each individual business, on the other hand, begets, by its anarchical system of competition, the most outrageous squandering of labour-power and of the social means of production, not to mention the creation of a vast number of employments, at present indispensable, but in themselves superfluous.

The intensity and productiveness of labour being given, the time which society is bound to devote to material production is shorter, and as a consequence, the time at its disposal for the free development, intellectual and social, of the individual is greater, in proportion as the work is more and more evenly divided among all the able-bodied members of society, and as a particular class is more and more deprived of the power to shift the natural burden of labour from its own shoulders to those of another layer of society. In this direction, the shortening of the working-day finds at last a limit in the generalisation of labour. In capitalist society spare time is acquired for one class by converting the whole life-time of the masses into labour time.” (p 496)

Chapter 18 - Various Formula for the rate of Surplus-Value

Marx sets out the formulas he has previously derived, for measuring the rate of surplus value and compares these with those used by the Classical Political Economists, which give a false calculation of the rate of exploitation.

Marx's formula:

The two first of these formulae represent, as a ratio of values, that which, in the third, is represented as a ratio of the times during which those values are produced.” (p 497)

The formulas of Classical Political Economy.

“One and the same ratio is here expressed as a ratio of labour-times, of the values in which those labour-times are embodied, and of the products in which those values exist. It is of course understood that, by “Value of the Product,” is meant only the value newly created in a working-day, the constant part of the value of the product being excluded.

In all of these formulae (II.), the actual degree of exploitation of labour, or the rate of surplus-value, is falsely expressed. Let the working-day be 12 hours. Then, making the same assumptions as in former instances, the real degree of exploitation of labour will be represented in the following proportions.

From formulae II. we get very differently,

These derivative formulae express, in reality, only the proportion in which the working-day, or the value produced by it, is divided between capitalist and labourer.” (p 497-8)

On the basis of “II” the rate of surplus value could never equal 100%, because that would equal the entire working day, leaving no time for necessary labour. But, if necessary labour sank to zero, so would surplus labour, because it is a function of the former.

“*The ratio*

can therefore never reach the limit 100/100, still less rise to $100 + x/100$. But not so the rate of surplus-value, the real degree of exploitation of labour. Take, e.g., the estimate of L. de Lavergne, according to which the English agricultural labourer gets only 1/4, the capitalist (farmer) on the other hand 3/4 of the product or its value, apart from the question of how the booty is subsequently divided between the capitalist, the landlord, and others. According to this, this surplus-labour of the English agricultural labourer is to his necessary labour as 3:1, which gives a rate of exploitation of 300%.” (p 498-9)

This distinction is important, not just because it understates the degree to which the worker is exploited, but also because it acts to disguise the real social relation. Production under capitalism is necessarily co-operative. That is not just the case in relation to the fact of co-operative labour, but also the fact of a necessary co-operation between capital and labour – capital provides the means of production and labour provides the labour-power for their transformation. Bourgeois

ideologists use this to present capitalist production as based on a free association, between labour and capital, for their mutual benefit. On this basis, the working day, the total product, and its value is then amicably divided, between labour and capital, as compensation for what both have contributed to the process.

Marx writes,

“All well-developed forms of capitalist production being forms of cooperation, nothing is, of course, easier, than to make abstraction from their antagonistic character, and to transform them by a word into some form of free association, as is done by A. de Laborde in “De l’Esprit d’Association dans tous les intérêts de la communauté”. Paris 1818. H. Carey, the Yankee, occasionally performs this conjuring trick with like success, even with the relations resulting from slavery.” (Note 2, p 499)

But, as Marx’s analysis has demonstrated, this is not at all an accurate picture of the real nature of capitalist production, or the relation of capital and labour. Labour does not enter a voluntary association with capital, but does so only because it has itself been stripped of the means of production. It has to sell its labour-power, to capital, as a commodity, in order to live. As capitalist production develops, even the specific nature of that labour-power is stripped away, as the artisan is first turned into the detailed worker, under the division of labour, during manufacture, and then into the factory worker, under modern machine industry.

The worker is first made formally subject to capital, but, at this stage, they could theoretically still sell the product

of their labour, rather than their labour-power, if they could acquire means of production. Then, they are made really subject to capital, when their labour-power is reduced to that of factory labour, which can only ever be sold to the owners of factories!

There is nothing in reality free about this association, which is why the workers have to agree to hand over a part of the product of their labour to capital, without capital having paid anything for it. As Marx points out, in *“Value, Price and Profit”*.

“As to the limits of the value of labour, its actual settlement always depends upon supply and demand, I mean the demand for labour on the part of capital, and the supply of labour by the working men. In colonial countries the law of supply and demand favours the working man. Hence the relatively high standard of wages in the United States. Capital may there try its utmost. It cannot prevent the labour market from being continuously emptied by the continuous conversion of wages labourers into independent, self-sustaining peasants. The position of a wages labourer is for a very large part of the American people but a probational state, which they are sure to leave within a longer or shorter term. To mend this colonial state of things the paternal British Government accepted for some time what is called the modern colonization theory, which consists in putting an artificial high price upon colonial land, in order to prevent the too quick conversion of the wages labourer into the independent peasant.”

This relation is described in the formula:

But, as Marx points out, the danger of this formula is that it can lead to the false conclusion that capital pays for labour not labour-power, and that it does not pay the full price for that labour-power.

As Marx has demonstrated, this is wrong. Capital purchases labour-power not labour. It pays the full price of that labour-power, as a commodity, like any other, and whose use value is its ability to perform useful labour. The worker then supplies their commodity, as part of the exchange. They do so for a given number of hours, determined by the normal working day. This working-day is divided into two parts. In one part, the new value created by the worker is equal to the value of the workers' labour power, and paid to them as wages. In the second part, the worker creates new value that is additional to what is required for their own reproduction, and which thereby constitutes a surplus value, which is appropriated by the capitalist.

“This expenditure of labour-power comes to him gratis. In this sense it is that surplus-labour can be called unpaid labour.

Capital, therefore, it not only, as Adam Smith says, the command over labour. It is essentially the command over unpaid labour. All surplus-value, whatever particular form (profit, interest, or rent), it may subsequently crystallize into, is in substance the materialization of unpaid labour. The secret of the self-expansion of capital resolves itself into having the disposal of a definite quantity of other people’s unpaid labour.” (p 500)

Part VI

Wages

Chapter 19 - The Transformation of the Value (and Respective Price) of Labour-Power into Wages

Wages appear as the price of labour. So many hours work has a price of £x. At the same time, as with any other commodity, the concept of a market price for labour is used, whereby this market price oscillates, above or below some natural price. But, further analysis shows that wages cannot be the price of labour. Put simply, the reason, which confounded Adam Smith and others, is this. If wages are the price of labour, and the value of any commodity is determined by the labour-time required for its production, there could never be any surplus value!

“But what is the value of a commodity? The objective form of the social labour expended in its production. And how do we measure the quantity of this value? By the quantity of the labour contained in it. How then is the value, e.g., of a 12 hour working-day to be determined?. By the 12 working-hours contained in a working-day of 12 hours, which is an absurd tautology.” (p 501)

In order to be sold, as a commodity, labour-power must first exist, and it cannot exist separate from the worker. Could the worker separate it from himself he would sell it as a distinct commodity. The worker does not sell himself as a commodity – that would make him a slave – but only his labour-power.

If money (exchange value incarnate) as realised labour, exchanged directly with living labour, this would imply either abolition of the *Law of Value*, which dictates that

value is equal to the labour-time required to produce the commodity, or else it implies the end of capitalism, which rests on wage labour.

The *Law of Value*, which operates throughout man's history, as a natural law, only begins to develop freely on the basis of capitalism, as this law takes the form of exchange value. The value of Robinson Crusoe's labour-power, is just as much determined by the labour-time required for its production as is that of the wage labourer. The value of the things produced by Robinson, are just as much determined by the labour-time required for their production as are the products of the wage labourer. These constraints, imposed by the *Law of Value*, determine the proportions in which each society allocates its available social labour-time, in order to meet its needs.

As Marx writes, of Robinson Crusoe,

Necessity itself compels him to apportion his time accurately between his different kinds of work. Whether one kind occupies a greater space in his general activity than another, depends on the difficulties, greater or less as the case may be, to be overcome in attaining the useful effect aimed at. This our friend Robinson soon learns by experience, and having rescued a watch, ledger, and pen and ink from the wreck, commences, like a true-born Briton, to keep a set of books. His stock-book contains a list of the objects of utility that belong to him, of the operations necessary for their production; and lastly, of the labour time that definite quantities of those objects have, on an average, cost him. All the relations between Robinson and the objects that form this wealth of his own creation, are here so simple and clear as to be

intelligible without exertion, even to Mr. Sedley Taylor. And yet those relations contain all that is essential to the determination of value.”

(Capital I, Ch. 1. Section 4)

A communist society would operate in a similar manner. It would decide upon its priorities – in essence, it ranks the utility obtained from all the various combinations of use values possible – but then how much of one it can have rather than some other option continues to be determined by the *Law of Value*, i.e. the available social labour-time (total value the society can produce) has to be divided, just as in every previous society, across all the range of possible use values, whose individual values are determined by the social labour-time required for their production. Only in the higher stage of Communism, when there is general abundance, and where having more of one thing does not mean foregoing an amount of some other, does the *Law of Value* cease to operate, to exert this constraint.

For Robinson, as for the peasant, or for the communist society, this distinction between necessary labour (which determines the value of labour-power) and surplus labour (which is the basis of surplus value) does not appear to exist, because all of their labour goes to producing use values, which continue to belong to them (apart from the peasant production paid as rent to the landlord) rather than being alienated to the capitalist.

The peasant that produces more than they immediately require, as with Robinson, or the communist society, can use it as investment, thereby creating the potential for

increasing future production. Workers, who like the peasant, or the communist society, that own their means of production through a worker owned co-operative can also operate in this way. For them too, the distinction between necessary and surplus labour is not so apparent. They could use any surplus to reduce the amount of labour they require to do in future.

Similarly, using the surplus to enable investment might also be aimed at reducing the burden of future work rather than simply increasing output and consumption. The surplus might be stored up to deal with unforeseen future events, or it might be used to facilitate other types of unproductive activity. Yet, in reality, the allocation of social labour-time to all of these alternatives, in each of these different societies is only possible, because in each case, the social working day does divide into a period of necessary labour required to reproduce labour-power, and a period of surplus labour. As Marx, sets out in *Capital III*, the size of the surplus product and surplus value ultimately is determined by the value of commodities.

On the one hand, the amount of social labour-time that must be devoted to reproducing labour-power is determined by the value of the commodities required to reproduce the consumed labour-power. But, the surplus product is the difference between this necessary product, and the new product created by that labour-power. Its value is determined by the quantity of living labour expended in its production, i.e. the total new value of commodities created by that labour-power

In the *Critique of the Gotha Programme*, indeed, Marx points out that any communist society, could not simply distribute all production on a 1:1 basis to the producers, because the society would need to allocate a proportion of its output to cover those employed in necessary administration, or those who are too sick, young or old to currently work. In other words, workers would need to effectively assign part of their current consumption entitlement, to a social insurance fund, as they were doing in the 19th century, via their Friendly Societies, to cover the potential of drawing from it, under any of these circumstances. The difference of all these other forms of property ownership compared to capitalist ownership, is that control over all, or a part, of the surplus remains with the producer, so unlike capitalist surplus there is no imperative to maximise it, or to accumulate it.

Peasant societies that had unexpected good harvests frequently decided to consume much of it, organising feasts and so on. But, a peasant with a surplus could also use it to buy a horse, for example, which would then be used to pull a plough, which improved productivity, which enabled their future output to rise consistently. Indeed, it is this, as Marx, and later Lenin, describe as the means by which differentiation within the peasantry occurs, creating an element of the bourgeoisie.

But, under capitalism, these aspects of the law of value take on free development. The fact that the law of value takes the form of exchange value, and that labour appears as wage labour, make that inevitable. The division of the working day, between necessary and surplus labour, is a consequence of that.

But, it is precisely for this reason that, under capitalism, wages cannot be the price of labour.

“The working-day of 12 hours embodies itself, e.g., in a money-value of 6s. Either equivalents are exchanged, and then the labourer receives 6s, for 12 hours’ labour; the price of his labour would be equal to the price of his product. In this case he produces no surplus-value for the buyer of his labour, the 6s. are not transformed into capital, the basis of capitalist production vanishes. But it is on this very basis that he sells his labour and that his labour is wage-labour. Or else he receives for 12 hours’ labour less than 6s., i.e., less than 12 hours’ labour. Twelve hours’ labour are exchanged against 10, 6, &c., hours’ labour. This equalization of unequal quantities not merely does away with the determination of value. Such a self-destructive contradiction cannot be in any way even enunciated or formulated as a law.” (p 502)

That cannot be got round by arguing that less labour (value) in money can be given for more labour, by claiming that the form of this labour is different, the one being the labour provided by the worker as living labour, the other paid to the worker as wages, being realised labour (money).

“This is the more absurd as the value of a commodity is determined not by the quantity of labour actually realized in it, but by the quantity of living labour necessary for its production. A commodity represents, say, 6 working-hours. If an invention is made by which it can be produced in 3 hours, the value, even of the commodity already produced, falls by half. It represents now 3 hours of social labour instead of the 6 formerly necessary. It is

the quantity of labour required for its production, not the realized form of that labour, by which the amount of the value of a commodity is determined.” (p 502-3)

Marx then once again explains the answer to this conundrum.

“That which comes directly face to face with the possessor of money on the market, is in fact not labour, but the labourer. What the latter sells is his labour-power. As soon as his labour actually begins, it has already ceased to belong to him; it can therefore no longer be sold by him. Labour is the substance, and the immanent measure of value, but has itself no value.” (p 503)

Classical political economy took on the concept of “*Price of Labour*” from its use in everyday life, but without subjecting it to any kind of analysis. It remained on a surface level description. As with every other commodity, in asking how is this price determined, it turned to the law of supply and demand, only to find that, as with every other commodity, that law could only explain changes in price, not why the price should settle at A rather than B.

“If demand and supply balance, the oscillation of prices ceases, all other conditions remaining the same. But then demand and supply also cease to explain anything. The price of labour, at the moment when demand and supply are in equilibrium, is its natural price, determined independently of the relation of demand and supply. And how this price is determined is just the question. Or a larger period of oscillations in the market-price is taken, e.g., a year, and they are found to cancel one the other, leaving a mean average quantity, a relatively constant

magnitude. This had naturally to be determined otherwise than by its own compensating variations. This price which always finally predominates over the accidental market-prices of labour and regulates them, this “necessary price” (Physiocrats) or “natural price” of labour (Adam Smith) can, as with all other commodities, be nothing else than its value expressed in money.” (p 503-4)

But, the value, as with other commodities, is the labour-time required for production. Production of what? Of the labourer who provides the labour. Classical political economy then wrapped itself in knots trying to identify the value of labour on this basis, whilst avoiding the inevitable contradiction described earlier, that, on this basis, there could be no surplus value. It was only Marx that recognised that,

“What economists therefore call value of labour, is in fact the value of labour-power, as it exists in the personality of the labourer, which is as different from its function, labour, as a machine is from the work it performs. Occupied with the difference between the market-price of labour and its so-called value, with the relation of this value to the rate of profit, and to the values of the commodities produced by means of labour, &c., they never discovered that the course of the analysis had led not only from the market-prices of labour to its presumed value, but had led to the resolution of this value of labour itself into the value of labour-power. Classical economy never arrived at a consciousness of the results of its own analysis; it accepted uncritically the categories “value of labour,” “natural price of labour,” &c., as final and as adequate expressions for the value-relation under consideration, and was thus led, as will be seen later, into

inextricable confusion and contradiction, while it offered to the vulgar economists a secure basis of operations for their shallowness, which on principle worships appearances only.” (p 504)

It was on this latter basis that the neo-classical school of economics, which forms the basis of orthodox economics today, was developed.

The daily value of labour-power is determined by the average lifespan of the worker. The longer workers live, the lower the value of labour-power. Suppose, on average, workers live for 60 years. The cost of producing that worker includes, maybe, 10 years when they are not producing, 8 years at the start of their life, and 2 at the end. But, they still require feeding, clothing etc., during those periods, particularly at the beginning. That leaves fifty years when they are producing. But, if workers' lifespan falls to 30 years, the value of their labour-power rises. Now, they only work for 20 years, during which they have to cover the expenses of the ten years they are unable to work!

Where workers have to work extended hours, or more intensively, this raises the value of labour power for two reasons. Firstly, the worker will require more food etc., to cover their additional exertion, and wear and tear – today it might also involve additional medical care, to cover treatment for the physical and mental stress caused. But, secondly, beyond a certain level, it will shorten the workers' life, thereby increasing the cost of production, because more labour-power will need to be produced, to replace that worn out prematurely.

But, this change in the value of labour power does not at all change the value of the product of the labour, which would have to be the case were what was being determined the price or value of labour itself. Rather, the value of the product remains the same, determined by the labour-time required for its production, whilst the reduction in workers' lifespan raises the value of labour-power, and thereby reduces surplus value.

“As the value of labour is only an irrational expression for the value of labour-power, it follows, of course, that the value of labour must always be less than the value it produces, for the capitalist always makes labour-power work longer than is necessary for the reproduction of its own value. In the above example, the value of the labour-power that functions through 12 hours is 3s., a value for the reproduction of which 6 hours are required. The value which the labour-power produces is, on the other hand, 6s., because it, in fact, functions during 12 hours, and the value it produces depends, not on its own value, but on the length of time it is in action.” (p 505)

It appears, however, that the price of labour (the wage) is the price of that labour for the whole time it is in action – which is further encouraged by the fact that wages may be proportional to the hours worked, for example, for part-time work, or else workers may receive additional wages for overtime etc.

“The wage form thus extinguishes every trace of the division of the working-day into necessary labour and surplus-labour, into paid and unpaid labour. All labour appears as paid labour. In the corvée, the labour of the worker for himself, and his compulsory labour for his lord,

differ in space and time in the clearest possible way. In slave labour, even that part of the working-day in which the slave is only replacing the value of his own means of existence, in which, therefore, in fact, he works for himself alone, appears as labour for his master. All the slave's labour appears as unpaid labour. In wage labour, on the contrary, even surplus-labour, or unpaid labour, appears as paid. There the property-relation conceals the labour of the slave for himself; here the money-relation conceals the unrequited labour of the wage labourer.” (p 505)

It is on the basis of this illusion that wages are the price of labour, rather than of labour-power, that, therefore, all labour is paid labour, that the ideological and juridical relations, and ideas of workers and capitalists rest. The importance of that for capital is obvious.

What is presented, at first appearance, is an exchange, the same as the exchange of any other commodity for money. Money (exchange value) is given in exchange for a commodity (use value). Commodity fetishism, as described in previous chapters, gives the impression that the value of the commodity is intrinsic to it, that it is the specific nature of the commodity, as a use value, which gives it its value, rather than that it is itself a manifestation of value, i.e. of a certain quantity of labour-time. Although this value, is a certain quantity of labour-time, it is not thereby a fixed quantity of value or labour-time. The commodity only acts as a vessel within which this continually varying quantity of value resides, rather like a balloon, whose size increases or diminishes as air is pumped into it, or let out of it. The value of the

commodity, as social value, is not the same as its individual value.

The labour time actually expended in the production of an individual commodity unit, is fixed. It has been expended, and is gone. It is its historic cost. But, the value of a commodity unit is not determined by this historic cost, or the concrete labour that was actually expended in its production. Each commodity unit is merely a representative of every other such unit in its class (*Chapter 1*), and the value of each unit is the same, irrespective of how much labour-time was actually consumed in its production. Moreover, this social value of the commodity, which is the basis of its exchange value, is determined not by the labour-time that was used for the production of this class of commodity in the past, but the labour-time that is currently required for their production, i.e. what proportion of current social labour-time must be devoted to the replacement of these commodities as part of the process of social reproduction.

It appears that exchange value (money) is being given in exchange not for an equal amount of labour-time, but for an amount of use value, and thereby two incommensurate things are being equated.

“Furthermore, exchange-value and use-value, being intrinsically incommensurable magnitudes, the expressions 'value of labour,' 'price of labour,' do not seem more irrational than the expressions 'value of cotton,' 'price of cotton.'” (p 506)

The illusion is strengthened by other factors. Firstly, the worker is paid for his labour-power only after it has been supplied. Secondly, the worker does not supply labour-power, as abstract labour, to the capitalist, but sells a specific, concrete labour – tailoring, spinning etc. The fact that this concrete labour is, at the same time, reducible to abstract labour, which is the substance of value, is not at first glance, or easily, discernible.

The worker, who works for ten hours a day, might see their wages rise from £10 to £12, or fall to £8, for this day, depending on the supply and demand for labour. It appears to him, therefore, that these changes in market price are a result of changes in its value, even if that value (determined by the labour-time required for its production) remains constant.

But, of course, the demand and supply of labour cannot ultimately be divorced from the value of labour power. If wages are below the value of labour-power then this will lead to a reduction in the supply of labour-power, or it will result in higher rates of profit, leading to accelerated accumulation and increased demand for labour-power. If wages are higher than the value of labour-power, the opposite will occur. More labour-power will arise, accumulation will be slower, capital will seek to replace labour with machines etc.

Seen from the perspective of the capitalist, his approach to labour is as with any other commodity – he seeks to get as much as possible for as little as possible. He sees his profit coming from his own ability to buy low and sell high, rather than from the fact that his workers provide unpaid labour. So he does not know he paid the worker

the value of their labour-power, and still made a profit. He simply believes he paid less than it was worth.

Marx also deals with the other two main cases, which give the appearance that wages are the price of labour rather than the value of labour-power.

“1.) Change of wages with the changing length of the working-day. One might as well conclude that not the value of a machine is paid, but that of its working, because it costs more to hire a machine for a week than for a day. 2.) The individual difference in the wages of different labourers who do the same kind of work. We find this individual difference, but are not deceived by it, in the system of slavery, where, frankly and openly, without any circumlocution, labour-power itself is sold. Only, in the slave system, the advantage of a labour-power above the average, and the disadvantage of a labour-power below the average, affects the slave-owner; in the wage-labour system, it affects the labourer himself, because his labour-power is, in the one case, sold by himself, in the other, by a third person.” (p 507)

Chapter 20 - Time Wages

Labour-power is sold for a definite period of time. The value of labour-power, i.e. the cost of reproducing it, over its average lifetime, can be reduced to these component parts. For example, if a worker lives for 70 years and of these works, on average, for 50, then, if the cost of reproducing these workers, over their lifetime, is £500,000, the annual cost is £10,000. If they work for 50 weeks a year it is £200 a week. If they work 5 days a week, it is £40 a day, and if they work 8 hours a day, it is £5 per hour.

This forms the basis of the value of labour-power as time wages, i.e. the payment of wages for labour-power supplied for a given period of time.

The laws, set out in *Chapter 17*, relating to the value of labour, and its relative proportion against surplus value, then apply by a simple change of form of wages. For example, if the value of labour-power falls, because necessaries become cheaper, then in its transformed '*phenomenal*' form, i.e. the form it presents itself as, at the level of appearances, shows up as the difference between "*nominal*" and "*real*" wages. Here, if the nominal wage remains constant, the real wage rises, because it buys more of these now cheaper necessaries.

By the same token, the daily or weekly wage may remain constant, and yet real wages fall, if the length of the working day increases. Earlier, we said that if the working day is 8 hours this equates to a value of labour-power of £5 per hour. However, if the weekly wage remains at

£200, but the working day rises from 8 hours to 10 hours, the real wage has fallen. Previously, 8 hours work earned £40, now it requires 10 hours work to earn the same amount, a fall from £5 per hour to £4 per hour.

If wages are paid by the hour, then even though the price of labour remains constant, wages will rise if more hours are then worked, and fall if fewer hours are worked. The same applies if the worker works more intensively rather than extensively, i.e. more labour performed in the same period of time.

Similarly, the price of labour can fall whilst wages remain the same, if the workers family can be employed. The household may now have the same weekly wage of £200, required for its reproduction, but if now the wife works for 40 hours, and two children 10 hours each, that is a total of 100 hours. The price of labour will now have fallen from $\text{£}200/40 = \text{£}5$ per hour, to $\text{£}200/100 = \text{£}2$ per hour.

Marx quotes the author of the “*Essay on Trade and Commerce*”, and Nassau Senior,

“This is perceived by the fanatical representative of the industrial bourgeoisie of the 18th century, the author of the “Essay on Trade and Commerce” often quoted by us, although he puts the matter in a confused way: “It is the quantity of labour and not the price of it” (he means by this the nominal daily or weekly wages) “that is determined by the price of provisions and other necessaries: reduce the price of necessaries very low, and of course you reduce the quantity of labour in proportion. Master manufacturers know that there are

various ways of raising and felling the price of labour, besides that of altering its nominal amount.” (op. cit., pp. 48, 61.) In his “Three Lectures on the Rate of Wages,” London, 1830, in which N. W. Senior uses West’s work without mentioning it, he says: “The labourer is principally interested in the amount of wages” (p. 14), that is to say, the labourer is principally interested in what he receives, the nominal sum of his wages, not in that which he gives, the amount of labour!” (Note 1, p 510)

Anyone who has acted as a trade union negotiator is well aware of this fact. A common strategy of management, in responding to pay claims, has always been to offer the prospect of increased amounts of overtime, rather than increases in the hourly rate, and all too frequently workers have been willing to accept this higher top line figure, rather than press for an increase in the hourly rate.

“As a general law it follows that, given the amount of daily or weekly labour, &c., the daily or weekly wages depend on the price of labour which itself varies either with the value of labour-power, or with the difference between its price and its value. Given, on the other hand, the price of labour, the daily or weekly wages depend on the quantity of the daily or weekly labour.” (p 510)

In much of what has gone before, Marx has described the dire consequences for workers from overwork. Now he describes the dire consequences of not enough work. We have set out that the annual cost of reproducing the workers is £10,000, which on the basis of a 50 week year, 40 hour week, and 8 hour day, amounts to £5 per hour. But, this cost is the cost of reproducing the workers'

labour power during this period, not the value created by that labour in the same period. For example, in a year, with a 100% rate of surplus value, the worker will create £20,000 of new value. Deducting the £10,000 cost of reproducing their labour-power leaves a surplus value of £10,000. By the same token, in a week they will produce £400 of new value, £200 as wages, £200 surplus value. In a day, £80 of new value, £40 wages, £40 surplus value. Finally, in an hour, £10 of new value, £5 wages, £5 surplus value.

If the worker is paid by the hour, then, if the number of hours worked in the day is reduced, the amount of wages, and of surplus value will fall equally. For example, if the day is cut from 8 hours to 6 hours, only £60 of new value will be created, £30 as wages, and £30 as surplus value. But, whether the worker is working these 8 hours or not the cost of reproducing their labour-power does not fall. The worker does not stop living during these 2 hours.

The £10,000 cost for the year, was the minimum amount required for their reproduction, from one year to the next. But, if the worker now only works 6 hours a day, receiving £30 in wages, that amounts to only £7,500 for the year, which means they are unable to reproduce their labour-power.

“If the hour’s wage is fixed so that the capitalist does not bind himself to pay a day’s or a week’s wage, but only to pay wages for the hours during which he chooses to employ the labourer, he can employ him for a shorter time than that which is originally the basis of the calculation of the hour-wage, or the unit-measure of the price of labour. Since this unit is determined by the ratio

it, of course, loses all meaning as soon as the working-day ceases to contain a definite number of hours. The connection between the paid and the unpaid labour is destroyed. The capitalist can now wring from the labour a certain quantity of surplus-labour without allowing him the labour-time necessary for his own subsistence. He can annihilate all regularity of employment, and according to his own convenience, caprice, and the interest of the moment, make the most enormous overwork alternate with relative or absolute cessation of work. He can, under the pretence of paying "the normal price of labour," abnormally lengthen the working-day without any corresponding compensation to the labourer." (p 510-11)

As referred to in an earlier chapter, this is the situation increasing numbers of workers find themselves in today as a result the casualisation of labour and introduction of temporary, part-time and zero hours contracts. It is a major reason that in order to ensure a sufficient supply of labour-power, the capitalist welfare state has to provide an increasing amount, and range, of in-work benefits for such workers, which are a direct transfer from one group of workers to another, via a bureaucratic mechanism, which is itself incredibly wasteful of resources. It is another reason that in the UK productivity levels are so low and falling.

Marx then turns to overtime. He shows that, even where the price of labour, i.e. the hourly wage, rises, this can be consistent with falling real wages. If the daily rate remains constant, but the number of hours in the day rises, then the hourly rate clearly falls. But, it also falls if the increase in hours is proportionately more than the rise in the daily wage. For example, £10 per day with a 5

hour day = £2 per hour. But, £12 per day, with an 8 hour day is only £1.50 per hour.

But, even where the hourly rate itself increases, this can still represent a fall in real wages. As described previously, the value of labour power is calculated on the cost of reproducing labour-power over a given period, and part of that cost is to cover the average wear and tear of the worker. But, that assumes that the worker works for the normal working day, at the normal level of intensity. If the worker works, for any consistent period of time, for longer than the normal working day, or at a higher than normal level of intensity, they will suffer greater wear and tear, and this wear and tear rises by a proportionately greater amount than the additional work.

As a consequence, the value of labour-power rises proportionately more, the more the worker is over worked. This is not only manifest in the need for more food etc., but also in a shorter life, greater medical costs, and so on. Suppose then that the worker goes from working an 8 hour day to a 12 hour day. But, this 50% increase in hours worked causes the value of their labour-power to rise from £5 per hour to £10 per hour. Their hourly rate rises from £5 to say £8. Their wages, for the year, rise to £24,000, and yet their real wage has fallen, because the value of their labour-power is now £30,000, required to meet the now much higher cost of reproducing their labour power.

“In many branches of industry where time-wage is the general rule without legal limits to the working-time, the habit has, therefore, spontaneously grown up of regarding the working day as normal only up to a certain

point, e.g., up to the expiration of the tenth hour (“normal working-day,” “the day’s work,” “the regular hours of work”). Beyond this limit the working-time is over-time, and is, taking the hour as unit-measure, paid better (“extra pay”), although often in a proportion ridiculously small. The normal working-day exists here as a fraction of the actual working-day, and the latter, often during the whole year, lasts longer than the former. The increase in the price of labour with the extension of the working-day beyond a certain normal limit, takes such a shape in various British industries that the low price of labour during the so-called normal time compels the labourer to work during the better paid over-time, if he wishes to obtain a sufficient wage at all. Legal limitation of the working-day puts an end to these amenities.” (p 512-3)

A low price of labour begets longer working hours, because the worker is forced to work longer to obtain enough wages to live on.

“On the other hand, the extension of the working-time produces, in its turn, a fall in the price of labour, and with this a fall in the day’s or week’s wages.” (p 513)

“If one man does the work of 1½ or 2 men, the supply of labour increases, although the supply of labour-power on the market remains constant. The competition thus created between the labourers allows the capitalist to beat down the price of labour, whilst the falling price of labour allows him, on the other hand, to screw up still further the working-time. Soon, however, this command over abnormal quantities of unpaid labour, i.e., quantities in excess of the average social amount, becomes a source of competition amongst the capitalists

themselves. A part of the price of the commodity consists of the price of labour. The unpaid part of the labour-price need not be reckoned in the price of the commodity. It may be presented to the buyer. This is the first step to which competition leads. The second step to which it drives is to exclude also from the selling price of the commodity at least a part of the abnormal surplus-value created by the extension of the working-day. In this way, an abnormally low selling price of the commodity arises, at first sporadically, and becomes fixed by degrees; a lower selling price which henceforward becomes the constant basis of a miserable wage for an excessive working-time, as originally it was the product of these very circumstances.” (p 513-4)

Marx does not expand on this further here, because he says it would require an analysis of competition, which he intended to deal with later. However, as is the case later, with his analysis of the falling rate of profit, and, as was the case with the establishment of the normal working day, its possible to identify countervailing tendencies. For example, for so long as the abnormal surplus value is accumulated, it creates an abnormal demand for labour, which will tend to push the price of labour higher. When it is discounted from selling prices, it will cause an abnormal increase in demand for this commodity (because its price does not fully reflect the value of the labour-power consumed), which again will cause an increase in demand for labour-power, raising the price of labour. Finally, if this particular labour is paid a price, which does not cover the value of the labour-power, for any considerable period, the supply of labour power of the appropriate quality will fall, thereby again raising its

price. However, the periods involved could be considerable.

Marx again cites the example of the competition between the “*full priced*” and “*under priced*” bakers, when the latter reduced the price of bread not only by gross adulteration of the product, but by the overwork and underpaying of their workers. Such competition and consequences between small capitalists continues today, but capital today is dominated by big capital, which long ago, as Engels described, found these penny-pinching measures to be counter-productive.

Marx quotes the *Reports of the Children's Employment Commission*.

““*In Birmingham there is so much competition of masters one against another that many are obliged to do things as employers that they would otherwise be ashamed of; and yet no more money is made, but only the public gets the benefit.*”” (p 514)

That is certainly a lesson that oligopolies have learned. As Paul Sweezy demonstrated, an oligopoly that reduces its prices, will be followed by others, creating a price war that is destructive of profits. One that raises prices, is not likely to be followed by others. This is why oligopolies try to avoid reducing prices, and why central banks were introduced, to increase money supply, to prevent falls in nominal price levels. Its why oligopolies began to compete not on lower prices, but on better quality, and sought to increase profits, via increased market share based on higher quality, new products, and via continual innovation to raise productivity and reduce costs.

As Marx points out elsewhere, what the capitalists demand above all else is a level playing field, which requires regulation. The more big capital dominates, the more those regulations meet its needs and undermine those of the small capitalists. Where regulations have been introduced by *social democracy* (meaning the modern form of bourgeois democracy, and therefore including the ideas that have dominated most bourgeois parties be they of the Right or the Left) that has been to meet the needs of big capital. The fact that governments, like that of Cameron, talk about removing such regulation is an indication of how much these parties are beholden to small capital, and its attendant social layers.

So, for example, Marx cites the testimony of the “*full priced*” bakers.

“The “full-priced” denounced their rivals before the Parliamentary Committee of Inquiry: “They only exist now by first defrauding the public, and next getting 18 hours’ work out of their men for 12 hours’ wages.... The unpaid labour of the men was made ... the source whereby the competition was carried on, and continues so to this day.... The competition among the master bakers is the cause of the difficulty in getting rid of night-work. An underseller, who sells his bread below the cost-price according to the price of flour, must make it up by getting more out of the labour of the men.... If I got only 12 hours’ work out of my men, and my neighbour got 18 or 20, he must beat me in the selling price. If the men could insist on payment for over-work, this would be set right.... A large number of those employed by the undersellers are foreigners and youths, who are obliged to accept almost any wages they can obtain.” (p 514)

A hundred and fifty years later, Cameron's Government represents the interests of the “*under priced*” producers of goods, not the “*full priced*” producers. In so doing, it is a far cry from the position of the Liberal Winston Churchill, who more than 100 years ago introduced the first minimum wage, precisely to undermine the kind of race to the bottom that the policies of today's Liberal-Tories lead to. As President of the Board of Trade, in 1909, Churchill introduced the Minimum Wage, saying,

“It is a national evil that any class of Her Majesty’s subjects should receive less than a living wage in return for their utmost exertions... where you have what we call sweated trades, you have no organisation, no parity of bargaining, the good employer is undercut by the bad and the bad by the worst; the worker, whose whole livelihood depends upon the industry, is undersold by the worker who only takes up the trade as a second string... where these conditions prevail you have not a condition of progress, but a condition of progressive degeneration.”

But, today in Britain, a large minority of workers are in jobs that do not pay a living wage. As a consequence, the state has to make up the wages of these workers, with various welfarist measures, such as Housing Benefit, Child Benefit, Tax Credits and so on, which subsidise these low-paying, “*under-selling*” employers that often also provide poor conditions of employment. These “*bad*” employers are subsidised as a result of taxes taken from better paid workers, used as benefits for worse paid workers.

One of the main influences on undermining this, of course, was the development by workers themselves of

the co-operatives. Their own shops were able to provide quality produce, at reasonable prices, without the kind of exploitation of workers, producing those goods, that occurred amongst capitalist producers. The co-ops were able to introduce decent pay and working conditions, as well as introducing welfare benefits for their employees and members. Yet, they were still able to out compete the private producers and retailers, and to grow, until by the end of the 19th century, the Co-op dominated the retail and wholesale sector. The extension of the Co-op into consumer research, also meant it was able to highlight poor and injurious products being produced and sold by other retailers. The Co-op was also able to work, with the rest of the Labour Movement, to highlight things like profiteering. For example, after WWI, the London Co-ops worked with the London Trades Councils, in the Food Vigilance Committee.

Chapter 21 - Piece Wages

“Wages by the piece are nothing else than a converted form of wages by time, just as wages by time are a converted form of the value or price of labour-power.

In piece wages it seems at first sight as if the use-value bought from the labourer was, not the function of his labour-power, living labour, but labour already realized in the product, and as if the price of this labour was determined, not as with time-wages, by the fraction, daily value of labour-power/the working day of a given number of hours, but by the capacity for work of the producer.” (p 516)

Marx points out that this appearance ought to be questioned by the simple fact that both piece rates and day rates appear side by side in the same industry.

“But it is, moreover, self-evident that the difference of form in the payment of wages alters in no way their essential nature, although the one form may be more favourable to the development of capitalist production than the other.” (p 517)

Suppose in a 10 hour day, 5 hours are paid (necessary labour) and 5 unpaid (surplus labour). Suppose the value of the output is £100. The worker receives £50 wages, capital £50 surplus value. Suppose the total output is 100 units. The worker is paid £0.50 per unit wages, and capital £0.50 surplus value. If a particular worker works at the average rate then clearly it does not matter whether they are paid at the rate of £0.50 per piece (piece rates) or £50 per day (day rates). In both cases their wage is

£50, and they produce as much surplus value in either case.

If there are 100 workers on piece rates, the wages of those who work below the average rate, and whose wages fall below the day rate will be cancelled out by the higher wages of those who work above the average rate.

“Piece wages do not, in fact, distinctly express any relation of value. It is not, therefore, a question of measuring the value of the piece by the working-time incorporated in it, but on the contrary, of measuring the working-time the labourer has expended by the number of pieces he has produced. In time-wages, the labour is measured by its immediate duration; in piece wages, by the quantity of products in which the labour has embodied itself during a given time. The price of labour time itself is finally determined by the equation: value of a day’s labour = daily value of labour-power. Piece-wage is, therefore, only a modified form of time-wage. (p 517-8)

Piece rates have clear advantages for capital. With time wages, the worker needs close supervision to ensure they are continually working. That implies costs of supervision. With piece rates, the worker has an incentive to work continuously and at their maximum intensity in order to produce more pieces and maximise wages. Under time wages, the quality of output needs to be checked, and fines imposed for poor quality. Under piece wages, the worker has an incentive to maintain quality, because substandard pieces are not paid for.

This also provides the capitalist with a measure of work intensity, so workers unable to match this standard are

dismissed. This also means the normal intensity of labour is raised.

“Since the quality and intensity of the work are here controlled by the form of wage itself, superintendence of labour becomes in great part superfluous. piece wages therefore lay the foundation of the modern “domestic labour,” described above, as well as of a hierarchically organized system of exploitation and oppression. The latter has two fundamental forms. On the one hand, piece wages facilitate the interposition of parasites between the capitalist and the wage-labourer, the “sub-letting of labour.” The gain of these middlemen comes entirely from the difference between the labour-price which the capitalist pays, and the part of that price which they actually allow to reach the labourer. In England this system is characteristically called the “sweating system.” On the other hand, piece-wage allows the capitalist to make a contract for so much per piece with the head labourer — in manufactures with the chief of some group, in mines with the extractor of the coal, in the factory with the actual machine-worker — at a price for which the head labourer himself undertakes the enlisting and payment of his assistant work people. The exploitation of the labourer by capital is here effected through the exploitation of the labourer by the labourer.” (p 518-9)

As well as raising the average level of intensity of labour, this also tends to a lengthening of the day, because that means more pieces are produced, meaning more wages. However, Marx’s previous comments in an earlier chapter have to be set against this, i.e. that a shorter day enabled a higher intensity, which led to increased output, and both higher wages and higher profits.

As described earlier, although piece rates mean each worker is paid an individual wage, based on their ability, this does not alter the total wage bill or relation to surplus value. But, it has other effects.

“But where a particular rate of piece-wage has for a long time been fixed by tradition, and its lowering, therefore, presented especial difficulties, the masters, in such exceptional cases, sometimes had recourse to its compulsory transformation into time-wages.” (p 520)

Marx argues that piece rates are the form most in harmony with capitalist production. At the beginning of modern industry, between 1797-1815, they facilitated the lengthening of working day, and lowering of wages. But, piece rates have disadvantages for capital, as productivity rises. In the example above, 100 pieces were produced in 10 hours, with a value of £100. If productivity doubles, so that 200 pieces are now produced in 10 hours, the value of each piece falls to £0.50. But, its clear that wages could not then continue to be paid at £0.50 per piece, or else there would be no surplus value. Wages need to fall to £0.25 per piece, leaving £0.25 per piece surplus value. Then wages and surplus value remain £50 each per day, equal to the value of the 200 items now produced. However, if workers accept the view that what they are being paid for is the value of their labour in each piece, they will be reluctant to reduce the rate per piece. This means that continual battles break out between workers and bosses over the latter's attempts to reduce piece rates.

Chapter 22 - National Differences of Wages

The analysis so far has demonstrated the basis of the value of labour power, and how this can rise or fall, as a consequence of numerous combinations. It can rise or fall, in absolute terms, and in relative terms, as against surplus value. This provides the underlying basis upon which arises the market price of labour, in the form of wages.

“As has been already said, the simple translation of the value, or respectively of the price, of labour-power into the esoteric form of wages transforms all these laws into laws of the fluctuations of wages. That which appears in these fluctuations of wages within a single country as a series of varying combinations, may appear in different countries as contemporaneous difference of national wages. In the comparison of the wages in different nations, we must therefore take into account all the factors that determine changes in the amount of the value of labour-power; the price and the extent of the prime necessaries of life as naturally and historically developed, the cost of training the labourers, the part played by the labour of women and children, the productiveness of labour, its extensive and intensive magnitude. Even the most superficial comparison requires the reduction first of the average day-wage for the same trades, in different countries, to a uniform working-day. After this reduction to the same terms of the day-wages, time-wage must again be translated into

piece-wage, as the latter only can be a measure both of the productivity and the intensity of labour.” (p 524)

In any national economy there is an average intensity of labour that determines how much labour-time is socially necessary. But, at an international level, there will be a series of these average intensities, because each country will be different.

“These national averages form a scale, whose unit of measure is the average unit of universal labour. The more intense national labour, therefore, as compared with the less intense, produces in the same time more value, which expresses itself in more money.” (p 525)

The more productive country's labour will also be counted as more intense, because its greater productivity will appear as a greater amount of labour, performed in a given time, compared with a less productive economy. At least, that is the case so long as competition does not drive this economy to reduce the price of its output down to its value.

The more capitalist production develops, in a particular country, the more productivity and intensity of labour there rises, compared to those economies that are less developed. The consequence is a modification of the law of value. Now, two identical commodities, that absorb the same amount of labour-time, have different values, because the labour-time of the more productive country, A, counts as a multiple of that of country B.

“The different quantities of commodities of the same kind, produced in different countries in the same working-time, have, therefore, unequal international values, which are

expressed in different prices, i.e., in sums of money varying according to international values. The relative value of money will, therefore, be less in the nation with more developed capitalist mode of production than in the nation with less developed. It follows, then, that the nominal wages, the equivalent of labour-power expressed in money, will also be higher in the first nation than in the second; which does not at all prove that this holds also for the real wages, i.e., for the means of subsistence placed at the disposal of the labourer.” (p 525)

But, these differences in productivity, between different countries, mean that other variations in wages, besides those caused by different relative values of money, arise.

“But even apart from these relative differences of the value of money in different countries, it will be found, frequently, that the daily or weekly, &tc., wage in the first nation is higher than in the second, whilst the relative price of labour, i.e., the price of labour as compared both with surplus-value and with the value of the product, stands higher in the second than in the first.” (p 525)

Marx cites James Anderson,

“James Anderson remarks in his polemic against Adam Smith: “It deserves, likewise, to be remarked, that although the apparent price of Labour is usually lower in poor countries, where the produce of the soil, and grain in general, is cheap; yet it is in fact for the most part really higher than in other countries. For it is not the wages that is given to the labourer per day that

constitutes the real price of labour, although it is its apparent price. The real price is that which a certain quantity of work performed actually costs the employer; and considered in this light, labour is in almost all cases cheaper in rich countries than in those that are poorer, although the price of grain and other provisions is usually much lower in the last than in the first.... Labour estimated by the day is much lower in Scotland than in England.... Labour by the piece is generally cheaper in England.” (James Anderson, “Observations on the Means of Exciting a Spirit of National Industry,” &tc., Edin. 1777, pp. 350, 351.) On the contrary, lowness of wages produces, in its turn, dearness of labour. “Labour being dearer in Ireland than it is in England ... because the wages are so much lower.” (N. 2079 in “Royal Commission on Railways, Minutes,” 1867.)” (Note 2, p 525)

He also cites Ure, who referred to the findings of J. W. Cowell's investigation into the spinning trade,

“...in England wages are virtually lower to the capitalist, though higher to the operative than on the Continent of Europe.” (p 526)

The same conclusion was arrived at by the Factory Inspector, Alexander Redgrave, in his *Report of October 1866*. He,

“...proves by comparative statistics with continental states, that in spite of lower wages and much longer working-time, continental labour is, in proportion to the product, dearer than English.” (p 526)

Marx provides a number of further examples of the way the less developed capitalist economies, across Europe, displayed all of the horrors of the early capitalist development in Britain, and yet with all that, and with wages often only 50% of those in Britain, the same industries in Germany, Russia, etc. were unable to compete with their British equivalents.

The reason was quite clearly the relative differences in productivity between countries. Marx highlights that by presenting the comparative tables produced by Redgrave, showing the average number of spindles per factory, and average number of spindles per person across a number of European economies.

But, it should not be assumed from this that wages rise or fall, in each country, in proportion to the different levels of productivity. As the discussion in previous chapters has shown, as productivity rises, this cheapens the necessaries needed by workers, so that real wages might rise, whilst nominal wages fall, and certainly fall relative to surplus value. This mistake was made by the US economist Henry Carey.

“In an “Essay on the Rate of Wages,” one of his first economic writings, H. Carey tries to prove that the wages of the different nations are directly proportional to the degree of productiveness of the national working-days, in order to draw from this international relation the conclusion that wages everywhere rise and fall in proportion to the productiveness of labour. The whole of

our analysis of the production of surplus-value shows the absurdity of this conclusion, even if Carey himself had proved his premises instead of, after his usual uncritical and superficial fashion, shuffling to and fro a confused mass of statistical materials.” (p 527-8)

Half a century later, it was the understanding of this principle that laid the basis of Fordism. Ford realised that he could afford to raise the wages of his workers, if, by doing so, he could raise productivity. Ford raised wages and introduced a corporate welfare system. It led to workers staying with the company, and as a result their productivity rose. Provided productivity continued to rise, proportionately more than wages, it led to a proportionately greater increase in profits. That, in turn, meant that more was available for additional accumulation of capital, which made possible even greater increases in productivity. At the same time, the steadily rising wages of Ford's workers, and the workers of the other companies, adopting similar Fordist methods, meant that a steadily rising market was created for Ford's cars, and the products of the other companies producing a range of mass produced consumer goods.

Part VII

The Accumulation Of Capital

Chapter 23 - Simple Reproduction

The only way any society can continue to produce – and thereby to consume – is if it continually sets aside part of what it produces, just to replace what it has used up, in the process of production itself. A farmer growing corn, for example, may have used 100 kilograms of corn as seed, to produce 1000 kilograms of corn. If they want to grow 1000 kilograms of corn again next year, they will have to set aside 100 kilograms out of this year's crop to use as seed again. But, they will also have used a certain amount of fertiliser, a certain proportion of the life of their plough and so on. The cost of replacing these elements and instruments of production has also to be taken out of the proceeds of selling the 1000 kilograms of corn. Of course, these other things, the fertiliser, the plough and so on, made by other members of society, also require labour-time for their production, and the elements and instruments of their production in turn – for example, the lathe used to produce a plough – also get used up, and a proportion of output set aside for their replacement too.

Put another way, - maybe looking at it from the standpoint of Robinson Crusoe – in any given year, out of the total labour-time available to society, then just to continue production at the same level, a certain proportion of that labour-time has to be set aside for no other purpose than to just replace the means of production. Under capitalism, this proportion is what we have described as the constant capital. It is a proportion of the total output of society that never enters consumption, or those commodities used in the production of commodities for consumption.

“If production be capitalistic in form, so, too, will be reproduction. Just as in the former the labour process figures but as a means towards the self-expansion of capital, so in the latter it figures but as a means of reproducing as capital — i.e., as self-expanding value — the value advanced.” (p 531)

Note that Marx does not speak of the “money” advanced here, in this process of reproduction, but of the “value” advanced, and these are two very different things. He continues,

“It is only because his money constantly functions as capital that the economic guise of a capitalist attaches to a man. If, for instance, a sum of £100 has this year been converted into capital. and produced a surplus-value of £20, it must continue during next year, and subsequent years, to repeat the same operation. As a periodic increment of the capital advanced, or periodic fruit of capital in process, surplus-value acquires the form of a revenue flowing out of capital.

*If this revenue serve the capitalist only as a fund to provide for his consumption, and be spent as periodically as it is gained, then, **caeteris paribus**, simple reproduction will take place. And although this reproduction is a mere repetition of the process of production on the old scale, yet this mere repetition, or continuity, gives a new character to the process, or, rather, causes the disappearance of some apparent characteristics which it possessed as an isolated discontinuous process.” (p 531-2)*

Using the formula presented earlier, in which the total output is divided into $C+V+S$, it can be seen that this is merely the capitalistic form of the law of value, which describes the necessary proportions in which society's available labour-time is divided up. We have seen above that any society that simply wants to continue to produce, on the same scale, has to devote a certain proportion of its available labour-time to physically replacing/reproducing the means of production (constant capital) used up. How much labour-time will be determined in line with the law of value, by the level of productivity. For example, if there is a good harvest, less time will be required to produce the 100 kilograms of corn needed to replace the original seed. Vice versa if there is a bad harvest. A society with a suitable climate and fertile soil will need to set aside less time for that purpose than a society with an unsuitable climate, and less fertile soil.

But, the formula $C+V+S$ also tells us that out of total production there are two further components – the proportion of the output required for consumption by the producers, and the proportion left over. This latter, for a primitive communist society, or Robinson Crusoe, or for a future communist society, and in part in a society of peasant producers, is in the hands of the producers themselves, and can be used to increase current consumption, to reduce the quantity of labour to be performed in future, or for investment.

In a slave society, it is directly appropriated by the slave owner. In a feudal society it is appropriated, in whole or in part, by the feudal ruling class, the landlords and clergy in the form of rents, tithes and taxes on the peasant. But, the peasant or artisan, may retain ownership of part,

which is one means by which they may transform themselves into capitalists.

Under capitalism, however, the whole of this surplus is appropriated by capital in the form of surplus value.

However, just as, in order to continue producing at the same level (simple reproduction), a proportion of society's available labour-time/output value has to be devoted to reproducing the means of production, so a certain proportion has to be devoted to ensuring the reproduction of the workers. So, it can be seen that, whatever the form of the surplus, it really is just that remainder after these other two necessary expenditures of available labour-time have been met. If the amount taken out as surplus encroaches on these necessary quantities, then future production will shrink. If a slave owner does not adequately feed his slaves, they will die or be unable to do so much work, so his future output from them will fall. If a capitalist does not repair or replace his machines, the workers will be less productive, as the machines break down, and so future output will fall.

So, a given proportion of society's output must also be devoted to producing those goods which ensure the reproduction of the producers. Again, how much labour-time will depend on the level of productivity. The higher the level of productivity, the less time has to be allocated to this purpose. As seen earlier, this is why capital has an incentive in raising productivity, because it means a proportionately smaller amount of society's labour-time has to be devoted to reproducing labour-power, which

leaves a greater proportion of labour-time left over as surplus.

Of course, it is the worker who produces both the constant capital and the goods which go into his own consumption, as well as the commodities which form the surplus production. On the one hand, this forms the physical production of the society, but under capitalism, operating through the market, this physical production also has another side, which confronts it, and that is its monetary value. So, for example, a certain proportion of the workers time is devoted to producing the goods needed for their reproduction. But, the worker is not simply handed these goods by the capitalist, in the way the slave is handed back a portion of their output by the slave owner. Instead, the capitalist gives to the worker a sum of money in the form of wages to buy these necessaries.

In reality, the same underlying relations exist. The producers/workers spend a given amount of available labour-time reproducing the means of production. They spend a given amount of labour-time producing those necessaries required for their own reproduction. The available labour-time remaining produces the surplus.

“The illusion begotten by the intervention of money vanishes immediately, if, instead of taking a single capitalist and a single labourer, we take the class of capitalists and the class of labourers as a whole. The capitalist class is constantly giving to the labouring class order-notes, in the form of money, on a portion of the commodities produced by the latter and appropriated by the former. The labourers give these order-notes back

just as constantly to the capitalist class, and in this way get their share of their own product. The transaction is veiled by the commodity form of the product and the money form of the commodity.

Variable capital is therefore only a particular historical form of appearance of the fund for providing the necessaries of life, or the labour-fund which the labourer requires for the maintenance of himself and family, and which, whatever be the system of social production, he must himself produce and reproduce. If the labour-fund constantly flows to him in the form of money that pays for his labour, it is because the product he has created moves constantly away from him in the form of capital.”(p 542-3)

Marx removes the illusion created by commodity fetishism by analysing the operation of the law of value in terms of the peasant producer.

“Let us take a peasant liable to do compulsory service for his lord. He works on his own land, with his own means of production, for, say, 3 days a week. The 3 other days he does forced work on the lord’s domain. He constantly reproduces his own labour-fund, which never, in his case, takes the form of a money payment for his labour, advanced by another person. But in return, his unpaid forced labour for the lord, on its side, never acquires the character of voluntary paid labour. If one fine morning the lord appropriates to himself the land, the cattle, the seed, in a word, the, means of production of this peasant, the latter will thenceforth be obliged to sell his labour-power to the lord. He will, ceteris paribus, labour 6 days a week as before, 3 for himself, 3 for his lord, who thenceforth

becomes a wages-paying capitalist. As before, he will use up the means of production as means of production, and transfer their value to the product. As before, a definite portion of the product will be devoted to reproduction. But from the moment that the forced labour is changed into wage labour, from that moment the labour-fund, which the peasant himself continues as before to produce and reproduce, takes the form of a capital advanced in the form of wages by the lord. The bourgeois economist whose narrow mind is unable to separate the form of appearance from the thing that appears, shuts his eyes to the fact, that it is but here and there on the face of the earth, that even nowadays the labour fund crops up in the form of capital.” (p 537)

Although today workers are, for the first time, the largest class on the planet, a very large part of the labour fund continues to be in the form of direct production and consumption by peasant producers, rather than in wages.

Of course, this process of reproduction under capitalism, whereby the worker works to produce the means of production and consumption, which the capitalist then sells, and out of these proceeds buys new means of production and labour-power, must have had a beginning. In other words, at some point, prior to this capitalist production, the capitalist must have had money available to buy means of production and labour-power. Marx deals later with this process of *Primary Accumulation*.

“However this may be, the mere continuity of the process, the simple reproduction, brings about some

other wonderful changes, which affect not only the variable, but the total capital.” (p 534)

Marx then proceeds to argue that once this process of simple reproduction, under capitalism, begins the nature of capital is transformed. The original capital, he says, may have been the result of abstinence by the capitalist, but the process of reproduction changes this so that, eventually, the whole of this capital is nothing more than accumulated surplus value. I have to say, I am not convinced by Marx's argument in the form he presents it.

In fact, I think here, Marx makes the same mistake as that made by Senior, and others previously criticised by Marx, in relation to the working day. That is he tries to make the labour-time expended, and new value created, by the worker, not just cover the workers' wages and the surplus value, but the replacement of the constant capital too.

Marx says, suppose a capitalist begins with a capital of £1000. He makes £200 a year in surplus value on it. Marx says, assume he consumes all of this £200. In five years, he will have consumed £1,000 = his original capital. If he only consumes £100, then it will take 10 years to have consumed his original capital. Marx develops a law from this:

“General Rule: The value of the capital advanced divided by the surplus-value annually consumed, gives the number of years, or reproduction periods, at the expiration of which the capital originally advanced has been consumed by the capitalist and has disappeared.” (p 534)

The capitalist, Marx says thinks he is consuming out of the surplus value created by the worker, but he isn't, he is really consuming his original capital, and although the original buildings etc., he bought with his original capital, are still there, these simply reflect the other side of the debt he has built up on them, by drawing down on their value, in order to consume. The equivalent today is someone who continues to consume by continually re-mortgaging their house, when its market price rises.

But, Marx's argument here does not stand up. Suppose, for instance, the capitalist made no surplus value on their capital. Would that mean that the constant capital was gradually eroded? Well it would if the capitalist each year took money out of the business intended for the reproduction of the constant capital. But, if they didn't, then the constant capital would continue to be reproduced. That is because, the constant capital is not reproduced out of the surplus value produced, which is the implication of Marx's argument here, but is reproduced in the value of the end product into whose value it has been transferred.

Suppose the capitalist was also a worker, or had an income from elsewhere to live on, and so could survive for some time, without the business producing surplus value. That frequently happens with new businesses. In fact, many of them frequently run at a loss for the first few years. We might then have:

$$c\ 1000 + v\ 200 + s\ 0 = C\ 1200.$$

When the output is sold, 1000 goes back into buying means of production, i.e. reproducing the original capital,

and 200 to purchasing labour-power. The original constant capital is not reproduced out of the surplus-value produced by the worker, as Marx oddly suggests here, but is reproduced automatically, as he previously set out, as a result of its value being transferred to the end product! Similarly, the value of the variable capital is not reproduced out of the surplus value, but out of the new value created by labour. Even without surplus value being produced, this capital will then always generate sufficient value to buy replacement means of production, and labour-power. Consequently, any surplus value produced above that, and not used for accumulation, does indeed go to fund the capitalists' consumption, rather than that consumption coming out of drawing down the value of the original capital.

As soon as a proportion of the surplus-value is actually accumulated then Marx is correct. This new capital is no longer the capital they have accumulated by their own means, but is simply the appropriated labour of the worker. Ultimately, then, for all intents and purposes, the great mass of capital is nothing more than this appropriated surplus value.

The initial condition of capitalist production, that the owner of the means of production is able to buy labour-power, from a worker, that is dispossessed of the means of production, is itself perpetually reproduced by this process of simple reproduction.

“On the one hand, the process of production incessantly converts material wealth into capital, into means of creating more wealth and means of enjoyment for the capitalist. On the other hand, the labourer, on quitting the

process, is what he was on entering it, a source of wealth, but devoid of all means of making that wealth his own. Since, before entering on the process, his own labour has already been alienated from himself by the sale of his labour-power, has been appropriated by the capitalist and incorporated with capital, it must, during the process, be realised in a product that does not belong to him. Since the process of production is also the process by which the capitalist consumes labour-power, the product of the labourer is incessantly converted, not only into commodities, but into capital, into value that sucks up the value-creating power, into means of subsistence that buy the person of the labourer, into means of production that command the producers. The labourer therefore constantly produces material, objective wealth, but in the form of capital, of an alien power that dominates and exploits him; and the capitalist as constantly produces labour-power, but in the form of a subjective source of wealth, separated from the objects in and by which it can alone be realised; in short he produces the labourer, but as a wage labourer. This incessant reproduction, this perpetuation of the labourer, is the sine qua non of capitalist production.” (p 535-6)

In the process, the worker consumes in two different ways. Firstly, his productive activity consumes the means of production. This is productive consumption. This process is also a process of productive consumption, by the capitalist, because as well as the means of production, he bought, being consumed, the labour-power, of the worker, he has bought, is also consumed.

In order to reproduce that labour-power, the wages, paid by the capitalist, to the worker, goes to buy commodities,

such as food, clothing and shelter, which the worker consumes. This is the workers' individual consumption.

“The labourer consumes in a two-fold way. While producing he consumes by his labour the means of production, and converts them into products with a higher value than that of the capital advanced. This is his productive consumption. It is at the same time consumption of his labour-power by the capitalist who bought it. On the other hand, the labourer turns the money paid to him for his labour-power, into means of subsistence: this is his individual consumption. The labourer’s productive consumption, and his individual consumption, are therefore totally distinct. In the former, he acts as the motive power of capital, and belongs to the capitalist. In the latter, he belongs to himself, and performs his necessary vital functions outside the process of production. The result of the one is, that the capitalist lives; of the other, that the labourer lives.” (p 536)

In another sense, and particularly in the early stages of capitalist production, when the length of the working day means the worker lives only to work, the workers' individual consumption has no other purpose than to reproduce his labour-power, and so his own individual consumption, is itself productive consumption.

Viewed from the perspective of capital, as a whole, rather than the individual capitalist, it can be seen that capital benefits in two ways. On the one hand, capital benefits from the output of the worker. On the other hand, capital benefits by selling that output to the worker, required for their reproduction. The process of consumption, by the

worker, to enable them to continue working, is, in reality, a necessary element in the production process. It is no different to supplying energy to a machine, or food to an animal.

From the perspective of the individual capitalist, however, the aim is to keep the amount paid, to ensure this reproduction, to a minimum. But, it has to be remembered that this minimum is not an absolute, or fixed minimum, as Ferdinand Lassalle believed, in formulating his *Iron Law of Wages*. It is a relative minimum, determined by what is required to ensure that labour-power is reproduced, in both the quantity and quality required by capital.

From this perspective then, any consumption by the worker over and above this minimum is unproductive consumption.

“If the accumulation of capital were to cause a rise of wages and an increase in the labourer’s consumption, unaccompanied by increase in the consumption of labour-power by capital, the additional capital would be consumed unproductively. In reality, the individual consumption of the labourer is unproductive as regards himself, for it reproduces nothing but the needy individual; it is productive to the capitalist and to the State, since it is the production of the power that creates their wealth.

From a social point of view, therefore, the working class, even when not directly engaged in the labour process, is just as much an appendage of capital as the ordinary instruments of labour. Even its individual consumption is,

within certain limits, a mere factor in the process of production. That process, however, takes good care to prevent these self-conscious instruments from leaving it in the lurch, for it removes their product, as fast as it is made, from their pole to the opposite pole of capital. Individual consumption provides, on the one hand, the means for their maintenance and reproduction: on the other hand, it secures by the annihilation of the necessaries of life, the continued re-appearance of the workman in the labour-market. The Roman slave was held by fetters: the wage labourer is bound to his owner by invisible threads. The appearance of independence is kept up by means of a constant change of employers, and by the fictio juris of a contract” (p 537-8)

But, of course, even this legal fiction, of freedom and equality, for the worker, is a sham. At the height of this age, revered by the Liberals and Libertarians like Hayek, the worker was far from free, let alone equal.

“In former times, capital resorted to legislation, whenever necessary, to enforce its proprietary rights over the free labourer. For instance, down to 1815, the emigration of mechanics employed in machine making was, in England, forbidden, under grievous pains and penalties.” (p 538)

And later, in the 19th century, even when starvation was forcing workers into emigration, the representatives of capital sought to legally prevent their escape. Marx's account of that is worth detailing at length as an expose of these Libertarian claims. Marx illustrates the point by reference to articles in the Times by Edmund Potter, who was the father of children's author Beatrix Potter.

(Marx)“In consequence of the civil war in the United States and of the accompanying cotton famine, the majority of the cotton operatives in Lancashire were...thrown out of work... there arose a cry for State aid, or for voluntary national subscriptions, in order to enable the “superfluous” hands to emigrate to the colonies or to the United States... The Times published on the 24th March, 1863, a letter from Edmund Potter, a former president of the Manchester Chamber of Commerce. This letter was rightly called in the House of Commons, the manufacturers’ manifesto...”

(Potter)“He” (the man out of work) “may be told the supply of cotton-workers is too large ... and ... must ... in fact be reduced by a third, perhaps, and that then there will be a healthy demand for the remaining two-thirds.... Public opinion... urges emigration.... The master cannot willingly see his labour supply being removed; he may think, and perhaps justly, that it is both wrong and unsound.... But if the public funds are to be devoted to assist emigration, he has a right to be heard, and perhaps to protest.”

Mr. Potter then shows how useful the cotton trade is, how the “trade has undoubtedly drawn the surplus-population from Ireland and from the agricultural districts,” how immense is its extent, how in the year 1860 it yielded 5/13 ths of the total English exports, how, after a few years, it will again expand by the extension of the market, particularly of the Indian market, and by calling forth a plentiful supply of cotton at 6d. per lb.

“Some time ...,one, two, or three years, it may be, will produce the quantity.... The question I would put then

is this — Is the trade worth retaining? Is it worth while to keep the machinery (he means the living labour machines) in order, and is it not the greatest folly to think of parting with that? I think it is. I allow that the workers are not a property, not the property of Lancashire and the masters; but they are the strength of both; they are the mental and trained power which cannot be replaced for a generation; the mere machinery which they work might much of it be beneficially replaced, nay improved, in a twelvemonth. Encourage or allow (!) the working-power to emigrate, and what of the capitalist?... Take away the cream of the workers, and fixed capital will depreciate in a great degree, and the floating will not subject itself to a struggle with the short supply of inferior labour.... We are told the workers wish it” (emigration). “Very natural it is that they should do so.... Reduce, compress the cotton trade by taking away its working power and reducing their wages expenditure, say one-fifth, or five millions, and what then would happen to the class above, the small shopkeepers; and what of the rents, the cottage rents.... Trace out the effects upwards to the small farmer, the better householder, and ... the landowner, and say if there could be any suggestion more suicidal to all classes of the country than by enfeebling a nation by exporting the best of its manufacturing population, and destroying the value of some of its most productive capital and enrichment I advise a loan (of five or six millions sterling), ... extending it may be over two or three years, administered by special commissioners added to the Boards of Guardians in the cotton districts,

under special legislative regulations, enforcing some occupation or labour, as a means of keeping up at least the moral standard of the recipients of the loan... can anything be worse for landowners or masters than parting with the best of the workers, and demoralising and disappointing the rest by an extended depletive emigration, a depletion of capital and value in an entire province?"

Potter... distinguishes two sorts of "machinery," each of which belongs to the capitalist, and of which one stands in his factory, the other at night-time and on Sundays is housed outside the factory, in cottages. The one is inanimate, the other living. The inanimate machinery not only wears out and depreciates from day to day, but a great part of it becomes so quickly superannuated, by constant technical progress, that it can be replaced with advantage by new machinery after a few months. The living machinery, on the contrary gets better the longer it lasts, and in proportion as the skill, handed from one generation to another, accumulates.

(The Times) "Mr. Edmund Potter is so impressed with the exceptional and supreme importance of the cotton masters that, in order to preserve this class ... he would keep half a million of the labouring class confined in a great moral workhouse against their will. 'Is the trade worth retaining?' asks Mr. Potter. 'Certainly by all honest means it is,' we answer. 'Is it worth while keeping the machinery in order?' again asks Mr. Potter. Here we hesitate. By the 'machinery' Mr. Potter means the human machinery... We must confess that we do not think it 'worth while,' or even possible, to keep the human machinery in order-that

is to shut it up and keep it oiled till it is wanted. Human machinery will rust under inaction, oil and rub it as you may. Moreover, the human machinery will, as we have just seen, get the steam up of its own accord, and burst or run amuck in our great towns. It might, as Mr. Potter says, require some time to reproduce the workers, but, having machinists and capitalists at hand, we could always find thrifty, hard, industrious men wherewith to improvise more master manufacturers than we can ever want. Mr. Potter talks of the trade reviving 'in one, two, or three years,' and he asks us not 'to encourage or allow (!) the working power to emigrate.' He says that it is very natural the workers should wish to emigrate; but he thinks that in spite of their desire, the nation ought to keep this half million of workers with their 700,000 dependents, shut up in the cotton districts; and as a necessary consequence, he must of course think that the nation ought to keep down their discontent by force, and sustain them by alms — and upon the chance that the cotton masters may some day want them.... The time is come when the great public opinion of these islands must operate to save this 'working power' from those who would deal with it as they would deal with iron, and coal, and cotton."

(Marx) The Times' article was only a jeu d'esprit. The "great public opinion" was, in fact, of Mr. Potter's opinion, that the factory operatives are part of the movable fittings of a factory. Their emigration was prevented. They were locked up in that "moral workhouse," the cotton districts, and they form, as before, "the strength" of the cotton manufacturers of Lancashire." (p 539-41)

“Parliament did not vote a single farthing in aid of emigration, but simply passed some Acts empowering the municipal corporations to keep the operatives in a half-starved state, i.e., to exploit them at less than the normal wages. On the other hand, when 3 years later, the cattle disease broke out, Parliament broke wildly through its usages and voted, straight off, millions for indemnifying the millionaire landlords, whose farmers in any event came off without loss, owing to the rise in the price of meat.” (Note 1, p 541)

Capitalist production, by its very operation, reproduces itself, not just in ensuring that the constant capital and variable capital are physically reproduced, but by ensuring that the social relation, between the worker and capital, is reproduced. The worker is increasingly deprived of capital, and the possibility of owning capital, as the minimum scale of efficient production continues to rise.

The worker is thereby continually led to have to sell their labour-power, in order to live, and in doing so, enables the capitalist to buy that labour-power, extract surplus value, and thereby expand his capital and power over the worker.

“It is no longer a mere accident, that capitalist and labourer confront each other in the market as buyer and seller. It is the process itself that incessantly hurls back the labourer on to the market as a vendor of his labour-power, and that incessantly converts his own product into a means by which another man can purchase him. In reality, the labourer belongs to capital before he has sold himself to capital. His economic bondage is both brought

about and concealed by the periodic sale of himself, by his change of masters, and by the oscillations in the market-price of labour-power.

Capitalist production, therefore, under its aspect of a continuous connected process, of a process of reproduction, produces not only commodities, not only surplus-value, but it also produces and reproduces the capitalist relation; on the one side the capitalist, on the other the wage labourer.” (p 541-2)

Chapter 24 - Conversion of Surplus-Value into Capital

1) Capitalist Production On A Progressively Increasing Scale. Transition Of The Laws Of Property That Characterise Production Of Commodities Into Laws Of Capitalist Appropriation

Suppose we have a capitalist cotton spinner. They employ a capital of £10,000. Of this, £8,000 is invested in machinery and cotton, and £2,000 in labour-power. The rate of surplus value is 100%. This gives:

$$c\ 8000 + v\ 2000 + s\ 2000 = C\ 12,000.$$

This £12,000 is the exchange value of 240,000 kilos of spun cotton. That means the surplus value is equal to 40,000 kilos. Let us assume that the capitalist does not use any of this £2,000 for their own consumption, but re-invests it all. Then, if no change in technology has occurred, this £2,000 will be invested in the same proportion as the original capital, i.e. 80% to constant capital, and 20% to labour-power (variable capital), or £1600 c, and £400 v. This means that the capitalist has converted the surplus value into new capital, making expanded production possible.

We now have:

$$c\ 9600 + v\ 2400 + s\ 2400 = C\ 14,400.$$

But, where does the additional constant capital, the machines and cotton, and the additional labour-power come from? In other words, its one thing to see how a

surplus value, as a monetary sum arises, but, for the actual capital itself to expand, this monetary value must also be able to meet, in the market, additional supplies of cotton, machines and labour-power.

The answer, Marx explains is quite simple. If we move now from looking at the situation facing the individual spinner to that of society as a whole, we see that the spinner's output is merely an aliquot part of the whole social product. But, the whole social product, like that of the spinner, can also be broken down into $c+v+s$. In other words, the total social product contains within it this social surplus product, which is the physical equivalent of the surplus value.

So, society, in its continual process of production, does not just produce the cotton that the spinner requires to meet their current needs, but produces an additional amount to that. This surplus amount of cotton then forms an aliquot part of the society's total surplus product.

The spinner, having realised the surplus value, by selling their spun cotton is able to use this surplus value to buy the additional cotton that exists as part of the social surplus. In the same way, the machine maker does not make only enough machines to meet the existing demand, but an additional number, which are bought by the spinner with his surplus value. Similarly, the value of labour-power is represented in wages that are intended not just to ensure the reproduction of existing labour-power, but also its increase.

This shouldn't really be read as meaning that wages themselves paid to the individual worker are high enough

to more than just reproduce the worker. It should be read as more wage goods in total are produced than is required to just reproduce existing labour-power. So, more than enough food, clothing and shelter is produced to meet the needs of existing workers, so that a surplus exists to feed, cloth and shelter the additional workers, and these additional workers can buy these goods out of the additional money wages set aside for them for that purpose. So, capital can always meet its needs for expansion, either from the normal increase in population, or by working labour more extensively or intensively.

“From a concrete point of view, accumulation resolves itself into the reproduction of capital on a progressively increasing scale. The circle in which simple reproduction moves, alters its form, and, to use Sismondi's expression, changes into a spiral.” (p 545)

We began with a capital of £10,000, which expanded to £12,000. But, the £2,000 then also expands. It comprised £400 (variable capital) that produces £400 surplus value. That surplus value in turn, when invested produces a further £80 of surplus value and so on. But, all the time, the original £10,000 of capital itself continues to expand, as does every other addition to it. Nor does it matter whether the additional capital created out of the surplus value is appended to the original capital, or is separated off. The £2,000 of surplus value could be used by the spinner to buy more cotton etc., but alternatively, he might have used it to set up another business, for example weaving the yarn into cloth. It would still operate as new capital.

Nor indeed does the spinner have to use the surplus value to create their own new capital. The spinner could lend it to some other capitalist, who then uses it to set up a new business, and thereby create new capital.

“The original capital was formed by the advance of £10,000. How did the owner become possessed of it? “By his own labour and that of his forefathers,” answer unanimously the spokesmen of Political Economy. And, in fact, their supposition appears the only one consonant with the laws of the production of commodities.

But it is quite otherwise with regard to the additional capital of £2,000. How that originated we know perfectly well. There is not one single atom of its value that does not owe its existence to unpaid labour. The means of production, with which the additional labour-power is incorporated, as well as the necessaries with which the labourers are sustained, are nothing but component parts of the surplus-product, of the tribute annually exacted from the working class by the capitalist class. Though the latter with a portion of that tribute purchases the additional labour-power even at its full price, so that equivalent is exchanged for equivalent, yet the transaction is for all that only the old dodge of every conqueror who buys commodities from the conquered with the money he has robbed them of.” (p 546)

Suppose a worker is employed by a capitalist to produce a commodity. Suppose further that the worker produces the constant capital they use too. They spend 8 hours producing this constant capital and 4 hours transforming it into the end product. This commodity has a value equal to 12 hours. However, the capitalist pays the worker the

equivalent of 10 hours as wages, which is equal to the value of their labour-power. The capitalist appropriates the product of the other 2 hours as surplus value.

The product has, in fact, only cost the capitalist 10 hours to produce, but if the worker who produced it, wants to buy it, they will have to pay the equivalent of 12 hours!

So, although the surplus value, produced by workers, may be used to employ more workers, or to employ existing workers for longer, and for more wages, it is only workers themselves making available the resources for that to happen. It is not some gratuitous act by capital.

“If the additional capital employs the person who produced it, this producer must not only continue to augment the value of the original capital, but must buy back the fruits of his previous labour with more labour than they cost. When viewed as a transaction between the capitalist class and the working class, it makes no difference that additional labourers are employed by means of the unpaid labour of the previously employed labourers. The capitalist may even convert the additional capital into a machine that throws the producers of that capital out of work, and that replaces them by a few children. In every case the working class creates by the surplus-labour of one year the capital destined to employ additional labour in the following year. And this is what is called: creating capital out of capital.” (p 546)

The first accumulation of capital, out of surplus value, of £2,000, depended on the prior existence of the £10,000 of capital, saved by the capitalist. But, the second accumulation of £80, only depends on the £2,000 robbed

from the workers as surplus value. As capitalist accumulation proceeds, the law of compound interest quickly ensures that the vast bulk of capital is nothing more than the accumulated surplus value robbed from workers as unpaid labour.

“The ownership of past unpaid labour is thenceforth the sole condition for the appropriation of living unpaid labour on a constantly increasing scale. The more the capitalist has accumulated, the more is he able to accumulate.” (p 546)

What first appeared as an exchange of equivalents, a given amount of labour-power, sold at its value, by the worker, a given amount of money, of equal value, paid by the capitalist, has now turned into its opposite. The capitalist now buys labour-power, not from their own resources, but from the surplus value produced by the worker. The workers' labour power is bought, by the capitalist, using money that the worker themselves created and handed over!

“The exchange of equivalents, the original operation with which we started, has now become turned round in such a way that there is only an apparent exchange. This is owing to the fact, first, that the capital which is exchanged for labour-power is itself but a portion of the product of others' labour appropriated without an equivalent; and, secondly, that this capital must not only be replaced by its producer, but replaced together with an added surplus. The relation of exchange subsisting between capitalist and labourer becomes a mere semblance appertaining to the process of circulation, a mere form, foreign to the real nature of the transaction,

and only mystifying it. The ever repeated purchase and sale of labour-power is now the mere form; what really takes place is this — the capitalist again and again appropriates, without equivalent, a portion of the previously materialised labour of others, and exchanges it for a greater quantity of living labour.” (p 546-7)

This also brings about a change in the nature and understanding of property and its laws.

“At first the rights of property seemed to us to be based on a man’s own labour. At least, some such assumption was necessary since only commodity-owners with equal rights confronted each other, and the sole means by which a man could become possessed of the commodities of others, was by alienating his own commodities; and these could be replaced by labour alone. Now, however, property turns out to be the right, on the part of the capitalist, to appropriate the unpaid labour of others or its product, and to be the impossibility, on the part of the labourer, of appropriating his own product. The separation of property from labour has become the necessary consequence of a law that apparently originated in their identity.” (p 547)

Consequently, Marx says that although capitalist accumulation may seem to contradict the laws of commodity production, in fact, it is merely an application of those laws.

“Thus the original conversion of money into capital is achieved in the most exact accordance with the economic laws of commodity production and with the right of property derived from them.

Nevertheless, its result is:

(1) that the product belongs to the capitalist and not to the worker;

(2) that the value of this product includes, besides the value of the capital advanced, a surplus-value which costs the worker labour but the capitalist nothing, and which none the less becomes the legitimate property of the capitalist;

(3) that the worker has retained his labour-power and can sell it anew if he can find a buyer.

Simple reproduction is only the periodical repetition of this first operation; each time money is converted afresh into capital. Thus the law is not broken; on the contrary, it is merely enabled to operate continuously.” (p 549)

But, the same is true on this basis where accumulation occurs.

“The surplus-value is his property; it, has never belonged to anyone else. If he advances it for the purposes of production, the advances made come from his own funds, exactly as on the day when he first entered the market. The fact that on this occasion the funds are derived from the unpaid labour of his workers makes absolutely no difference. If worker B is paid out of the surplus-value which worker A produced, then, in the first place, A furnished that surplus-value without having the just price of his commodity cut by a half-penny, and, in the second place, the transaction is no concern of B’s whatever.” (p 549)

Provided worker B is paid the full value of his labour-power, then he has no grounds to complain that the funds for this come from the surplus value produced by A. And, as we have seen, capitalist production proceeds precisely on that basis of commodity exchange, so that B is indeed paid the full value for his labour-power.

That is not the case if instead of viewing things from the perspective of the individual contracts, between each worker and capitalist, we view things in terms of the continuous process of capitalist production, or from the perspective of the relations between workers as a whole and capitalists as a whole. But, that would not be to analyse things in terms of commodity production and exchange.

In commodity production, we have just one buyer and one seller. Each contract is a single event. The sale of labour-power for a single given period of time. It has no relation to anything that has gone before, or that happens after.

“However long a series of periodical reproductions and preceding accumulations the capital functioning today may have passed through, it always preserves its original virginity. So long as the laws of exchange are observed in every single act of exchange the mode of appropriation can be completely revolutionised without in any way affecting the property rights which correspond to commodity production. These same rights remain in force both at the outset, when the product belongs to its producer, who, exchanging equivalent for equivalent, can enrich himself only by his own labour, and also in the period of capitalism, when social wealth becomes to an

ever-increasing degree the property of those who are in a position to appropriate continually and ever afresh the unpaid labour of others.

This result becomes inevitable from the moment there is a free sale, by the labourer himself, of labour-power as a commodity. But it is also only from then onwards that commodity production is generalised and becomes the typical form of production; it is only from then onwards that, from the first, every product is produced for sale and all wealth produced goes through the sphere of circulation. Only when and where wage labour is its basis does commodity production impose itself upon society as a whole; but only then and there also does it unfold all its hidden potentialities.” (p 550-1)

The laws of commodity production make capitalist production and accumulation inevitable. That is why, as Marx says, the ideas of Proudhon, who believed that the evils of capitalism could be abolished by applying the laws of commodity production, were nonsense.

“We may well, therefore, feel astonished at the cleverness of Proudhon, who would abolish capitalistic property by enforcing the eternal laws of property that are based on commodity production!” (Note 1, p 551)

The same is true of some of the ideas of the anarcho-capitalists and libertarians, who see in the development of monopolies and state capitalism something alien to their 18th century views of commodity production and exchange, rather than what they are, the inevitable consequence of the laws of commodity production and exchange.

2) Erroneous Conception, By Political Economy, Of Reproduction On A Progressively Increasing Scale

Only the commodities the capitalist buys for the purposes of capitalist production constitute productive consumption. The food he buys to eat, the Rolls Royce to drive, are not productive consumption. They do not lead to the expansion of capital. The same is true of the labour-power he buys with this surplus value. If he uses some of the surplus value to employ a chef to work in a restaurant, that is productive. If he employs the same chef simply to prepare his own meals, that is not. If he employs a driver to work as a taxi driver, that is productive. If he employs the same driver, purely as a chauffeur, that is not.

As Marx says, the bourgeois economists got this wrong. They had some incentive to understand the difference between productive and unproductive consumption, because the development of capitalism depended upon the accumulation of capital. Hence the ideological significance of the *“Protestant Ethic”*.

“On the other hand the economists had to contend against the popular prejudice, that confuses capitalist production with hoarding, and fancies that accumulated wealth is either wealth that is rescued from being destroyed in its existing form, i.e., from being consumed, or wealth that is withdrawn from circulation. Exclusion of money from circulation would also exclude absolutely its self-expansion as capital, while accumulation of a hoard in the shape of commodities would be sheer tomfoolery. The accumulation of commodities in great masses is the result either of over-production or of a stoppage of

circulation. It is true that the popular mind is impressed by the sight, on the one hand, of the mass of goods that are stored up for gradual consumption by the rich, and on the other hand, by the formation of reserve stocks; the latter, a phenomenon that is common to all modes of production, and on which we shall dwell for a moment, when we come to analyse circulation.” (p 552)

So, they grasped the importance of consuming commodities productively. But, they then made a mistake that some modern economists, including some on the Left, also make of believing that the value of all current production is reducible to the value created by living labour. This is a mistake made by Adam Smith, and manifest in his *Trinity Formula*, to be discussed in *Volume II and III, and Theories of Surplus Value*. It is also a mistake made by Keynes, who, following on from Smith, reduces the value of national output to the incomes currently received in the form of rent, wages, profit, and interest. This reduces the value of current production only to wages and property income. It misses out the value of constant capital transferred into that output, and equally reproduced out of it.

“Adam Smith has made it the fashion, to represent accumulation as nothing more than consumption of surplus products by productive labourers, which amounts to saying, that the capitalising of surplus-value consists in merely turning surplus-value into labour-power.” (p 552-3)

Marx then quotes from Ricardo who, following on from Smith, argues that the surplus value is used to employ additional productive labourers. Marx explains what is wrong with this.

“According to this, all surplus-value that is changed into capital becomes variable capital. So far from this being the case, the surplus-value, like the original capital, divides itself into constant capital and variable capital, into means of production and labour-power. Labour-power is the form under which variable capital exists during the process of production. In this process the labour-power is itself consumed by the capitalist while the means of production are consumed by the labour-power in the exercise of its function, labour. At the same time, the money paid for the purchase of the labour-power, is converted into necessaries, that are consumed, not by “productive labour,” but by the “productive labourer.” Adam Smith, by a fundamentally perverted analysis, arrives at the absurd conclusion, that even though each individual capital is divided into a constant and a variable part, the capital of society resolves itself only into variable capital, i.e., is laid out exclusively in payment of wages. For instance, suppose a cloth manufacturer converts £2,000 into capital. One portion he lays out in buying weavers, the other in woollen yarn, machinery, &c. But the people, from whom he buys the yarn and the machinery, pay for labour with a part of the purchase money, and so on until the whole £2,000 are spent in the payment of wages, i.e., until the entire product represented by the £2,000 has been consumed by productive labourers. It is evident that the whole gist of this argument lies in the words “and so on,” which send us from pillar to post. In truth, Adam Smith breaks his investigation off, just where its difficulties begin.” (p 553)

In short, as Marx points out, the total value of national output cannot be divided into rent, wages, interest and

profit, or into wages and property income, for the simple reason that these latter resolve themselves only into the new value created by living labour, i.e. into $V+S$ (S itself, as we will see in *Volume III*, dividing into rent, profit, interest and taxes). But, Marx correctly argues the value of national output is not just $V+S$, but $C+V+S$, as it is at the level of the firm! The value of C is not newly created, but existing value transferred into the value of current output, and constantly reproduced from it.

3) Separation Of Surplus-Value Into Capital And Revenue. The Abstinence Theory

In reality, surplus value acts neither as solely a fund for accumulation nor solely for the enjoyment of the capitalist. It is a fund for both together. Given a certain amount of surplus value, the more the capitalist devotes to his own consumption, the less he has for accumulation and vice versa.

“But it is by the owner of the surplus-value, by the capitalist alone, that the division is made. It is his deliberate act. That part of the tribute exacted by him which he accumulates, is said to be saved by him, because he does not eat it, i.e., because he performs the function of a capitalist, and enriches himself.” (p 555)

From the perspective of capitalism, the private consumption of the capitalist represents waste, precisely because it means that a portion of surplus value has not gone to increase capital.

“Except as personified capital, the capitalist has no historical value, and no right to that historical existence, which, to use an expression of the witty Lichnowsky,

“hasn't got no date.” And so far only is the necessity for his own transitory existence implied in the transitory necessity for the capitalist mode of production. But, so far as he is personified capital, it is not values in use and the enjoyment of them. but exchange-value and its augmentation, that spur him into action. Fanatically bent on making value expand itself, he ruthlessly forces the human race to produce for production's sake; he thus forces the development of the productive powers of society, and creates those material conditions, which alone can form the real basis of a higher form of society, a society in which the full and free development of every individual forms the ruling principle.” (p 555)

In fact, as Marx describes later, the very operation of capitalism itself, let alone of socialism, makes the historical and social function of the capitalist redundant. His position in the factory is replaced by the professional manager; his function even of providing private capital is replaced by the collectivisation of that function through the joint stock company, the public limited company, (and today the financing of these via workers' pension funds etc.) and by the capitalist state. In all these forms, the capitalist, as an individual, need not exist, and yet the laws of capital accumulation continue to operate, and thereby perpetuate the exploitation of workers.

But, it is these objective laws of capital accumulation which also constrain the choices made by the productive-capitalist, and which dictate that his own pleasures are subordinate to the need of his capital to expand.

“Moreover, the development of capitalist production makes it constantly necessary to keep increasing the

amount of the capital laid out in a given industrial undertaking, and competition makes the immanent laws of capitalist production to be felt by each individual capitalist, as external coercive laws. It compels him to keep constantly extending his capital, in order to preserve it, but extend it he cannot, except by means of progressive accumulation.” (p 555)

In other words, his capital must expand or die.

“So far, therefore, as his actions are a mere function of capital — endowed as capital is, in his person, with consciousness and a will — his own private consumption is a robbery perpetrated on accumulation, just as in book-keeping by double entry, the private expenditure of the capitalist is placed on the debtor side of his account against his capital. To accumulate, is to conquer the world of social wealth, to increase the mass of human beings exploited by him, and thus to extend both the direct and the indirect sway of the capitalist.” (p 555)

Marx quotes from Martin Luther a passage that is long, but worth quoting in full, given the return today in Britain of the usurer, in the form of the pay day loan companies.

“Taking the usurer, that old-fashioned but ever renewed specimen of the capitalist for his text, Luther shows very aptly that the love of power is an element in the desire to get rich. “The heathen were able, by the light of reason, to conclude that a usurer is a double-dyed thief and murderer. We Christians, however, hold them in such honour, that we fairly worship them for the sake of their money... Whoever eats up, robs, and steals the nourishment of another, that man commits as great a

murder (so far as in him lies) as he who starves a man or utterly undoes him. Such does a usurer, and sits the while safe on his stool, when he ought rather to be hanging on the gallows, and be eaten by as many ravens as he has stolen guilders, if only there were so much flesh on him, that so many ravens could stick their beaks in and share it. Meanwhile, we hang the small thieves.... Little thieves are put in the stocks, great thieves go flaunting in gold and silk.... Therefore is there, on this earth, no greater enemy of man (after the devil) than a gripe-money, and usurer, for he wants to be God over all men. Turks, soldiers, and tyrants are also bad men, yet must they let the people live, and Confess that they are bad, and enemies, and do, nay, must, now and then show pity to some. But a usurer and money-glutton, such a one would have the whole world perish of hunger and thirst, misery and want, so far as in him lies, so that he may have all to himself, and every one may receive from him as from a God, and be his serf for ever. To wear fine cloaks, golden chains, rings, to wipe his mouth, to be deemed and taken for a worthy, pious man Usury is a great huge monster, like a werewolf, who lays waste all, more than any Cacus, Gerion or Antus. And yet decks himself out, and would be thought pious, so that people may not see where the oxen have gone, that he drags backwards into his den. But Hercules shall hear the cry of the oxen and of his prisoners, and shall seek Cacus even in cliffs and among rocks, and shall set the oxen loose again from the villain. For Cacus means the villain that is a pious usurer, and steals, robs, eats everything. And will not own that he has done it, and thinks no one will find him out, because the oxen, drawn backwards into his den, make it seem, from their foot-prints, that they have

been let out. So the usurer would deceive the world, as though he were of use and gave the world oxen, which he, however, rends, and eats all alone... And since we break on the wheel, and behead highwaymen, murderers and housebreakers, how much more ought we to break on the wheel and kill.... hunt down, curse and behead all usurers.” (Martin Luther, l. c.)” (Note 1, p 555)

In fact, as we will see later, as part of the process of capitalist accumulation, the state placed limits on the interest rates that could be charged, precisely because this kind of usury drained resources that would otherwise have been used for productive investment.

The more capitalism develops, and the social function of the capitalist diminishes, the more the individual capitalist is separated from the actual process of production, and of accumulation. Their role becomes increasingly merely that of the “*coupon clipper*”, who invests money capital in bonds, shares and other assets, simply seeking the highest total return, in yield and capital gain.

But, on this basis, they are no longer, as an individual, constrained to accumulate or die, because that is only a law which applies to the individual productive-capital, not the individual capitalist.

“As capitalist production, accumulation, and wealth, become developed, the capitalist ceases to be the mere incarnation of capital. He has a fellow-feeling for his own Adam, and his education gradually enables him to smile at the rage for asceticism, as a mere prejudice of the old-fashioned miser. While the capitalist of the classical type brands individual consumption as a sin against his

function, and as “abstinence” from accumulating, the modernised capitalist is capable of looking upon accumulation as “abstinence” from pleasure.

“Two souls, alas, do dwell with in his breast; The one is ever parting from the other.”

At the historical dawn of capitalist production, — and every capitalist upstart has personally to go through this historical stage — avarice, and desire to get rich, are the ruling passions. But the progress of capitalist production not only creates a world of delights; it lays open, in speculation and the credit system, a thousand sources of sudden enrichment. When a certain stage of development has been reached, a conventional degree of prodigality, which is also an exhibition of wealth, and consequently a source of credit, becomes a business necessity to the “unfortunate” capitalist. Luxury enters into capital’s expenses of representation. Moreover, the capitalist gets rich, not like the miser, in proportion to his personal labour and restricted consumption, but at the same rate as he squeezes out the labour-power of others, and enforces on the labourer abstinence from all life’s enjoyments. Although, therefore, the prodigality of the capitalist never possesses the bona fide character of the open-handed feudal lord’s prodigality, but, on the contrary, has always lurking behind it the most sordid avarice and the most anxious calculation, yet his expenditure grows with his accumulation, without the one necessarily restricting the other. But along with this growth, there is at the same time developed in his breast, a Faustian conflict between the passion for accumulation, and the desire for enjoyment.” (p 556-7)

Malthus, the representative of the landlord class, had his own solution to this problem. He proposed that the capitalists should content themselves with the business of accumulating and working in their factories, whilst all those classes that shared in their surplus value should content themselves, as they always had, with consumption! Not surprisingly, the capitalists, themselves becoming used to much greater consumption, thought little of the suggestion.

But, at least during this period, the bourgeois economists searched after, and spoke openly about, the extraction of this surplus value, the better to dispute its division with the landlords. That ended when the whiff of proletarian revolution in Europe began to enter the nostrils of the bourgeoisie, particularly in England, encouraging them to hush their dispute with their fellow exploiters.

“The learned disputation, how the booty pumped out of the labourer may be divided, with most advantage to accumulation, between the industrial capitalist and the rich idler, was hushed in face of the revolution of July. Shortly afterwards, the town proletariat at Lyons sounded the tocsin of revolution, and the country proletariat in England began to set fire to farm-yards and corn-stacks. On this side of the Channel Owenism began to spread; on the other side, St. Simonism and Fourierism. The hour of vulgar economy had struck.” (p 559)

So began the whole industry of orthodox bourgeois economic theory, of explaining the existence of profit as arising from anything other than its actual source – the exploitation of workers. Nassau Senior, proposed to replace the term *“Capital”* with the term *“Abstinence”*, and

to explain the existence and justification of profit on the grounds that it was the reward to the capitalist for abstaining from consumption, and thereby allowing their capital to be used for production.

The debunking of these theories of vulgar economy, still trotted out today, by the apologists of capital, was done in discussing the working day. So there is no point repeating it here. But, what can simply be said is that in all societies including those that do not have capitalists practising abstinence, a social surplus of production is created, and this surplus product allows the members of society to continue to consume, at the same level, whilst adding to its stock of means of production. This in turn enables it to expand its production further, thereby facilitating both an increase in consumption and accumulation.

“Richard Jones, who died a few years ago, and was the successor of Malthus in the chair of Political Economy at Haileybury College, discusses this point well in the light of two important facts. Since the great mass of the Hindu population are peasants cultivating their land themselves, their products, their instruments of labour and means of subsistence never take “the shape of a fund saved from revenue, which fund has, therefore, gone through a previous process of accumulation.” On the other hand, the non-agricultural labourers in those provinces where the English rule has least disturbed the old system, are directly employed by the magnates, to whom a portion of the agricultural surplus-product is rendered in the shape of tribute or rent. One portion of this product is consumed by the magnates in kind, another is converted, for their use, by the labourers, into articles of luxury and such like

things, while the rest forms the wages of the labourers, who own their implements of labour. Here, production and reproduction on a progressively increasing scale, go on their way without any intervention from that queer saint, that knight of the woeful countenance, the capitalist “abstainer.”” (p 561)

4) Circumstances That, Independently Of The Proportional Division Of Surplus-Value Into Capital And Revenue, Determine The Amount Of Accumulation. Degree Of Exploitation Of Labour-Power. Productivity Of Labour. Growing Difference In Amount Between Capital Employed And Capital Consumed. Magnitude Of Capital Advanced

“The proportion in which surplus-value breaks up into capital and revenue being given, the magnitude of the capital accumulated clearly depends on the absolute magnitude of the surplus-value. Suppose that 80 per cent. were capitalised and 20 per cent. eaten up, the accumulated capital will be £2,400 or £200, according as the total surplus-value has amounted to £3,000 or £500. Hence all the circumstances that determine the mass of surplus-value operate to determine the magnitude of the accumulation. We sum them up once again, but only in so far as they afford new points of view in regard to accumulation.” (p 561)

The rate of surplus value is determined, primarily, by the degree of exploitation of labour. Assuming workers are paid the value of their labour power, this can only be increased by lengthening the working-day, making the working day more intensive (both of which we have seen

have limits), or else by reducing the value of labour-power, thereby increasing relative surplus value.

But, in practice, the lowering of wages below the value of labour-power, also plays an important part.

“It, in fact, transforms, within certain limits, the labourer’s necessary consumption fund into a fund for the accumulation of capital.” (p 562)

As a consequence, all other things being equal, (which we know they are not) capital will always seek to lower wages to the minimum. Today, that means that capital will seek to locate its activities to where the labour it requires can be had at the lowest price, e.g. China, Vietnam, India, Indonesia and Africa. That means this presses down on wages elsewhere, as Marx pointed out.

“...today, thanks to the competition on the world-market, established since then, we have advanced much further. “If China,” says Mr. Stapleton, M.P., to his constituents, “should become a great manufacturing country, I do not see how the manufacturing population of Europe could sustain the contest without descending to the level of their competitors.” (Times, Sept. 3, 1873, p. 8.) The wished-for goal of English capital is no longer Continental wages but Chinese.” (Note 2, p 563)

In order to achieve these reductions, all sorts of methods were adopted by capital, particularly in its youth. It led to all those abuses discussed earlier, as workers sought to compensate for their scant and reduced wages, by buying the cheapest food, thereby encouraging the supply of cheap but adulterated food. Today, workers are

led into the grasp of the usurers, charging 4000% interest on pay day loans.

Today, also, as in Marx's day, the bad employers get away with reducing wages below the value of labour power, and force other workers to make up the difference, in transfers through the tax and benefits system.

“At the end of the 18th and during the first ten years of the 19th century, the English farmers and landlords enforced the absolute minimum of wage, by paying the agricultural labourers less than the minimum in the form of wages, and the remainder in the shape of parochial relief.” (p 563-4)

Marx then looks at the effect on constant capital. The instruments of labour have to be efficient for the number of workers to work with them. But, increased production resulting from accumulation does not necessarily mean they have to be increased in the same proportion.

“In a factory, suppose that 100 labourers working 8 hours a day yield 800 working-hours. If the capitalist wishes to raise this sum by one half, he can employ 50 more workers; but then he must also advance more capital, not merely for wages, but for instruments of labour. But he might also let the 100 labourers work 12 hours instead of 8, and then the instruments of labour already to hand would be enough. These would then simply be more rapidly consumed. Thus additional labour, begotten of the greater tension of labour-power, can augment surplus-product and surplus-value (i.e., the subject-matter of

accumulation), without corresponding augmentation in the constant part of capital.” (p 565)

Being picky this could be challenged. Suppose we take a three year period. Assume 100 tools which last 1.5 years, so over 3 years, 200 tools are required. If the number of workers rises to 150 then the number of tools is 300 over three years. If the number of workers remains at 100, but they work 50% longer then, other things being equal, the tools will wear out 50% quicker. Instead of lasting 1.5 years, they will last only 1 year. So, over 3 years, once again 300 tools have to be provided.

In practice, Marx is right, however, because for most tools, being used 50% more will not mean they wear out proportionately quicker. This is particularly significant in the extractive industries like mining where increased production does not involve the purchase of additional raw material to be worked up. Here, almost all the constant capital is made up of the instruments of labour. So, the hours of labour can be increased, labour intensity can be increased, shift systems can be introduced, which result in increased output, but involve no significant increase in constant capital, either in the form of raw materials, or instruments of labour.

A similar thing applies in agriculture. Increased output requires additional constant capital in the form of raw materials (seed, fertiliser etc.), but no additional instruments of labour. The workers can simply work with the existing implements for longer or work more intensively.

“Finally, in what is called manufacturing industry, every additional expenditure of labour presupposes a corresponding additional expenditure of raw materials, but not necessarily of instruments of labour. And as extractive industry and agriculture supply manufacturing industry with its raw materials and those of its instruments of labour, the additional product the former have created without additional advance of capital, tells also in favour of the latter.” (p 565-6)

The point here is not that the saving in additional constant capital produces more surplus value. We have established that constant capital only transfers its value to the end product. Whether capital has to lay out a lot or a little for constant capital does not affect the amount of surplus value. But, the extent to which capital has to expend value or surplus value in replacing or adding to constant capital does have an important consequence for the rate of profit, and, therefore the rate at which capital can expand! The less capital has to expend on constant capital, the larger the proportion of surplus value, capital can expend on additional labour-power, which does determine the amount of surplus value produced.

A further factor is the rising productivity of social labour. The more productive labour becomes, the more use values are produced, and the cheaper each of these use values becomes. If the rate of surplus value remains the same, the total amount of surplus product increases. So, in terms of physical quantities of use values, the capitalist could both consume more luxury goods, and yet still be able to accumulate more capital.

By the same token, the capitalist could increase their consumption without accumulation falling and vice versa.

Moreover, even if the rate of surplus value is falling, this can still be the case provided the productivity is rising faster than the rate of surplus value is falling.

For example,

$$c\ 1000 + v\ 1000 + s\ 1000 = C\ 3000 = 3000\ \text{units.}$$

Suppose these units of output can be equally consumed by the capitalists or used for accumulation. Suppose productivity rises by 50%, so 4500 units are produced, whilst the rate of surplus value falls from 100% to 75%.

So,

$$c\ 1000 + v\ 1000 + s\ 750 = C\ 2750 = 4500\ \text{units.}$$

If capital divides the surplus equally between consumption and accumulation, then previously the surplus product was 1000 units, divided into 500 consumption and 500 accumulation. Now, however, the surplus product amounts to $750 \times 1.5 = 1125$ units, divided 562.5 consumption, and 562.5 accumulation.

Things don't stop there. Along with the rise in productivity goes the reduction in the value of labour power, as the workers necessities are cheapened. That means that the rate of surplus value rises through relative surplus value.

“But hand-in-hand with the increasing productivity of labour, goes, as we have seen, the cheapening of the labourer, therefore a higher rate of surplus-value, even

when the real wages are rising. The latter never rise proportionally to the productive power of labour. The same value in variable capital therefore sets in movement more labour-power, and, therefore, more labour. The same value in constant capital is embodied in more means of production, i.e., in more instruments of labour, materials of labour and auxiliary materials; it therefore also supplies more elements for the production both of use value and of value, and with these more absorbers of labour. The value of the additional capital, therefore, remaining the same or even diminishing, accelerated accumulation still takes place. Not only does the scale of reproduction materially extend, but the production of surplus-value increases more rapidly than the value of the additional capital.” (p 566)

By the same token, this rise in productivity has an effect on the instruments of labour. That is the constant capital that is fixed capital, being consumed only gradually, over a period. Every so often, a portion of these machines wear out and have to be replaced. From the time these machines were originally bought, increases in productivity mean that the replacement machine will be cheaper than the original. Frequently, also, the replacement machine will not only be cheaper, but will be better and more productive than the original, because of technological improvements incorporated in it.

“Every advance in Chemistry not only multiplies the number of useful materials and the useful applications of those already known, thus extending with the growth of capital its sphere of investment. It teaches at the same time how to throw the excrements of the processes of production and consumption back again into the circle of

the process of reproduction, and thus, without any previous outlay of capital, creates new matter for capital. Like the increased exploitation of natural wealth by the mere increase in the tension of labour-power, science and technology give capital a power of expansion independent of the given magnitude of the capital actually functioning. They react at the same time on that part of the original capital which has entered upon its stage of renewal. This, in passing into its new shape, incorporates gratis the social advance made while its old shape was being used up. Of course, this development of productive power is accompanied by a partial depreciation of functioning capital. So far as this depreciation makes itself acutely felt in competition, the burden falls on the labourer, in the increased exploitation of whom the capitalist looks for his indemnification.” (p 567)

As the productivity of labour rises, the new value, created by labour, in a given time, remains the same, but the volume of constant capital, in raw material it processes, increases. If the value of each unit of this raw material remains constant, the proportion of value accounted for by the constant capital, compared to labour rises. That is true even though the intensity with which the workers work remains the same or may even fall.

“An English and a Chinese spinner, e.g., may work the same number of hours with the same intensity; then they will both in a week create equal values. But in spite of this equality, an immense difference will obtain between the value of the week’s product of the Englishman, who works with a mighty automaton, and that of the Chinaman, who has but a spinning-wheel. In the same

time as the Chinaman spins one pound of cotton, the Englishman spins several hundreds of pounds. A sum, many hundred times as great, of old values swells the value of his product, in which those re-appear in a new, useful form, and can thus function anew as capital.

“In 1782,” as Frederick Engels teaches us, “all the wool crop in England of the three preceding years, lay untouched for want of labourers, and so it must have lain, if newly invented machinery had not come to its aid and spun it.”

Labour embodied in the form of machinery of course did not directly force into life a single man, but it made it possible for a smaller number of labourers, with the addition of relatively less living labour, not only to consume the wool productively, and put into it new value, but to preserve in the form of yarn, &c., its old value.” (p 567-8)

As the physical quantity of capital increases with the accumulation of capital, labour acts both to preserve its value, and to enhance it.

“With the increase of capital, the difference between the capital employed and the capital consumed increases. In other words, there is increase in the value and the material mass of the instruments of labour, such as buildings, machinery, drain-pipes, working-cattle, apparatus of every kind that function for a longer or shorter time in processes of production constantly repeated, or that serve for the attainment of particular useful effects, whilst they themselves only gradually wear out, therefore only lose their value piecemeal, therefore

transfer that value to the product only bit by bit. In the same proportion as these instruments of labour serve as product-formers without adding value to the product, i.e., in the same proportion as they are wholly employed but only partly consumed, they perform, as we saw earlier, the same gratuitous service as the natural forces, water, steam, air, electricity, etc. This gratuitous service of past labour, when seized and filled with a soul by living labour, increases with the advancing stages of accumulation.” (p 569)

The bourgeois economists are quick to praise the power of capital, embodied in physical equipment, but they fail to point out that this capital is only the result of past labour and that in two senses. Firstly, that it was produced by living labour, and secondly that the capitalist is only able to accumulate it as a result of the surplus value created by his own workers.

Yet, despite the fact that this capital is the product of workers, they are so in awe of this capital that

“... according to the Scotch genius MacCulloch, ought to receive a special remuneration in the shape of interest, profit, etc.” (p 569)

In other words, the productive assistance, to current living labour that the product of past labour affords it, in the shape of machines and other instruments of labour, is not assigned to the labour that made it possible, but to capital.

“With a given degree of exploitation of labour-power, the mass of the surplus-value produced is determined by the number of workers simultaneously exploited; and this

corresponds, although in varying proportions, with the magnitude of the capital. The more, therefore, capital increases by means of successive accumulations, the more does the sum of the value increase that is divided into consumption fund and accumulation fund. The capitalist can, therefore, live a more jolly life, and at the same time show more "abstinence." And, finally, all the springs of production act with greater elasticity, the more its scale extends with the mass of the capital advanced."
(p 570)

5) The So-Called Labour Fund

Capital is not a fixed amount. It constitutes just one part of total social wealth, and this part continually fluctuates, as new surplus value is divided into capital and revenue. Moreover, even given a certain quantity of functioning capital, the effectiveness of this capital, in terms of output, can vary considerably, depending on the nature and productiveness of the labour-power it purchases, the extent to which science has introduced new technological developments, the fertility of the land, and usefulness of other natural features, such as rivers, access to wind and so on.

In addition, the analysis, so far, has not taken into consideration the effects of circulation. That is because Marx wants to emphasise that surplus value is created in production, and not as a consequence of exchange. But, the need to actually realise the surplus value produced, by selling the commodities, imposes costs. The more efficiently circulation takes place (and this applies to the circulation of money as well as commodities) the lower these costs are, and, therefore, the more effective the

capital employed is. Marx demonstrates, in *Volume III*, that it is for this reason that capital becomes divided into *Money Capital, Merchant Capital, and Productive Capital*. The first two do not produce surplus value, but reduce the costs of realising it, and on that basis, claim their share of the total surplus value.

The idea of capital, as a fixed sum, Marx says, was commonplace amongst political economists, and first established as a dogma by Jeremy Bentham.

“The dogma was used by Bentham himself, as well as by Malthus, James Mill, MacCulloch, etc., for an apologetic purpose, and especially in order to represent one part of capital, namely, variable capital, or that part convertible into labour-power, as a fixed magnitude.” (p 571)

If we take the quantity of constant capital, at any point in time, then it will require a certain quantity of labour-power to set it in motion. This relation is determined technically. But, its not possible to then determine, as Bentham and others did, that this then creates a fixed labour fund.

a) Technology is constantly changing, so the technical determination of the relation between constant capital and variable capital is itself constantly changing. That is, there is no such thing as a *“point in time”*. Time is continuous, and so is change.

b) Even without technological change, a given amount of labour-power to constant capital does not mean a proportionate increase in workers wages. The existing workers could be employed for longer, or more intensively.

c) The limit on wages is only a capitalistic limit. So, that limit sets a minimum limit determined by the value of labour-power. Even this limit, in practice, can be breached for a limited period of time. For example, when there is a sufficiently large reserve army of labour. Then, wages can be pushed below the value of labour-power, for a time, so that part of the wage fund becomes part of the fund for capital accumulation.

But, similarly, there is no reason why the wage fund should not expand, if society chose to use its resources to do so, at the expense of accumulation. It is only the laws of capitalism that prevent such a choice. Even under capitalism, during those short periods where labour-power is in short supply, the wage fund can expand as a result.

The extent to which bourgeois ideologists saw the wages fund as fixed is reflected in their attitude towards its counterpart, the surplus value. They saw it as natural that it should be divided not only into capital and revenue, but even the capital to be divided into that invested at home, and its surfeit invested abroad. Marx quotes Fawcett.

“The aggregate wealth which is annually saved in England, is divided into two portions; one portion is employed as capital to maintain our industry, and the other portion is exported to foreign countries... Only a portion, and perhaps, not a large portion of the wealth which is annually saved in this country, is invested in our own industry.” (p 572)

Chapter 25 - The General Law of Capitalist Accumulation

1) The Increased Demand For Labour Power That Accompanies Accumulation, The Composition Of Capital Remaining The Same

Marx here develops his analysis, from earlier, of the organic composition of capital, i.e. the proportion between constant capital and variable capital. This proportion can be viewed from two angles. Firstly, from the perspective of the values of constant and variable capital, and secondly from the perspective of the physical amounts of constant and variable capital. For example, two identical capitals can represent significantly different relations. Suppose,

$$c\ 10,000 + v\ 2,000 + s\ 2,000 = C\ 14,000.$$

On the one hand, this capital could represent a jewellery business, which buys a small number of very expensive materials, which are worked up by a small number of highly skilled and paid workers. On the other, it could be a pottery firm that buys a large amount of cheap materials, processed by a large amount of low skilled, low paid workers.

To make the distinction, Marx calls the merely value relation, between constant and variable capital, the “*Value Composition of Capital*”, and calls the physical relation between them the “*Technical Composition of Capital*”. However, its clear that although these are two different things, there is a close correlation between the

two. The technical composition is itself a determining factor in the value composition.

“To express this, I call the value composition of capital, in so far as it is determined by its technical composition and mirrors the changes of the latter, the organic composition of capital. Wherever I refer to the composition of capital, without further qualification, its organic composition is always understood.” (p 574)

In any branch of production, there are many individual capitals (more so when Marx was writing). Each of these “*many capitals*” will vary one from another, in their organic composition, as a result of the fact that some will be larger or smaller (thereby enjoying, or not, economies of scale), will be more or less established, and may, therefore, have more skilled workers. Some will have other natural benefits from their location. Some may be new entrants that were able to start production with the latest machines and techniques, and so on.

But, if we total up the constant capital and variable capital across the entire branch, we can calculate the average composition of capital for an industry. Some individual capitals will operate above, and some below the average. Likewise, if we totalled up for all industries across the economy, we could calculate the average composition for the economy. Not only would some firms operate above or below the average, but entire industries would also operate above or below the average.

Marx writes,

“Growth of capital involves growth of its variable constituent or of the part invested in labour power.” (p

575)

And, since, as Marx has pointed out, the quantity of labour-power employed is a function of the technical composition, not the value composition of capital, i.e. the quantity of labour-power to be employed is determined by the quantity of means of production it has to set in motion, it is clear that for Marx, it is this physical expansion of capital, and not merely the increase in its value that truly constitutes the expansion of capital. That is so for two other fundamental and related reasons. Firstly, Marx can never divorce from his analysis of capital, the effect it has on the working class, the force in history he recognises as the agent of change. It is only a physical increase in the amount of constant capital employed that can bring about an increase in the number of workers employed. That is important not just for the actual size of the working class as a social force, but is also important for its relative strength, and ability to defend its living standards, i.e. a higher demand for labour-power creates the conditions for higher wages.

But, there is a further point. Marx is concerned with the expansion of capital, which can only arise through greater masses of surplus value. But, as he showed earlier, the value of constant capital is irrelevant in that respect. In fact, its effect is if anything an inverse. A single worker, working with £1 million of constant capital creates no more surplus value than the same worker working with £100 of constant capital. The constant capital only transfers its value to the final product.

Yet, a capitalist that has to spend a large proportion of their available capital, buying constant capital – for

example a jeweller buying diamonds – has less capital remaining to buy labour-power. All things being equal, then, they are able to buy less of the value creating substance – labour – and so the amount of surplus value they can produce is less. In turn, that means they are able to expand their capital more slowly. Marx resolves this apparent problem, for capital, in *Volume III*. However, it remains the case, looked at from the perspective of *Capital in General*, that the more constant capital is, in value terms, the less of it physically that can be bought, which means, with a given technical composition of capital, the less labour-power is required, which in turn means the less surplus value is produced, and consequently the less accumulation there will be.

This is an important factor for economies, in determining their growth strategies, and paths for economic development. Marx details this, and comments,

“... the requirements of accumulating capital may exceed the increase of labour power or of the number of labourers; the demand for labourers may exceed the supply, and, therefore, wages may rise. This must, indeed, ultimately be the case if the conditions supposed above continue. For since in each year more labourers are employed than in its predecessor, sooner or later a point must be reached, at which the requirements of accumulation begin to surpass the customary supply of labour, and, therefore, a rise of wages takes place. A lamentation on this score was heard in England during the whole of the fifteenth, and the first half of the eighteenth centuries.” (p 575)

He continues,

“The reproduction of a mass of labour power, which must incessantly re-incorporate itself with capital for that capital’s self-expansion; which cannot get free from capital, and whose enslavement to capital is only concealed by the variety of individual capitalists to whom it sells itself, this reproduction of labour power forms, in fact, an essential of the reproduction of capital itself. Accumulation of capital is, therefore, increase of the proletariat.” (p 575-6)

The point had been so well grasped by political economy, Marx says, that Smith and Ricardo had made the mistake of seeing accumulation only in terms of the addition to variable capital. Marx quotes from John Bellers and Bernard de Mandeville, who wrote explaining, in different ways, the fact that the wealth of the rich was dependent on having a sufficient number of poor to do the work. For this reason, Mandeville wrote,

“It would be easier, where property is well secured, to live without money than without poor; for who would do the work? ... As they [the poor] ought to be kept from starving, so they should receive nothing worth saving. If here and there one of the lowest class by uncommon industry, and pinching his belly, lifts himself above the condition he was brought up in, nobody ought to hinder him; nay, it is undeniably the wisest course for every person in the society, and for every private family to be frugal; but it is the interest of all rich nations, that the greatest part of the poor-should almost never be idle, and yet continually spend what they get.... Those that get their living by their daily labour ... have nothing to stir them up to be serviceable but their wants which it is prudence to relieve, but folly to cure.” (p 576)

If the technical composition of capital remains the same, then accumulation simply means that more labour-power is employed. The natural increase in population, therefore, means that, alongside the expansion of constant capital, goes an equivalent increase in variable capital. The expansion of the working class is simply an aspect of the expansion of capital. If the population does not increase fast enough to keep pace with the accumulation of capital, then the increased demand brings about a rise in wages.

“A larger part of their own surplus-product, always increasing and continually transformed into additional capital, comes back to them in the shape of means of payment, so that they can extend the circle of their enjoyments; can make some additions to their consumption-fund of clothes, furniture, &c., and can lay by small reserve funds of money. But just as little as better clothing, food, and treatment, and a larger peculium, do away with the exploitation of the slave, so little do they set aside that of the wage worker. A rise in the price of labour, as a consequence of accumulation of capital, only means, in fact, that the length and weight of the golden chain the wage worker has already forged for himself, allow of a relaxation of the tension of it.” (p 579-80)

But, capitalists do not buy labour-power for its ability to create commodities. They do so for its ability to produce surplus value. If wages rise to a level where that is not possible, then capital will not demand labour-power. As demand falls, so will wages.

“Altogether, irrespective of the case of a rise of wages with a falling price of labour, &c., such an increase only means at best a quantitative diminution of the unpaid labour that the worker has to supply. This diminution can never reach the point at which it would threaten the system itself. Apart from violent conflicts as to the rate of wages (and Adam Smith has already shown that in such a conflict, taken on the whole, the master is always master), a rise in the price of labour resulting from accumulation of capital implies the following alternative:

Either the price of labour keeps on rising, because its rise does not interfere with the progress of accumulation. In this there is nothing wonderful, for, says Adam Smith, 'after these (profits) are diminished, stock may not only continue to increase, but to increase much faster than before.... A great stock, though with small profits, generally increases faster than a small stock with great profits.' (l. c., ii, p. 189.) In this case it is evident that a diminution in the unpaid labour in no way interferes with the extension of the domain of capital. — Or, on the other hand, accumulation slackens in consequence of the rise in the price of labour, because the stimulus of gain is blunted. The rate of accumulation lessens; but with its lessening, the primary cause of that lessening vanishes, i.e., the disproportion between capital and exploitable labour power. The mechanism of the process of capitalist production removes the very obstacles that it temporarily creates. The price of labour falls again to a level corresponding with the needs of the self-expansion of capital, whether the level be below, the same as, or above the one which was normal before the rise of wages took place. (p 580-1)

It is the movement of capital that determines here.

“In the first case, it is not the diminished rate either of the absolute, or of the proportional, increase in labour power, or labouring population, which causes capital to be in excess, but conversely the excess of capital that makes exploitable labour power insufficient. In the second case, it is not the increased rate either of the absolute, or of the proportional, increase in labour power, or labouring population, that makes capital insufficient; but, conversely, the relative diminution of capital that causes the exploitable labour power, or rather its price, to be in excess. It is these absolute movements of the accumulation of capital which are reflected as relative movements of the mass of exploitable labour power, and therefore seem produced by the latter’s own independent movement.” (p 581)

In other words, as in so many other cases, appearance is in fact the mirror image of reality.

“Thus, when the industrial cycle is in the phase of crisis, a general fall in the price of commodities is expressed as a rise in the value of money, and, in the phase of prosperity, a general rise in the price of commodities, as a fall in the value of money. The so-called currency school concludes from this that with high prices too much, with low prices too little money is in circulation. Their ignorance and complete misunderstanding of facts are worthily paralleled by the economists, who interpret the above phenomena of accumulation by saying that there are now too few, now too many wage labourers.” (p 581)

In the end, it comes down to the relation between paid and unpaid labour, provided by the worker, the relation between necessary labour and surplus labour, between the value of labour-power and surplus value. The workers do unpaid labour that creates surplus value, which is accumulated as capital, and thereby employs additional labour-power. Wages move according to whether this causes an excess of demand over the supply of labour-power.

“It is therefore in no way a relation between two magnitudes, independent one of the other: on the one hand, the magnitude of the capital; on the other, the number of the labouring population; it is rather, at bottom, only the relation between the unpaid and the paid labour of the same labouring population. If the quantity of unpaid labour supplied by the working class, and accumulated by the capitalist class, increases so rapidly that its conversion into capital requires an extraordinary addition of paid labour, then wages rise, and, all other circumstances remaining equal, the unpaid labour diminishes in proportion. But as soon as this diminution touches the point at which the surplus labour that nourishes capital is no longer supplied in normal quantity, a reaction sets in: a smaller part of revenue is capitalised, accumulation lags, and the movement of rise in wages receives a check. The rise of wages therefore is confined within limits that not only leave intact the foundations of the capitalistic system, but also secure its reproduction on a progressive scale. The law of capitalistic accumulation, metamorphosed by economists into pretended law of Nature, in reality merely states that the very nature of accumulation excludes every diminution in

the degree of exploitation of labour, and every rise in the price of labour, which could seriously imperil the continual reproduction, on an ever-enlarging scale, of the capitalistic relation. It cannot be otherwise in a mode of production in which the labourer exists to satisfy the needs of self-expansion of existing values, instead of, on the contrary, material wealth existing to satisfy the needs of development on the part of the labourer. As, in religion, man is governed by the products of his own brain, so in capitalistic production, he is governed by the products of his own hand.” (p 581-2)

2) Relative Diminution of the Variable Part of Capital Simultaneously with the Progress of Accumulation and of the Concentration that Accompanies it

“Once given the general basis of the capitalistic system, then, in the course of accumulation, a point is reached at which the development of the productivity of social labour becomes the most powerful lever of accumulation.” (p 582-3)

The more the productivity of labour increases, the more means of production are processed in a given period.

“But those means of production play a double part. The increase of some is a consequence, that of the others a condition of the increasing productivity of labour. E.g., with the division of labour in manufacture, and with the use of machinery, more raw material is worked up in the same time, and, therefore, a greater mass of raw material and auxiliary substances enter into the labour process. That is the consequence of the increasing productivity of labour. On the other hand, the mass of machinery, beasts

of burden, mineral manures, drain-pipes, &c., is a condition of the increasing productivity of labour. So also is it with the means of production concentrated in buildings, furnaces, means of transport, &c.” (p 583)

In either case, the increasing productivity of labour means relatively less of it is employed compared to the means of production. That means there is a change in the technical composition of capital. In turn, that is reflected in a change in its value composition, raising the proportion of constant as opposed to variable capital. But, the change in the value composition is always much smaller than the change in the physical amounts of each.

“The reason is simply that, with the increasing productivity of labour, not only does the mass of the means of production consumed by it increase, but their value compared with their mass diminishes. Their value therefore rises absolutely, but not in proportion to their mass. The increase of the difference between constant and variable capital, is, therefore, much less than that of the difference between the mass of the means of production into which the constant, and the mass of the labour power into which the variable, capital is converted.” (p 584)

Although less labour is employed, relative to means of production, that does not mean that less labour is employed absolutely. If a capital is divided into 50% constant and 50% variable capital, and becomes 80% and 20%, the amount of labour employed can still be greater, if the total capital is large enough. If it was originally £1,000 constant, and £1,000 variable, and the total capital rises from this £2,000 to £10,000, this would

mean that constant capital would now be £8,000, and variable capital £2,000, i.e. twice its former amount. Its not unreasonable or a cheat to make this point, because it is precisely the increase in the size of the total capital, through accumulation, which has resulted in the increase in the organic composition of that capital.

But, where previously a doubling of the total capital was enough to bring about a doubling of the labour employed, now it requires a five fold increase in the total capital.

Capital develops on the basis of widespread co-operation of labour that creates the conditions for production on a larger scale, the use of scientific methods, to economise on the means of production etc. This early stage of *“Primary Accumulation”* sees capital increase extensively as more and more individual capitals are formed, and more and more means of production are transformed from artisanal handicraft and manufacture into capitalist production.

But, this capitalist production creates the conditions for the same methods to be used for accumulation. In other words, rather than capital increasing extensively it also increases intensively.

“With the accumulation of capital, therefore, the specifically capitalistic mode of production develops, and with the capitalist mode of production the accumulation of capital. Both these economic factors bring about, in the compound ratio of the impulses they reciprocally give one another, that change in the technical composition of capital by which the variable constituent becomes always

smaller and smaller as compared with the constant.” (p 585)

Every accumulation of capital creates the conditions for an even larger accumulation, and thereby creates the conditions for an ever greater concentration of capital in the hands of a few capitalists. By the same token, this concentration widens the basis of production on a large scale and capitalist basis.

Social capital increases, as more individual capitals are created. At the same time, each of these individual capitals increases, as concentration increases with accumulation. Alongside this concentration, the accumulation also sees parts of some individual capitals separate off to form new capitals themselves.

“Besides other causes, the division of property, within capitalist families, plays a great part in this. With the accumulation of capital, therefore, the number of capitalists grows to a greater or less extent. Two points characterise this kind of concentration which grows directly out of, or rather is identical with, accumulation. First: The increasing concentration of the social means of production in the hands of individual capitalists is, other things remaining equal, limited by the degree of increase of social wealth. Second: The part of social capital domiciled in each particular sphere of production is divided among many capitalists who face one another as independent commodity-producers competing with each other.” (p 586)

So, there is a contradictory process under way. Firstly, there is accumulation and concentration, but at the same

time, this process is undermined by the continual splitting up of these individual capitals, and the competition in each sphere of one capital with another.

“This splitting-up of the total social capital into many individual capitals or the repulsion of its fractions one from another, is counteracted by their attraction. This last does not mean that simple concentration of the means of production and of the command over labour, which is identical with accumulation. It is concentration of capitals already formed, destruction of their individual independence, expropriation of capitalist by capitalist, transformation of many small into few large capitals.” (p 586)

The first process is a process of concentration of capital as accumulation brings about an increase in total social wealth. But, this latter process is not at all dependent upon accumulation or an increase in social wealth. It is rather a process of centralisation, whereby existing social wealth is redistributed by the expropriation of some capitalists by other capitalists.

“The laws of this centralisation of capitals, or of the attraction of capital by capital, cannot be developed here. A brief hint at a few facts must suffice. The battle of competition is fought by cheapening of commodities. The cheapness of commodities depends, caeteris paribus, on the productiveness of labour, and this again on the scale of production. Therefore, the larger capitals beat the smaller. It will further be remembered that, with the development of the capitalist mode of production, there is an increase in the minimum amount of individual capital necessary to carry on a business under its normal

conditions. The smaller capitals, therefore, crowd into spheres of production which Modern Industry has only sporadically or incompletely got hold of. Here competition rages in direct proportion to the number, and in inverse proportion to the magnitudes, of the antagonistic capitals. It always ends in the ruin of many small capitalists, whose capitals partly pass into the hands of their conquerors, partly vanish.” (p 587)

In addition, alongside capitalist production comes the credit system. It first seems to be a means of mobilising scattered resources for productive use, but it also becomes a powerful means of centralisation of capital, as these small capitals find themselves unable to repay their loans.

“Commensurately with the development of capitalist production and accumulation there develop the two most powerful levers of centralisation — competition and credit.” (p 587)

Accumulation creates the growth in the number of firms, which is a precondition for them being centralised. The expansion of capitalist production creates the extensive market and technology that makes these ever larger enterprises both necessary and possible.

“Today, therefore, the force of attraction, drawing together individual capitals, and the tendency to centralisation are stronger than ever before. But if the relative extension and energy of the movement towards centralisation is determined, in a certain degree, by the magnitude of capitalist wealth and superiority of economic mechanism already attained, progress in centralisation does not in

any way depend upon a positive growth in the magnitude of social capital.” (p 587)

Capital grows large in one place via centralisation, because elsewhere many small capitals have been destroyed, their capital passing into other hands.

“In a given society the limit would be reached only when the entire social capital was united in the hands of either a single capitalist or a single capitalist company.” (p 588)

That single company can be owned by a collective of capitalists, for example, a trust or large limited company, or it can be owned, for all capitalists collectively, by their state. Engels notes,

“The latest English and American “trusts” are already striving to attain this goal by attempting to unite at least all the large-scale concerns in one branch of industry into one great joint-stock company with a practical monopoly.” (Note 1, p 588)

Centralisation and concentration both bring about the same result. The increased scale of production and the drawing together of separate productive forces.

“Everywhere the increased scale of industrial establishments is the starting point for a more comprehensive organisation of the collective work of many, for a wider development of their material motive forces — in other words, for the progressive transformation of isolated processes of production, carried on by customary methods, into processes of production socially combined and scientifically arranged.” (p 589)

The difference between the two is speed. Concentration is slow, centralisation fast.

“The world would still be without railways if it had had to wait until accumulation had got a few individual capitals far enough to be adequate for the construction of a railway. Centralisation, on the contrary, accomplished this in the twinkling of an eye, by means of joint-stock companies. And whilst centralisation thus intensifies and accelerates the effects of accumulation, it simultaneously extends and speeds those revolutions in the technical composition of capital which raise its constant portion at the expense of its variable portion, thus diminishing the relative demand for labour.” (p 588)

New individual capitals provide experiments in the use of new inventions and methods. To the extent they are effective, these new capitals employ relatively less labour. But, the existing capital, at some point, also needs to undergo a renewal – especially if its existing technology and methods are threatened by those of the new capitals. The other, older, larger capital then renews itself top to bottom, introducing all of these now proved new technologies and methods, with a consequent shaking out of large amounts of now redundant labour.

Its important, to emphasise, however, that Marx is describing a contradictory process here. The overall trend is to fewer, larger enterprises. But, as he says, this same process leads still to an extension of the number of capitals being formed, but also of existing capitals being broken up. Many Liberal and Marxist economists opposed to monopoly, have tended to neglect this latter aspect of the process. But, it is important in relation to

both the *Tendency for the Rate of Profit to Fall*, and for Marx's theory of crises of overproduction.

If existing large capitals are broken up, for example, by a portion of that capital being devoted to some new branch of production, then this can itself act as a countervailing factor against the falling rate of profit. Frequently, new types of production have low, sometimes very low organic compositions of capital. For example, when the computer industry started, it relied heavily on very skilled labour, rather than on large amounts of constant capital. Similarly, when this industry developed into the personal computer industry, it was again highly educated and skilled workers that were the most important factor, and today, with companies like *Apple*, that is still the case.

The more these kinds of industries are developed, with their lower organic composition of capital, the more this lowers the average organic composition for the economy as a whole. This development of new industries with lower organic compositions of capital occurs on a regular periodic basis linked to the *Long Wave*.

But, also, the process of concentration and centralisation is not one that simply results in monopoly and a reduction in competition. Marx was extremely prescient in that regard. In response to Proudhon, Marx emphasises that monopoly leads to competition, which leads to monopoly, which in turn leads to competition at a higher level. In the *"Poverty of Philosophy"* Marx writes,

"In practical life we find not only competition, monopoly and the antagonism between them, but also the synthesis of the two, which is not a formula, but a

movement. Monopoly produces competition, competition produces monopoly. Monopolists are made from competition; competitors become monopolists. If the monopolists restrict their mutual competition by means of partial associations, competition increases among the workers; and the more the mass of the proletarians grows as against the monopolists of one nation, the more desperate competition becomes between the monopolists of different nations. The synthesis is of such a character that monopoly can only maintain itself by continually entering into the struggle of competition.”

And that was precisely what Marxist economists rediscovered in the 1980's. Increasing concentration and centralisation led not to a diminution of competition, but to it being raised to new heights as huge companies sharpened their competition not just within national borders, but on a global basis. Increasingly, it became a competition based not on the kind of price competition relevant to the small scale capitals of the 19th century, but competition based on continual improvements in quality, and increased profits due to the continual revolutionising of production, and reduction of production costs.

3) Progressive Production Of A Relative Surplus Population Or Industrial Reserve Army

The accumulation of capital appears at first as merely a quantitative phenomenon, but as Marx describes it is also a qualitative expansion, because it also involves a change in the organic composition of capital, as constant capital increases faster than the increase in variable capital.

The increase in capitalist production, the rise in productivity and the consequent change in the organic composition, proceeds more quickly than the rate of accumulation, because of the role of centralisation.

The consequence is that now, with the increasing social wealth in the form of a greater share of total capital, the demand for labour becomes progressively smaller in proportion to the growth of total capital. The total amount of labour employed continues to rise, but forms a proportionately smaller part of total capital. For periods, capital continues to expand on a purely extensive basis, i.e. technology is not revolutionised. But, these periods become shorter. As a consequence, the total capital needs to expand by larger and larger amounts, not just to absorb new workers, but just to keep existing workers employed.

“This accelerated relative diminution of the variable constituent, that goes along with the accelerated increase of the total capital, and moves more rapidly than this increase, takes the inverse form, at the other pole, of an apparently absolute increase of the labouring population, an increase always moving more rapidly than that of the variable capital or the means of employment. But in fact, it is capitalistic accumulation itself that constantly produces, and produces in the direct ratio of its own energy and extent, a relatively redundant population of labourers, i.e., a population of greater extent than suffices for the average needs of the self-expansion of capital, and therefore a surplus population.” (p 590)

The total social capital goes through a series of changes affecting sometimes all of it, and sometimes part of it. All

of these changes affect the demand for labour, frequently in dramatic ways.

“Considering the social capital in its totality, the movement of its accumulation now causes periodical changes, affecting it more or less as a whole, now distributes its various phases simultaneously over the different spheres of production. In some spheres a change in the composition of capital occurs without increase of its absolute magnitude, as a consequence of simple centralisation; in others the absolute growth of capital is connected with absolute diminution of its variable constituent, or of the labour power absorbed by it; in others again, capital continues growing for a time on its given technical basis, and attracts additional labour power in proportion to its increase, while at other times it undergoes organic change, and lessens its variable constituent; in all spheres, the increase of the variable part of capital, and therefore of the number of labourers employed by it, is always connected with violent fluctuations and transitory production of surplus population, whether this takes the more striking form of the repulsion of labourers already employed, or the less evident but not less real form of the more difficult absorption of the additional labouring population through the usual channels.” (p 590-1)

A number of factors coincide. The increase in the total social capital; the rate at which it accumulates; the increase in the scale of production and masses of labour employed it brings; the development of the productivity of labour; the increased scope across the economy of capitalist production. All these things create the

conditions not only for an increased attraction of labour, but also for its repulsion.

“... the rapidity of the change in the organic composition of capital, and in its technical form increases, and an increasing number of spheres of production becomes involved in this change, now simultaneously, now alternately. The labouring population therefore produces, along with the accumulation of capital produced by it, the means by which it itself is made relatively superfluous, is turned into a relative surplus population; and it does this to an always increasing extent. This is a law of population peculiar to the capitalist mode of production; and in fact every special historic mode of production has its own special laws of population, historically valid within its limits and only in so far as man has not interfered with them.” (p 591-2)

This surplus population or reserve army of labour, is a product of capitalist production, but in turn it becomes a condition for capitalist production, and a lever for accumulation. Whatever the limits of population, capitalism always generates this surplus population, to meet its needs for expansion, by always having labour available for exploitation.

Capital, through accumulation becomes capable of huge leaps in its size. It does so because of a number of factors. The productivity of labour is continually raised. As Marx pointed out earlier, after a certain point, capital becomes more “*elastic*”, that is it has a number of means of quickly expanding. It can employ more labour, employ it more extensively or intensively and so on. It can introduce more and/or better machines, use shift systems

an so on. As social wealth increases, so capital as part of social wealth can increase rapidly. For example, capitalists can divert resources from revenue to accumulation. They can also mobilise money hoards, or wealth held in other forms as capital. That is also facilitated by the growth of credit, which enables the mobilisation of money hoards and borrowing against other forms of wealth. But, also at a certain stage, the technical basis of production facilitates the accumulation of surplus value into the expansion of machinery, transport and so on, that has a dramatic effect on increasing production.

“The mass of social wealth, overflowing with the advance of accumulation, and transformable into additional capital, thrusts itself frantically into old branches of production, whose market suddenly expands, or into newly formed branches, such as railways, &c., the need for which grows out of the development of the old ones. In all such cases, there must be the possibility of throwing great masses of men suddenly on the decisive points without injury to the scale of production in other spheres. Overpopulation supplies these masses. The course characteristic of modern industry, viz., a decennial cycle (interrupted by smaller oscillations), of periods of average activity, production at high pressure, crisis and stagnation, depends on the constant formation, the greater or less absorption, and the re-formation of the industrial reserve army or surplus population. In their turn, the varying phases of the industrial cycle recruit the surplus population, and become one of the most energetic agents of its reproduction.” (p 592-3)

In the early stages of capitalism, this does not occur, because the change in the organic composition is very gradual. As capital expanded, the demand for labour expanded with it. So even with the change in its organic composition, no surplus population is created, because population itself grew only slowly. This in itself had consequences for the ability of capital to expand, and for wages. Capital dealt with these consequences, in its infancy by other means, i.e. the expulsion of the peasants from their land.

But, the more rapid growth of capital is only possible if it finds a sufficiently large quantity of exploitable labour available when it is required. The reserve army is then a necessary element for capitalist expansion. But, the same frenetic behaviour that leads to rapid expansion also leads to rapid contractions, which in turn throw workers back into the ranks of the reserve army.

So, the process of accumulation, which brings about changes in the composition of capital, continuously “sets free” workers that swell the ranks of the reserve army. During periods of rapid accumulation these are absorbed again by the extension of existing capitals, and the creation of new ones. Even some of the existing reserve can be absorbed during these periods. But, when contraction sets in, this process is reversed.

“The whole form of the movement of modern industry depends, therefore, upon the constant transformation of a part of the labouring population into unemployed or half-employed hands. The superficiality of Political Economy shows itself in the fact that it looks upon the expansion and contraction of credit, which is a mere

symptom of the periodic changes of the industrial cycle, as their cause. As the heavenly bodies, once thrown into a certain definite motion, always repeat this, so is it with social production as soon as it is once thrown into this movement of alternate expansion and contraction. Effects, in their turn, become causes, and the varying accidents of the whole process, which always reproduces its own conditions, take on the form of periodicity. When this periodicity is once consolidated, even Political Economy then sees that the production of a relative surplus population — i.e., surplus with regard to the average needs of the self-expansion of capital — is a necessary condition of modern industry.” (p 593)

Variable capital can increase even if the number of workers stays the same or even falls. That is the case if those workers perform more labour and receive more wages. So, Marx says, its always in the interests of capital to get more work out of fewer workers than to employ more workers.

“In the latter case, the outlay of constant capital increases in proportion to the mass of labour set in action; in the former that increase is much smaller. The more extended the scale of production, the stronger this motive. Its force increases with the accumulation of capital.” (p 595)

Once again this is a contradictory process. On the one hand, an increased variable capital, here, does not employ more workers. On the other, capitalist development replaces more skilled with less skilled workers, a larger number of whom can be employed for

the same amount of wages. The same is true with replacing men with women or children.

“The production of a relative surplus population, or the setting free of labourers, goes on therefore yet more rapidly than the technical revolution of the process of production that accompanies, and is accelerated by, the advance of accumulation; and more rapidly than the corresponding diminution of the variable part of capital as compared with the constant. If the means of production, as they increase in extent and effective power, become to a less extent means of employment of labourers, this state of things is again modified by the fact that in proportion as the productiveness of labour increases, capital increases its supply of labour more quickly than its demand for labourers. The overwork of the employed part of the working class swells the ranks of the reserve, whilst conversely the greater pressure that the latter by its competition exerts on the former, forces these to submit to overwork and to subjugation under the dictates of capital. The condemnation of one part of the working class to enforced idleness by the overwork of the other part, and the converse, becomes a means of enriching the individual capitalists, and accelerates at the same time the production of the industrial reserve army on a scale corresponding with the advance of social accumulation.” (p 595-6)

But, we shouldn't think that this means that there is any absolute tendency to unemployment. On the contrary, there is unemployment on one side of the coin, overwork on the other. Marx writes of England,

“Her technical means for saving labour are colossal. Nevertheless, if to-morrow morning labour generally were reduced to a rational amount, and proportioned to the different sections of the working class according to age and sex, the working population to hand would be absolutely insufficient for the carrying on of national production on its present scale.” (p 596)

We see the same thing today. On the one hand we have large scale unemployment and under employment. In addition to the large number of unemployed, 3 million say they would like to work more hours, and this probably understates the degree of under employment. Yet, at the same time, workers are told they have to work until they are 67 or 70, rather than 65. The government has demanded an opt-out from the *Working Time Directive* and so on.

“Taking them as a whole, the general movements of wages are exclusively regulated by the expansion and contraction of the industrial reserve army, and these again correspond to the periodic changes of the industrial cycle. They are, therefore, not determined by the variations of the absolute number of the working population, but by the varying proportions in which the working class is divided into active and reserve army, by the increase or diminution in the relative amount of the surplus population, by the extent to which it is now absorbed, now set free.” (p 596)

Wages rise and fall in line with the demand and supply of labour-power but not in the way the economists suggested. They put forward the idea that the demand for labour-power raises wages which causes workers to

increase their procreation, increasing the population and supply of labour-power. This increased supply reduces wages, which in turn decimates population, reducing the supply of labour-power. On this basis, it is population not the needs of capital that is the determining factor. Marx has shown why this is wrong.

Marx refers to the rise of agricultural wages between 1849-59. They rose by almost 30%, as workers escaped the land for factories, mines, railways and the needs of war.

“Everywhere the farmers were howling, and the London Economist, with reference to these starvation-wages, prattled quite seriously of “a general and substantial advance.” What did the farmers do now? Did they wait until, in consequence of this brilliant remuneration, the agricultural labourers had so increased and multiplied that their wages must fall again, as prescribed by the dogmatic economic brain? They introduced more machinery, and in a moment the labourers were redundant again in a proportion satisfactory even to the farmers. There was now “more capital” laid out in agriculture than before, and in a more productive form. With this the demand for labour fell, not only relatively, but absolutely.” (p 597-8)

This is not to be confused with the situation determining the actual supply of labour-power to specific branches of industry.

“If, e.g., in consequence of favourable circumstances, accumulation in a particular sphere of production becomes especially active, and profits in it, being greater

than the average profits, attract additional capital, of course the demand for labour rises and wages also rise. The higher wages draw a larger part of the working population into the more favoured sphere, until it is glutted with labour power, and wages at length fall again to their average level or below it, if the pressure is too great. Then, not only does the immigration of labourers into the branch of industry in question cease; it gives place to their emigration. Here the political economist thinks he sees the why and wherefore of an absolute increase of workers accompanying an increase of wages, and of a diminution of wages accompanying an absolute increase of labourers. But he sees really only the local oscillation of the labour-market in a particular sphere of production — he sees only the phenomena accompanying the distribution of the working population into the different spheres of outlay of capital, according to its varying needs.

The industrial reserve army, during the periods of stagnation and average prosperity, weighs down the active labour-army; during the periods of over-production and paroxysm, it holds its pretensions in check. Relative surplus population is therefore the pivot upon which the law of demand and supply of labour works. It confines the field of action of this law within the limits absolutely convenient to the activity of exploitation and to the domination of capital.” (p 598)

Marx then returns to the discussion from earlier, once again attacking the economic apologists for their arguments claiming that capital is “set free” for the workers. The process of the increasing reserve army exposes this fallacy, Marx argues.

“The impulse that additional capital, seeking an outlet, would otherwise have given to the general demand for labour, is therefore in every case neutralised to the extent of the labourers thrown out of employment by the machine. That is to say, the mechanism of capitalistic production so manages matters that the absolute increase of capital is accompanied by no corresponding rise in the general demand for labour.” (p 599)

Capital influences both the demand for and the supply of labour-power at the same time. On the one hand, its expansion creates an additional demand for labour-power. On the other, that same expansion, because it also calls forth additional machines, technology and techniques etc., which raise productivity, also creates an additional supply of labour-power from the existing number of workers.

“As soon, therefore, as the labourers learn the secret, how it comes to pass that in the same measure as they work more, as they produce more wealth for others, and as the productive power of their labour increases, so in the same measure even their function as a means of the self-expansion of capital becomes more and more precarious for them; as soon as they discover that the degree of intensity of the competition among themselves depends wholly on the pressure of the relative surplus population; as soon as, by Trades’ Unions, &c., they try to organise a regular co-operation between employed and unemployed in order to destroy or to weaken the ruinous effects of this natural law of capitalistic production on their class, so soon capital and its sycophant, Political Economy, cry out at the infringement of the “eternal” and so to say “sacred” law of supply and

demand. Every combination of employed and unemployed disturbs the “harmonious” action of this law. But, on the other hand, as soon as (in the colonies, e.g.) adverse circumstances prevent the creation of an industrial reserve army and, with it, the absolute dependence of the working class upon the capitalist class, capital, along with its commonplace Sancho Panza, rebels against the “sacred” law of supply and demand, and tries to check its inconvenient action by forcible means and State interference.” (p 599-600)

4) Different Forms Of The Relative Surplus Population. The General Law Of Capitalistic Accumulation

Marx describes the three forms of reserve army; the floating, latent and stagnant reserves.

“In the centres of modern industry — factories, manufactures, ironworks, mines, &c. — the labourers are sometimes repelled, sometimes attracted again in greater masses, the number of those employed increasing on the whole, although in a constantly decreasing proportion to the scale of production. Here the surplus population exists in the floating form.” (p 600)

Another part of the *floating reserve* are those young people thrown out of machine industry once they become adults. One consequence was that young male workers often emigrated *“following in fact capital that has emigrated” (p 600)*. This meant there were more young females than males. It also means that although the supply of labour-power is always in excess of the demand, yet it was still not enough to meet the needs of

capital. Then as now, large scale unemployment goes along with labour shortages.

“It wants larger numbers of youthful labourers, a smaller number of adults. The contradiction is not more glaring than that other one that there is a complaint of the want of hands, while at the same time many thousands are out of work, because the division of labour chains them to a particular branch of industry.” (p 600)

In addition, particularly in the early stages, the length and intensity of work is such that workers were worn out only half way through their lives.

“He falls into the ranks of the supernumeraries, or is thrust down from a higher to a lower step in the scale. It is precisely among the work-people of modern industry that we meet with the shortest duration of life. Dr. Lee, Medical Officer of Health for Manchester, stated

“that the average age at death of the Manchester ... upper middle class was 38 years, while the average age at death of the labouring class was 17; while at Liverpool those figures were represented as 35 against 15. It thus appeared that the well-to-do classes had a lease of life which was more than double the value of that which fell to the lot of the less favoured citizens.” [Opening address to the Sanitary Conference, Birmingham, January 15th, 1875, by J. Chamberlain, Mayor of the town, now (1883) President of the Board of Trade.] (p 601)

The only way the low age of death could be compensated was through a high birth rate, which could only be achieved through early marriages frequently as young as age 12 or 13.

In agriculture, the introduction of capitalism brings about a reduction of employment. Capital replaces labour, but unlike in industry, this is not compensated by the expansion of total capital on a sufficient scale to lead to an absolute increase in employment. The consequence is that the agricultural population is continually being transformed into an urban and industrial proletariat.

“781 towns given in the census for 1861 for England and Wales “contained 10,960,998 inhabitants, while the villages and country parishes contained 9,105,226. In 1851, 580 towns were distinguished, and the population in them and in the surrounding country was nearly equal. But while in the subsequent ten years the population in the villages and the country increased half a million, the population in the 580 towns increased by a million and a half (1,554,067). The increase of the population of the country parishes is 6.5 per cent., and of the towns 17.3 per cent. The difference in the rates of increase is due to the migration from country to town. Three-fourths of the total increase of population has taken place in the towns.” (“Census. &c.,” pp. 11 and 12.)” (Note 2, p 601)

This relative surplus population in the countryside is continually flowing towards the towns. It constitutes a *latent reserve*. This can be observed in every process of industrialisation including that occurring in China today.

“The third category of the relative surplus population, the stagnant, forms a part of the active labour army, but with extremely irregular employment. Hence it furnishes to capital an inexhaustible reservoir of disposable labour power. Its conditions of life sink below the average normal level of the working class; this makes it at once

the broad basis of special branches of capitalist exploitation. It is characterised by maximum of working-time, and minimum of wages.” (p 602)

Marx refers to the working class in “*domestic industry*” as part of this group. They are those employed in sweatshops, home working and, today, all those aspects of the black economy. In fact, it is an indictment of British capitalism, today, that, since the 1980's, its increasingly zombified economy has cast millions of workers into the kind of casual, peripheral employment that Marx refers to in the 19th century as providing workers with the worst conditions.

“It recruits itself constantly from the supernumerary forces of modern industry and agriculture, and specially from those decaying branches of industry where handicraft is yielding to manufacture, manufacture to machinery.” (p 602)

Today, in Britain, it is from all those who, since the 1980's, have lost stable employment from former staple industries, and those who have not been able to obtain sufficient education and skills to obtain employment in higher value production. And, its condition today, partly encouraged by welfarism, is little different from Marx's description.

“But it forms at the same time a self-reproducing and self-perpetuating element of the working class, taking a proportionally greater part in the general increase of that class than the other elements. In fact, not only the number of births and deaths, but the absolute size of the families stand in inverse proportion to the height of

wages, and therefore to the amount of means of subsistence of which the different categories of labourers dispose. This law of capitalistic society would sound absurd to savages, or even civilised colonists. It calls to mind the boundless reproduction of animals individually weak and constantly hunted down.” (p 602)

And below the reserve army of labour resides what Marx calls the “dangerous classes”. They compose three different groups.

“First, those able to work. One need only glance superficially at the statistics of English pauperism to find that the quantity of paupers increases with every crisis, and diminishes with every revival of trade. Second, orphans and pauper children. These are candidates for the industrial reserve army, and are, in times of great prosperity, as 1860, e.g., speedily and in large numbers enrolled in the active army of labourers. Third, the demoralised and ragged, and those unable to work, chiefly people who succumb to their incapacity for adaptation, due to the division of labour; people who have passed the normal age of the labourer; the victims of industry, whose number increases with the increase of dangerous machinery, of mines, chemical works, &c., the mutilated, the sickly, the widows, &c. Pauperism is the hospital of the active labour-army and the dead weight of the industrial reserve army. Its production is included in that of the relative surplus population, its necessity in theirs; along with the surplus population, pauperism forms a condition of capitalist production, and of the capitalist development of wealth. It enters into the faux frais of capitalist production; but capital knows how to throw these, for the most part, from its own shoulders on

to those of the working class and the lower middle class.”
(p 602-3)

In other words, the existence of these elements is inescapable for capitalism. The cost of their subsistence has to be met, in the same way that workers have to be compensated, not just for their immediate needs for reproduction, but for things such as old age. All of these costs have to be covered in the *wage fund*. But, the subsistence of the paupers etc. is not part of the reproduction of labour power. It forms a cost for capital. But, as Marx says, capital finds ways of mostly transferring this cost to other workers. One way in which this is done is via the kinds of activities these dangerous classes engage in - “*vagabonds, criminals, prostitutes*”. The prostitutes make their money largely from male workers, whilst the petty criminals main targets are themselves other workers, and workers communities. In the 19th century, one way it did this was via *Poor Relief*, which workers contributed to in Parish contributions. Today, the same thing is done via welfarism, which takes taxes from most workers, on the one hand, to give out in benefits to other workers, and the “*dangerous classes*”, on the other.

Marx then sets out an “*absolute general law of capitalist accumulation.*” (p 603) which is, however, he says, “*modified in its working by many circumstances*” (p 603). The law is:

“The greater the social wealth, the functioning capital, the extent and energy of its growth, and, therefore, also the absolute mass of the proletariat and the productiveness of its labour, the greater is the industrial reserve army.

The same causes which develop the expansive power of capital, develop also the labour power at its disposal. The relative mass of the industrial reserve army increases therefore with the potential energy of wealth. But the greater this reserve army in proportion to the active labour army, the greater is the mass of a consolidated surplus population, whose misery is in inverse ratio to its torment of labour. The more extensive, finally, the Lazarus layers of the working class, and the industrial reserve army, the greater is official pauperism.” (p 603)

In fact, as stated previously, the empirical evidence has falsified this law, or at least, we can say that circumstances, in most developed economies, have modified it so as to make it largely inoperable. One reason for that, as stated previously, is that the same forces alluded to by Marx, in relation to productivity, have also led to such a massive expansion of capital that it has been able to soak up most of the relative surplus population, outside particular periods of prolonged downturn, such as the 1930's or 1980's. Capital has expanded both by deepening and widening. It has sunk its roots deeper where it was already established, and widened its activities across more and more aspects of life, and of the globe. The development of ever increasing relative surplus populations seems to be more a feature of capitalism in its industrialising phase, rather than its more developed stage. Wherever capitalism has industrialised, including China today, it has brought a paradoxical combination of both rapidly rising employment, with a large rise also in unemployment, particularly in the countryside.

Part of the reason that there has not been a continual rise in the size of the reserve army, in developed economies, also seems to be due to the fact that absolutely rising living standards have reduced the need for large families, whilst family planning has provided workers with the ability to limit the size of their families. The latter does not prevent an over supply of labour-power compared to demand for it, for all the reasons previously described, but it does act to limit the degree of over supply. Another reason is that the nature of capital has changed, becoming more planned and regulated. Part of the planning process for capital is the use of the *Welfare State* itself to provide adequate supplies of more educated and skilled workers, so that more valuable labour can be exploited, in higher value production where the composition of capital is lower. The form of regulation for that during much of the 20th century was *Fordism*, at the level of the enterprise, and its equivalent, *Keynesianism* and *Welfarism* at the level of the state. It is the foundation of a bourgeois social democratic state.

Previously, Marx described how all the methods of raising productivity are at the cost of the worker, who is turned into an appendage of the machine etc. But, all these methods of creating relative surplus value also lead to increased accumulation, which in turn makes the workers position even more tenuous, because, as has been described, this process means that increasingly less labour-power is required to process the means of production. But, this also means that the power of capital to impose those same methods of increasing surplus value, on the worker, increase.

“It follows therefore that in proportion as capital accumulates, the lot of the labourer, be his payment high or low, must grow worse. The law, finally, that always equilibrates the relative surplus population, or industrial reserve army, to the extent and energy of accumulation, this law rivets the labourer to capital more firmly than the wedges of Vulcan did Prometheus to the rock. It establishes an accumulation of misery, corresponding with accumulation of capital. Accumulation of wealth at one pole is, therefore, at the same time accumulation of misery, agony of toil slavery, ignorance, brutality, mental degradation, at the opposite pole, i.e., on the side of the class that produces its own product in the form of capital.” (p 605)

Its important to read these words carefully so as not to fall into the trap of the *Lassalleans* and the “*Iron law of Wages*”. Marx makes the point, here, that all this misery etc. persists whether the workers wages are high or low. It is the difference between wealth and affluence, he describes in the *Grundrisse*.

“Labour as absolute poverty: poverty not as shortage, but as total exclusion of objective wealth.”

You can be affluent, i.e. have a high income without being wealthy, i.e. have a large amount of stored assets in the form of capital. In fact, you can be more tied to capital, have a more tenuous position, if you are affluent. A worker on high wages will suffer a larger fall in living standards if they lose their job.

It is not low wages that causes the misery that Marx describes, but the lack of wealth, the non-ownership of

capital, and consequently the lack of control over the labour process, and all that goes with it, that leaves the proletariat as a slave class.

5) Illustrations of the General Law of Capitalist Accumulation

a) England from 1846-1866

Marx provides comprehensive data showing the extent to which profits and rents increased compared to the growth of population. Between 1853-64 population rose by around 12%. For the same period, profits subject to Income Tax, rose by around 50%. The increase in rent of land, subject to Income Tax, rose by 38%.

“The accumulation of capital was attended at the same time by its concentration and centralisation. Although no official statistics of agriculture existed for England (they did for Ireland), they were voluntarily given in 10 counties. These statistics gave the result that from 1851 to 1861 the number of farms of less than 100 acres had fallen from 31,583 to 26,597, so that 5,016 had been thrown together into larger farms. From 1815 to 1825 no personal estate of more than £1,000,000 came under the succession duty; from 1825 to 1855, however, 8 did; and 4 from 1856 to June, 1859, i.e., in 4½ years.” (p 608)

The accumulation was also manifest in the growth of production. Coal production went from 64.4 million tons, worth £16 million, in 1855, to 92.8 million tons, worth £23 million, in 1864. In the same period, pig iron went from 3.2 million tons, worth £8 million, to 4.7 million tons, worth £11.9 million. Railways went from 8,000 miles to nearly 13,000 miles, and their paid up capital from £286

million to £425.7 million. Total value of exports and imports went from £268.2 million to £490 million. The value of exports trebled between 1846 and 1866 from £58 million to £189 million.

“After these few examples one understands the cry of triumph of the Registrar-General of the British people:

'Rapidly as the population has increased, it has not kept pace with the progress of industry and wealth.'”

Yet, as Marx details, using the *Budget Speeches of Gladstone* to illustrate, the best that could be said, for the workers, during this period, is that, in absolute terms, they did not get any poorer! But, in relative terms, they had become poorer, because the rich had become considerably richer. Even in absolute terms, the rise in wages barely covered the rise in prices.

“As to the cheapening of the means of subsistence, the official statistics, e.g., the accounts of the London Orphan Asylum, show an increase in price of 20% for the average of the three years 1860-1862, compared with 1851-1853. In the following three years, 1863-1865, there was a progressive rise in the price of meat, butter, milk, sugar, salt, coals, and a number of other necessary means of subsistence.” (p 610)

The number of paupers rose from 878,000 in 1856 to 971,000 in 1865. As a result of the cotton famine, resulting from the *US Civil War*, it rose to 1.08 million in 1863, and 1.01 million in 1864.

“The crisis of 1866, which fell most heavily on London, created in this centre of the world market, more populous than the kingdom of Scotland, an increase of pauperism for the year

1866 of 19.5% compared with 1865, and of 24.4% compared with 1864, and a still greater increase for the first months of 1867 as compared with 1866. From the analysis of the statistics of pauperism, two points are to be taken. On the one hand, the fluctuation up and down of the number of paupers, reflects the periodic changes of the industrial cycle. On the other, the official statistics become more and more misleading as to the actual extent of pauperism in proportion as, with the accumulation of capital, the class-struggle, and, therefore, the class consciousness of the working men, develop.” (p 612)

b) The Badly Paid Strata of the British Industrial Class

Marx details how low real wages had fallen in 1862. Using nutritional data provided by Dr. Smith, for the Privy Council, Marx indicates that in December 1862, the consumption level of the cotton workers had fallen to the minimum levels – 29,211 grains of carbon and 1,295 grains of nitrogen per week. The study, which selected the most healthy families, found that

“in only one of the examined classes of in-door operatives did the average nitrogen supply just exceed, while in another it nearly reached, the estimated standard of bare sufficiency [i.e., sufficient to avert starvation diseases], and that in two classes there was defect — in one, a very large defect — of both nitrogen and carbon. Moreover, as regards the examined families of the agricultural population, it appeared that more than a fifth were with less than the estimated sufficiency of carbonaceous food, that more than one-third were with less than the estimated sufficiency of nitrogenous food, and that in three counties (Berkshire, Oxfordshire, and Somersetshire), insufficiency of nitrogenous food was the average local diet.” (p 613)

The worst affected were women and children. But, Dr. Simon, who commissioned Smith's Report, comments,

“Yet in this point of view, there is, in my opinion, a very important sanitary context to be added. It must be remembered that privation of food is very reluctantly borne, and that as a rule great poorness of diet will only come when other privations have preceded it. Long before insufficiency of diet is a matter of hygienic concern, long before the physiologist would think of counting the grains of nitrogen and carbon which intervene between life and starvation, the household will have been utterly destitute of material comfort; clothing and fuel will have been even scantier than food — against inclemencies of weather there will have been no adequate protection — dwelling space will have been stinted to the degree in which overcrowding produces or increases disease; of household utensils and furniture there will have been scarcely any—even cleanliness will have been found costly or difficult, and if there still be self-respectful endeavours to maintain it, every such endeavour will represent additional pangs of hunger. The home, too, will be where shelter can be cheapest bought; in quarters where commonly there is least fruit of sanitary supervision, least drainage, least scavenging, least suppression of public nuisances, least or worst water supply, and, if in town, least light and air. Such are the sanitary dangers to which poverty is almost certainly exposed, when it is poverty enough to imply scantiness of food. And while the sum of them is of terrible magnitude against life, the mere scantiness of food is in itself of very serious moment.... These are painful reflections, especially when it is remembered that the poverty to which they advert is not the deserved poverty of

idleness. In all cases it is the poverty of working populations.”
(p 615)

Marx points out that the intimate connection between this poverty and the wealth of the capitalists can only be understood on the basis of the economic analysis he is undertaking. But, that is not the case in relation to the housing of the workers.

“Every unprejudiced observer sees that the greater the centralisation of the means of production, the greater is the corresponding heaping together of the labourers, within a given space; that therefore the swifter capitalistic accumulation, the more miserable are the dwellings of the working-people. “Improvements” of towns, accompanying the increase of wealth, by the demolition of badly built quarters, the erection of palaces for banks, warehouses, &c., the widening of streets for business traffic, for the carriages of luxury, and for the introduction of tramways, &c., drive away the poor into even worse and more crowded hiding places. On the other hand, every one knows that the dearness of dwellings is in inverse ratio to their excellence, and that the mines of misery are exploited by house speculators with more profit or less cost than ever were the mines of Potosi. The antagonistic character of capitalist accumulation, and therefore of the capitalistic relations of property generally, is here so evident, that even the official English reports on this subject teem with heterodox onslaughts on “property and its rights.”” (p 615-6)

That is not just a description which today fits the process of accumulation in Sao Paulo, Mumbai and Shanghai; it also fits with the situation in London, where clearances continue to make way for new palaces of capital,

alongside workers living in sheds at the bottom of gardens. It leads to the price of property soaring way beyond what workers can afford to buy, and rents that can only be sustained on the back of large subsidies in the form of Housing Benefit, paid for by workers elsewhere in the country.

In the reports of the 19th century, this kind of centralisation and overcrowding resulted in all sorts of sanitary problems and diseases. Ultimately, it provoked the bourgeoisie to introduce environmental health measures, and to promote the building of *Public Parks*. Later, it led to the development of suburban developments, as an escape from the misery of towns and cities. Today, with land prices having been sent through the roof, as a consequence of the house price speculation, began in the 1980's, on the back of money printing and financial deregulation, capital seeks, once again, to squeeze workers into cramped, poor quality housing in the cities, on so called, appropriately named "*brown field sites*".

It does so by utilising environmental arguments about saving the countryside (despite the fact that existing urban areas are squeezed on to just 10% of the available land!) and promoting the idea of developing brownfield sites.

"The result of this change is not only that the class of town people is enormously increased, but the old close-packed little towns are now centres, built round on every side, open nowhere to air, and being no longer agreeable to the rich are abandoned by them for the pleasanter outskirts. The successors of these rich are occupying the larger houses at the rate of a

family to each room [... and find accommodation for two or three lodgers ...] and a population, for which the houses were not intended and quite unfit, has been created, whose surroundings are truly degrading to the adults and ruinous to the children.' The more rapidly capital accumulates in an industrial or commercial town, the more rapidly flows the stream of exploitable human material, the more miserable are the improvised dwellings of the labourers.” (p 618-9)

c) The Nomad Population

These are former agricultural workers who now undertake a variety of jobs that arise sporadically in different locations, such as road building, railway construction, brick making and so on. Those involved frequently live in their own encampments, just as today itinerants move around in their caravans. The living conditions of these workers made them prone to a whole range of diseases, which they spread, as they moved from one area to another.

In the same classification, Marx also details the living conditions of miners. Many of them lived in mining villages near the pit, in cottages provided by the mine owner. Marx comments,

“In the construction of the cottages, only one point of view is of moment, the “abstinence” of the capitalist from all expenditure that is not absolutely unavoidable.

'The lodging which is obtained by the pitman and other labourers connected with the collieries of Northumberland and Durham,” says Dr. Julian Hunter, “is perhaps, on the whole, the worst and the dearest of which any large specimens can be found in England, the similar parishes of Monmouthshire

excepted.... The extreme badness is in the high number of men found in one room, in the smallness of the ground-plot on which a great number of houses are thrust, the want of water, the absence of privies, and the frequent placing of one house on the top of another, or distribution into flats, ... the lessee acts as if the whole colony were encamped, not resident.'” (p 623)

A further report detailed the way in which any complaints by miners led to them not being rehired when the annual contract expired, meaning they lost both their job and their house.

d) Effect of Crises on the Best Paid Part of the working class

Marx details the consequences of the crisis of 1866. 1857 had seen a great crisis at the close of the trade cycle. The crisis of 1866 was exacerbated by the cotton famine caused by the US Civil War. A large amount of capital was drawn away from industry and into financial speculation.

“Already discounted in the regular factory districts by the cotton famine, which threw much capital from its wonted sphere into the great centres of the money-market, the crisis assumed, at this time, an especially financial character. Its outbreak in 1866 was signalled by the failure of a gigantic London Bank, immediately followed by the collapse of countless swindling companies. One of the great London branches of industry involved in the catastrophe was iron shipbuilding. The magnates of this trade had not only over-produced beyond all measure during the overtrading time, but they had, besides, engaged in enormous contracts on the speculation that credit would be forthcoming to an equivalent extent. Now, a terrible reaction set in, that even at this hour

(the end of March, 1867) continues in this and other London industries.” (p 625)

Marx then details the effects on even these better paid and skilled workers, from a newspaper correspondent.

“In the East End districts of Poplar, Millwall, Greenwich, Deptford, Limehouse and Canning Town, at least 15,000 workmen and their families were in a state of utter destitution, and 3,000 skilled mechanics were breaking stones in the workhouse yard (after distress of over half a year’s duration)...” (p 626)

The Report goes on,

“Seven thousand ... in this one workhouse ... were recipients of relief ... many hundreds of them ... it appeared, were, six or eight months ago, earning the highest wages paid to artisans.... Their number would be more than doubled by the count of those who, having exhausted all their savings, still refuse to apply to the parish, because they have a little left to pawn.” (p 626)

Marx quotes from a Tory newspaper – *The Standard* – which even detailed the misery.

“A frightful spectacle was to be seen yesterday in one part of the metropolis. Although the unemployed thousands of the East-end did not parade with their black flags en masse, the human torrent was imposing enough. Let us remember what these people suffer. They are dying of hunger. That is the simple and terrible fact. There are 40,000 of them.... In our presence, in one quarter of this wonderful metropolis, are packed — next door to the most enormous accumulation of wealth the world

ever saw — cheek by jowl with this are 40,000 helpless, starving people. These thousands are now breaking in upon the other quarters; always half-starving, they cry their misery in our ears, they cry to Heaven, they tell us from their miserable dwellings, that it is impossible for them to find work, and useless for them to beg. The local ratepayers themselves are driven by the parochial charges to the verge of pauperism.” (p 627)

Then, as now, of course, the apologists of capital proclaimed that the solution was even greater freedom for capital and further limitation of the rights of workers. Then they cited Belgium, even though as Marx has shown, Belgian industry was still unable to compete with its British rivals. But, the consequences for Belgian workers were even worse.

Marx details from official Belgian data the fact that Belgian families' income available for food intake, was not just below the minimum levels, but was below even the meagre rations provided for prison inmates!

“Of the 450,000 working class families, over 200,000 are on the pauper list.” (p 629)

e) The British Agricultural Proletariat

Marx details briefly the deterioration of the agricultural labourers position, from what it had been in the 15th century. The agricultural revolution of the mid 18th century reduced that position further.

“It is then proved in detail that the real agricultural wages between 1737 and 1777 fell nearly ¼ or 25 per cent.” (p 630)

“His average wage expressed in pints of wheat was from 1770 to 1771, 90 pints, in Eden’s time (1797) only 65, in 1808 but 60.” (p 631)

“The Poor Law and its administration were in 1795 and 1814 the same. It will be remembered how this law was carried out in the country districts: in the form of alms the parish made up the nominal wage to the nominal sum required for the simple vegetation of the labourer. The ratio between the wages paid by the farmer, and the wage-deficit made good by the parish, shows us two things. First, the falling of wages below their minimum; second, the degree in which the agricultural labourer was a compound of wage labourer and pauper, or the degree in which he had been turned into a serf of his parish.” (p 631)

“In 1795 the deficit was less than 1/4 the wage, in 1814, more than half.” (p 631)

Marx also details how divisions amongst the exploiters played out in this regard. The Liberals opposing the Corn Laws sought to expose the extent to which the Tory landlords exploited the agricultural workers, whilst the Tories sought to expose the poor conditions of the industrial workers.

Once again, the data showed that many of these labourers were living on less for food than was available for convicts in British prisons.

“John Smith, governor of the Edinburgh prison, deposes:

No. 5056. “The diet of the English prisons [is] superior to that of ordinary labourers in England.” No 50. “It is the fact ... that the ordinary agricultural labourers in Scotland very seldom get

any meat at all.” Answer No. 3047. “Is there anything that you are aware of to account for the necessity of feeding them very much better than ordinary labourers? — Certainly not.” No. 3048. “Do you think that further experiments ought to be made in order to ascertain whether a dietary might not be hit upon for prisoners employed on public works nearly approaching to the dietary of free labourers? ...” “He [the agricultural labourer] might say: ‘I work hard, and have not enough to eat, and when in prison I did not work harder where I had plenty to eat, and therefore it is better for me to be in prison again than here.’” (p 635)

But, the situation in respect of housing and other necessary elements of life was even worse. One reason was that in '*closed villages*', where a few large landlords dominated, they would demolish labourers' cottages, because this reduced the amount of Poor Relief the village was committed to pay. The labourers would then move to nearby '*open villages*', where a large number of small landlords prevailed, and where speculators would erect poor, but expensive, shacks for these workers to rent. As these workers moved to the poorer '*open villages*', so the cost of Poor Relief in these parishes rose, putting more pressure on their inhabitants. A similar thing happens with welfarism today.

In the past, at least, the rural labourers benefited from a generally healthier environment, but now, their poor diet and worse housing meant they were subject to all the same kinds of diseases as the town proletariat, caused by those same conditions.

Marx then provides details of these conditions from official reports covering several counties.

The amalgamation of farms and introduction of new methods combined to produce a surplus rural population. That, plus the destruction of their cottages, produced a continuous flow of labourers from the country to the towns. These conditions led to the pauperisation of the rural labourers. Moreover, at the same time as a relative surplus population is created, the countryside becomes under populated, so that at times, when additional work is required, there are insufficient workers. As elsewhere this then leads to overwork.

“Hence we find in the official documents contradictory complaints from the same places of deficiency and excess of labour simultaneously. The temporary or local want of labour brings about no rise in wages, but a forcing of the women and children into the fields, and exploitation at an age constantly lowered. As soon as the exploitation of the women and children takes place on a larger scale, it becomes in turn a new means of making a surplus population of the male agricultural labourer and of keeping down his wage. In the east of England thrives a beautiful fruit of this vicious circle — the so-called gang-system, to which I must briefly return here.” (p 648-9)

Marx then details how new farms, in these areas, had been made possible by the use of steam engines for drainage. These new, large farms often had no cottages or workers of their own. Instead, the workers were shipped in from neighbouring open villages as gangs, recruited by *Gang Masters*, a phenomenon we see again today.

Along with the overwork, the long distances to walk to and from work, Marx also details the effects this life had on the young people born into the gangs, where

frequently girls of 13 were made pregnant by boys of the same age.

f) Ireland

In concluding this chapter, Marx looks at Ireland, including the effects of the famine, which reduced population from 8.2 million in 1841, to 5.5 million in 1866, from death and emigration. Emigration between 1851 and 1866 accounted for 1.5 million people.

The number of inhabited houses fell by 53,000, whilst the size of farms rose.

“From 1851-1861, the number of holdings of 15 to 30 acres increased 61,000, that of holdings over 30 acres, 109,000, whilst the total number of all farms fell 120,000, a fall, therefore, solely due to the suppression of farms under 15 acres —i.e., to their centralisation.” (p 652)

There was an attendant reduction in agricultural output.

“Nevertheless, with the fall in numbers of the population, rents and farmers’ profits rose, although the latter not as steadily as the former. The reason of this is easily comprehensible. On the one hand, with the throwing of small holdings into large ones, and the change of arable into pasture land, a larger part of the whole produce was transformed into surplus-produce. The surplus-produce increased, although the total produce, of which it formed a fraction, decreased. On the other hand, the money value of this surplus-produce increased yet more rapidly than its mass, in consequence of the rise in the English market price of meat, wool, &c., during the last 20, and especially during the last 10, years.” (p 657)

The process also increased the amount of constant capital employed, because previously scattered means of production, owned by peasant producers, passed into the hands of capitalist farmers.

“The Irish famine of 1846 killed more than 1,000,000 people, but it killed poor devils only. To the wealth of the country it did not the slightest damage. The exodus of the next 20 years, an exodus still constantly increasing, did not, as, e.g., the Thirty Years’ War, decimate, along with the human beings, their means of production. Irish genius discovered an altogether new way of spiriting a poor people thousands of miles away from the scene of its misery. The exiles transplanted to the United States, send home sums of money every year as travelling expenses for those left behind. Every troop that emigrates one year, draws another after it the next. Thus, instead of costing Ireland anything, emigration forms one of the most lucrative branches of its export trade. Finally, it is a systematic process, which does not simply make a passing gap in the population, but sucks out of it every year more people than are replaced by the births, so that the absolute level of the population falls year by year.” (p 658-9)

But, the relative surplus population remained as large, and wages just as low, despite this reduction in population.

“The facts are simple. The revolution in agriculture has kept pace with emigration. The production of relative surplus population has more than kept pace with the absolute depopulation.” (p 659)

The process of centralisation continued to crush the small to medium sized farmers who were thereby turned

into labourers themselves.

In the meantime, the only significant industry was linen manufacture, which employed an insignificant proportion of the population, and the same laws that created a relative surplus population in English machine industry did the same in Ireland.

“The misery of the agricultural population forms the pedestal for gigantic shirt-factories, whose armies of labourers are, for the most part, scattered over the country. Here, we encounter again the system described above of domestic industry, which in underpayment and overwork, possesses its own systematic means for creating supernumerary labourers. Finally, although the depopulation has not such destructive consequences as would result in a country with fully developed capitalistic production, it does not go on without constant reaction upon the home-market. The gap which emigration causes here, limits not only the local demand for labour, but also the incomes of small shopkeepers, artisans, tradespeople generally.” (p 659-60)

Although money wages had risen, real wages had fallen, as food and other prices far outstripped them. The huts the workers lived in were even worse than those of the English agricultural labourers.

The extent to which this misery, however, did not extend to the exploiting classes is shown in the Tax receipts.

“From Table E. we saw that, during 1864, of £4,368,610 of total profits, three surplus-value makers pocketed only £262,819; that in 1865, however, out of £4,669,979 total profits, the same three virtuosi of “abstinence” pocketed

£274,528; in 1864, 26 surplus-value makers reached to £646,377; in 1865, 28 surplus-value makers reached to £736,448; in 1864, 121 surplus-value makers, £1,076,912; in 1865, 150 surplus-value makers, £1,320,906; in 1864, 1,131 surplus-value makers £2,150,818, nearly half of the total annual profit; in 1865, 1,194 surplus-value makers, £2,418,833, more than half of the total annual profit. But the lion's share, which an inconceivably small number of land magnates in England, Scotland and Ireland swallow up of the yearly national rental, is so monstrous that the wisdom of the English State does not think fit to afford the same statistical materials about the distribution of rents as about the distribution of profits.” (p 664)

Part VIII

**The So Called Primitive
Accumulation**

Chapter 26 - The Secret of Primitive Accumulation

The analysis has shown how money arises out of commodity production, and how money is transformed into capital. Capital, in turn, produces surplus value, which, when accumulated, again becomes capital. But, for surplus value to arise, this presupposes the existence of capital. So, there must be some process of *Primary Accumulation of Capital* that is not a product of surplus value. It is this process that Marx next analyses.

“Its origin is supposed to be explained when it is told as an anecdote of the past. In times long gone by there were two sorts of people; one, the diligent, intelligent, and, above all, frugal elite; the other, lazy rascals, spending their substance, and more, in riotous living. The legend of theological original sin tells us certainly how man came to be condemned to eat his bread in the sweat of his brow; but the history of economic original sin reveals to us that there are people to whom this is by no means essential. Never mind! Thus it came to pass that the former sort accumulated wealth, and the latter sort had at last nothing to sell except their own skins. And from this original sin dates the poverty of the great majority that, despite all its labour, has up to now nothing to sell but itself, and the wealth of the few that increases constantly although they have long ceased to work. Such insipid childishness is every day preached to us in the defence of property.” (p 667)

In fact, the true history of this primary accumulation of capital, is little different to the accumulation of other forms of property

in history, be they slaves, serfs or feudal domains. It is a history of violence, robbery and deceit.

“In themselves money and commodities are no more capital than are the means of production and of subsistence. They want transforming into capital. But this transformation itself can only take place under certain circumstances that centre in this, viz., that two very different kinds of commodity-possessors must come face to face and into contact; on the one hand, the owners of money, means of production, means of subsistence, who are eager to increase the sum of values they possess, by buying other people’s labour power; on the other hand, free labourers, the sellers of their own labour power, and therefore the sellers of labour. Free labourers, in the double sense that neither they themselves form part and parcel of the means of production, as in the case of slaves, bondsmen, &c., nor do the means of production belong to them, as in the case of peasant-proprietors; they are, therefore, free from, unencumbered by, any means of production of their own.” (p 668)

Once capitalist production has started, on this basis, it is able to continue to reproduce this separation on an ever expanded base. Moreover, it is able to do so, not now on the basis of the need to use force, but simply on the basis of what appear to be free and equal, voluntary exchanges. This is no different from the way that, after the feudal lords had acquired their domains, by force, they were able to extract their rents and taxes apparently by *Right*, even *Divine Right*, or the way the slave owner was entitled to the surplus product of the slave, based on some supposed superiority. The difference between capitalism and these previous forms of exploitation is that they made no attempt to hide the real relations of inequality, and indeed were based on it, as some kind of natural order, whereas the

fundamental ideological basis of capitalism is the notion that everyone is free and equal.

But, of course, this real history exposes the childish myth that property accumulates in some hands rather than others, because of the diligence of some and laziness of others. It was never the case that property arose on that basis. Land, for example, did not simply exist waiting for entrepreneurial individuals to seize it. Human societies arose out of the animal kingdom as collectives. Land was utilised by these primitive communist societies on a collective, not an individual basis, be that in the form of hunter-gathering or settled agriculture.

The only way individual ownership can then arise, as Engels describes, in *"The Origin Of The Family, Private Property and the State"*, is through the break up of these collectives, and for individuals to seize for themselves what belongs to all.

Capital is only able to meet with the wage labourer, in the market, because the worker has been previously deprived of their means of production. Again, that has nothing to do with laziness. If we take Marx's comments about the reason for high US wages, it was because workers emigrating to America, as soon as they could, acquired land, and turned themselves back into property owning peasants.

"The so-called primitive accumulation, therefore, is nothing else than the historical process of divorcing the producer from the means of production. It appears as primitive, because it forms the prehistoric stage of capital and of the mode of production corresponding with it.

The economic structure of capitalist society has grown out of the economic structure of feudal society. The dissolution of the

latter set free the elements of the former.

The immediate producer, the labourer, could only dispose of his own person after he had ceased to be attached to the soil and ceased to be the slave, serf, or bondsman of another. To become a free seller of labour power, who carries his commodity wherever he finds a market, he must further have escaped from the regime of the guilds, their rules for apprentices and journeymen, and the impediments of their labour regulations. Hence, the historical movement which changes the producers into wage-workers, appears, on the one hand, as their emancipation from serfdom and from the fetters of the guilds, and this side alone exists for our bourgeois historians. But, on the other hand, these new freedmen became sellers of themselves only after they had been robbed of all their own means of production, and of all the guarantees of existence afforded by the old feudal arrangements. And the history of this, their expropriation, is written in the annals of mankind in letters of blood and fire.” (p 668-9)

This transformation, therefore, conforms with the dialectic of history. On the one hand, in freeing the worker of all those feudal restrictions and monopolies, it performs a revolutionising and progressive role. At the same time, it does so only by establishing new monopolies and restrictions, and replacing the exploitation of the producers in one form with their exploitation in another.

“Although we come across the first beginnings of capitalist production as early as the 14th or 15th century, sporadically, in certain towns of the Mediterranean, the capitalistic era dates from the 16th century. Wherever it appears, the abolition of serfdom has been long effected, and the highest development

of the middle ages, the existence of sovereign towns, has been long on the wane.

In the history of primitive accumulation, all revolutions are epoch-making that act as levers for the capital class in course of formation; but, above all, those moments when great masses of men are suddenly and forcibly torn from their means of subsistence, and hurled as free and “unattached” proletarians on the labour-market. The expropriation of the agricultural producer, of the peasant, from the soil, is the basis of the whole process. The history of this expropriation, in different countries, assumes different aspects, and runs through its various phases in different orders of succession, and at different periods. In England alone, which we take as our example, has it the classic form.” (p 670)

Chapter 27 - Expropriation of the Agricultural Population from the Land

“In England, serfdom had practically disappeared in the last part of the 14th century. The immense majority of the population consisted then, and to a still larger extent, in the 15th century, of free peasant proprietors, whatever was the feudal title under which their right of property was hidden. In the larger seignorial domains, the old bailiff, himself a serf, was displaced by the free farmer. The wage labourers of agriculture consisted partly of peasants, who utilised their leisure time by working on the large estates, partly of an independent special class of wage labourers, relatively and absolutely few in numbers. The latter also were practically at the same time peasant farmers, since, besides their wages, they had allotted to them arable land to the extent of 4 or more acres, together with their cottages. Besides they, with the rest of the peasants, enjoyed the usufruct of the common land, which gave pasture to their cattle, furnished them with timber, fire-wood, turf, &c.” (p 671)

This make up of society, with a majority of peasant producers, each self-sufficient, not just for food, but each with their own means of production for spinning and weaving, is what characterises feudal production. It is also what creates the form of farming known as “*strip farming*” or “*open field system*”, with use of common land used for cattle grazing, and hunting of rabbits etc.

“The might of the feudal lord, like that of the sovereign, depended not on the length of his rent roll, but on the number

of his subjects, and the latter depended on the number of peasant proprietors. Although, therefore, the English land, after the Norman Conquest, was distributed in gigantic baronies, one of which often included some 900 of the old Anglo-Saxon lordships, it was bestrewn with small peasant properties, only here and there interspersed with great seignorial domains. Such conditions, together with the prosperity of the towns so characteristic of the 15th century, allowed of that wealth of the people which Chancellor Fortescue so eloquently paints in his "Laudes legum Angliae;" but it excluded the possibility of capitalistic wealth." (p 672)

There were a number of factors that played into the preliminary stages of this process. Firstly, there had always been a certain number of wage workers employed as retainers by feudal lords. Wars between them led to some of these retainers being displaced and moving into the towns. But, economic changes played an even bigger role.

"Although the royal power, itself a product of bourgeois development, in its strife after absolute sovereignty forcibly hastened on the dissolution of these bands of retainers, it was by no means the sole cause of it. In insolent conflict with king and parliament, the great feudal lords created an incomparably larger proletariat by the forcible driving of the peasantry from the land, to which the latter had the same feudal right as the lord himself, and by the usurpation of the common lands. The rapid rise of the Flemish wool manufactures, and the corresponding rise in the price of wool in England, gave the direct impulse to these evictions. The old nobility had been devoured by the great feudal wars. The new nobility was the child of its time, for which money was the

power of all powers. Transformation of arable land into sheep-walks was, therefore, its cry.” (p 672)

This process had nothing to do with the laziness of these peasant farmers, who for centuries had been self-sufficient, and everything to do with the greed of the landlords, who forced them from their land.

In a similar way to the introduction of legislation to curtail the worst excesses of capital, so earlier, legislation is introduced against the excesses of feudal thefts of land. Legislation is introduced from the time of *Henry VII* onwards to limit enclosures and depopulation of villages.

“As late as Charles I.’s reign, 1638, a royal commission was appointed to enforce the carrying out of the old laws, especially that referring to the 4 acres of land. Even in Cromwell’s time, the building of a house within 4 miles of London was forbidden unless it was endowed with 4 acres of land. As late as the first half of the 18th century complaint is made if the cottage of the agricultural labourer has not an adjunct of one or two acres of land.” (p 674)

But, such access, even to these meagre means of production, would prevent the development of capitalism. Marx quotes Dr. Hunter,

“‘Landlords and farmers,’ says Dr. Hunter, ‘work here hand in hand. A few acres to the cottage would make the labourers too independent.’” (p 674)

“Dr. Hunter, l. c., p. 134. “The quantity of land assigned (in the old laws) would now be judged too great for labourers, and rather as likely to convert them into small farmers.” (George

Roberts: "The Social History of the People of the Southern Counties of England in Past Centuries." Lond., 1856, pp. 184-185.)" (Note 2, p 674)

A further contributor to the formation of a working class came with the *Reformation*, and the suppression of the monasteries.

"The estates of the church were to a large extent given away to rapacious royal favourites, or sold at a nominal price to speculating farmers and citizens, who drove out, en masse, the hereditary sub-tenants and threw their holdings into one. The legally guaranteed property of the poorer folk in a part of the church's tithes was tacitly confiscated. "Pauper ubique jacet," cried Queen Elizabeth, after a journey through England. In the 43rd year of her reign the nation was obliged to recognise pauperism officially by the introduction of a poor-rate." (p 675)

But, even by the end of the 17th century the yeomanry, the free, independent peasants, who made up the backbone of *Cromwell's army*, were more numerous than the farmers who rented larger farms and employed labourers.

"About 1750, the yeomanry had disappeared, and so had, in the last decade of the 18th century, the last trace of the common land of the agricultural labourer." (p 677)

Economic forces such as those described by Marx, in relation to wool, were at work in encouraging the clearing of the land. At the same time, the increase in trade, and of the merchant class, consequent upon opening up of markets, in Asia, Africa and the Americas, was making available a wider range of goods that could be purchased with money, and which,

therefore, encouraged replacement of payment of rent in kind with payment in money.

This in itself creates the economic conditions for a conversion of small inefficient farms. But, as Marx says, he is concerned here with the actual forceful means used to bring that about.

“After the restoration of the Stuarts, the landed proprietors carried, by legal means, an act of usurpation, effected everywhere on the Continent without any legal formality. They abolished the feudal tenure of land, i.e., they got rid of all its obligations to the State, “indemnified” the State by taxes on the peasantry and the rest of the mass of the people, vindicated for themselves the rights of modern private property in estates to which they had only a feudal title, and, finally, passed those laws of settlement, which, mutatis mutandis, had the same effect on the English agricultural labourer, as the edict of the Tartar Boris Godunof on the Russian peasantry.

The “Glorious Revolution” brought into power, along with William of Orange, the landlord and capitalist appropriators of surplus-value. They inaugurated the new era by practising on a colossal scale thefts of state lands, thefts that had been hitherto managed more modestly. These estates were given away, sold at a ridiculous figure, or even annexed to private estates by direct seizure. All this happened without the slightest observation of legal etiquette. The Crown lands thus fraudulently appropriated, together with the robbery of the Church estates, as far as these had not been lost again during the republican revolution, form the basis of the today princely domains of the English oligarchy.” (p 676-7)

Whilst feudal state owned land was wrested into the hands of a few, by combined means of theft and force, the appropriation of communal property was achieved by continual acts of violence over a long period. But, in the 18th century the law itself is also used to bring about the theft of these lands. The means of doing this are the *Enclosure Acts*.

“Whilst the place of the independent yeoman was taken by tenants at will, small farmers on yearly leases, a servile rabble dependent on the pleasure of the landlords, the systematic robbery of the Communal lands helped especially, next to the theft of the State domains, to swell those large farms, that were called in the 18th century capital farms or merchant farms, and to “set free” the agricultural population as proletarians for manufacturing industry.” (p 678)

Marx cites from some of the economic literature of the 18th century, which opposed the process of enclosure, and which detailed these thefts and processes of concentration of farms. The process means that peasants, who were formerly self-sufficient in food, clothing etc., can no longer provide for themselves. They have to become wage labourers. But, at the same time, they now also have to buy the food and clothing they previously produced for themselves, thereby creating a market for these commodities.

“In fact, usurpation of the common lands and the revolution in agriculture accompanying this, told so acutely on the agricultural labourers that, even according to Eden, between 1765 and 1780, their wages began to fall below the minimum, and to be supplemented by official poor-law relief. Their

wages, he says, 'were not more than enough for the absolute necessaries of life.'" (p 680)

The process of theft of common land and of the small plots belonging to the peasants continued through the 18th century. Writers of the time described the nature of the process.

As early as 1724, *Daniel Defoe* had noted that, on estates near London, families of local gentry were being displaced by families enriched in business; and *Cobbett*, the writer who admired *Squire Coke of Holkham*, felt very differently about the people from London whom he termed "*the Squires of Change Alley*". Parliament passed a series of so called *Enclosure Acts*. A few such Acts had been obtained under *Queen Anne* and *George I*, and over two hundred during *George II's* reign, but even at the accession of *George III* in 1760, the open field system still existed in half the counties of England, mostly in the Eastern counties, bounded by the East Riding in Yorkshire, Norfolk, and Wiltshire. During *George III's* reign some 3,200 *Enclosure Acts* were obtained, including, in 1801, a *General Enclosure Act*, which simplified the procedure.

On the face of it these Acts seemed fair. Land in a village was supposed to be the subject of enclosure only if the owners of four-fifths of the area of property to be enclosed were in favour. But there was an in built problem here for the small peasant. The landed aristocracy were the biggest owners of landed property and, depending upon how the boundaries of the land to be enclosed were drawn, their individual land ownership could of itself ensure that the figure of four-fifths was achieved. In addition, the increase in the number of capitalist farmers, previously mentioned, meant that these new

elements, whose capitalistic methods of farming were only possible on large enclosed fields, were bound to vote for enclosure, and they themselves had larger areas of land ownership than the average peasant, because it had been bought from the former squirearchy, whose economic fortunes had been in decline. As many of the landlords were themselves suffering financially, it was in their interest to have the land enclosed, in order to rent it out to capitalist farmers, who would pay more rent. Secondly, in order to have a vote, it was necessary to prove that you were, in fact, a land owner. Most of the small peasant farms had passed down through generations of the peasant's family, and no written documentation existed to prove such ownership. This was not just a problem at this stage, but at a later stage when, after enclosure, and the replacement of the old strip of land, a new enclosed field was to be allotted. If you could not prove ownership, you got no new allocation. Moreover, in many cases, even where peasants did produce title deeds to their land, they were simply torn up, so that no proof existed, and the landlord then appropriated the land.

Even if these hurdles were overcome, the small peasant farmer was at a massive disadvantage. The compact piece of land he received after enclosure had to compensate him not just for his arable strip, but also for his former use of the common land, which was now appropriated by the landlord. Not only did he lose the use of this land (which he like the other villagers had previously owned collectively) on which to graze his cattle, etc., but he also lost his source of fuel. Once an Enclosure Act had been passed, the Government sent in Commissioners to undertake the process. Of course, who were these Commissioners, ordinary peasants? Not on your life. There

were normally three of them, and they were peers, gentlemen, clergymen, or farmers. And of course their fees and travelling expenses (which, with repeated trips back to London, were considerable given the cost of transport at the time) had to be paid, and this cost fell far more heavily in proportion on the pockets of the peasant than it did on the large landowner. Nor did the cost end there. The hedges or fences were also inordinately expensive for the peasant, as was the cost of the award, which had to be paid by each person who benefited.

Even *Arthur Young*, who had for years advocated enclosure, was forced to acknowledge the “*knavery of commissioners and attorneys*” acting under the Enclosure Acts, and stated that “*by nineteen out of twenty Enclosure Acts the poor are injured, and most grossly.*” *Oliver Goldsmith* in his poem, *The Deserted Village*, lamented,

“*A bold peasantry, their country’s pride,*

When once destroyed can never be supplied.”

Those that managed to hang on soon found that their other means of livelihood was soon removed. Factory-produced goods soon replaced hand spinning and other crafts. In addition, new *Game Laws* were introduced that were extremely harsh. Where once the common land was a free source of food, in the form of game, these new laws meant that the penalty, for example, of being found, on open land, with nets for rabbiting, was seven years transportation. But, the greatest crime was the actual theft of the peasants’ land, which the Enclosure Acts themselves constituted.

Some small freeholders, who had been the most independent type of yeoman, because being owners of their land they need

obey no squire, kept their farms as long as prices were high, but at the end of the *French Wars*, at the beginning of the 19th century, many of these too had to sell up and move to the towns as agricultural prices fell.

A similar process occurred in France, Belgium, and Western Germany during the 17th. and 18th. centuries.

“In the 19th century, the very memory of the connexion between the agricultural labourer and the communal property had, of course, vanished. To say nothing of more recent times, have the agricultural population received a farthing of compensation for the 3,511,770 acres of common land which between 1801 and 1831 were stolen from them and by parliamentary devices presented to the landlords by the landlords?” (p 681)

All of these thefts of land result in the peasants being cleared from it, and the agricultural labourers, who take their place, are then confined to the substandard hovels previously discussed.

The clearest example of those thefts and clearances is provided by the theft of clan land in Scotland and Ireland, and the massive clearances that occurred there.

In Scotland and Ireland, the land was owned collectively by the clans. Each clan chief had no individual right to this property, yet that was what was brought about with the support of the British state.

“This revolution, which began in Scotland after the last rising of the followers of the Pretender, can be followed through its first phases in the writings of Sir James Steuart and James Anderson. In the 18th century the hunted-out Gaels were forbidden to emigrate from the country, with a view to driving

them by force to Glasgow and other manufacturing towns. As an example of the method obtaining in the 19th century, the “clearing” made by the Duchess of Sutherland will suffice here. This person, well instructed in economy, resolved, on entering upon her government, to effect a radical cure, and to turn the whole country, whose population had already been, by earlier processes of the like kind, reduced to 15,000, into a sheep-walk. From 1814 to 1820 these 15,000 inhabitants, about 3,000 families, were systematically hunted and rooted out. All their villages were destroyed and burnt, all their fields turned into pasturage. British soldiers enforced this eviction, and came to blows with the inhabitants. One old woman was burnt to death in the flames of the hut, which she refused to leave. Thus this fine lady appropriated 794,000 acres of land that had from time immemorial belonged to the clan. She assigned to the expelled inhabitants about 6,000 acres on the sea-shore — 2 acres per family. The 6,000 acres had until this time lain waste, and brought in no income to their owners. The Duchess, in the nobility of her heart, actually went so far as to let these at an average rent of 2s. 6d. per acre to the clansmen, who for centuries had shed their blood for her family. The whole of the stolen clanland she divided into 29 great sheep farms, each inhabited by a single family, for the most part imported English farm-servants. In the year 1835 the 15,000 Gaels were already replaced by 131,000 sheep. The remnant of the aborigines flung on the sea-shore tried to live by catching fish. They became amphibious and lived, as an English author says, half on land and half on water, and withal only half on both.

But the brave Gaels must expiate yet more bitterly their idolatry, romantic and of the mountains, for the “great men” of the clan. The smell of their fish rose to the noses of the great

men. They scented some profit in it, and let the sea-shore to the great fishmongers of London. For the second time the Gaels were hunted out.” (p 682-3)

Chapter 28 - Bloody Legislation against the Expropriated, from the End of the 15th Century. Forcing down of Wages by Acts of Parliament

All of the retainers, thrown from their former employment, all of those left rootless by the dissolution of the monasteries, all of the peasants, forcibly evicted from their land, were far too numerous for the needs of the small-scale manufacture that was beginning. All of these people, removed from their only means of subsistence, by force, were now cast out, into the land, as vagabonds, whose only means of staying alive was through begging and criminal activity.

Against all these people, thrust into this position for no fault of their own, are then introduced a series of laws. This process happened not just in Britain, but across Western Europe, from the end of the 15th century.

Marx details this legislation, in England, from the time of *Henry VII*. It includes punishment for begging including whipping, and having part of an ear cut off, and the turning of the workless into slaves by anyone who denounces them. These slaves could be branded with an "S" on their forehead. If the slave ran away three times, they could be executed.

"This kind of parish slave was kept up in England until far into the 19th century under the name of "roundsmen."" (p 687)

Under *Elizabeth I*, unlicensed beggars were to be flogged and branded and ultimately executed.

“Thus were the agricultural people, first forcibly expropriated from the soil, driven from their homes, turned into vagabonds, and then whipped, branded, tortured by laws grotesquely terrible, into the discipline necessary for the wage system.” (p 688)

But, for capitalist production, it is not enough that capital exist at one pole and forced wage labour at the other. The workers must accept their relation to capital as being just as normal as the former subordination of the serf to the lord of the manor.

“The advance of capitalist production develops a working class, which by education, tradition, habit, looks upon the conditions of that mode of production as self-evident laws of Nature. The organisation of the capitalist process of production, once fully developed, breaks down all resistance. The constant generation of a relative surplus-population keeps the law of supply and demand of labour, and therefore keeps wages, in a rut that corresponds with the wants of capital. The dull compulsion of economic relations completes the subjection of the labourer to the capitalist. Direct force, outside economic conditions, is of course still used, but only exceptionally. In the ordinary run of things, the labourer can be left to the “natural laws of production,” i.e., to his dependence on capital, a dependence springing from, and guaranteed in perpetuity by, the conditions of production themselves.” (p 689)

But, that is not at all the case, in respect of the actual genesis of capitalist production. The bourgeoisie that, once secure in its position, enthuses over *Free Trade*, is quick to use the power of the state for the purposes of control.

“The bourgeoisie, at its rise, wants and uses the power of the state to “regulate” wages, i.e., to force them within the limits suitable for surplus-value making, to lengthen the working-day and to keep the labourer himself in the normal degree of dependence. This is an essential element of the so-called primitive accumulation.” (p 689)

But, at this stage, wage labourers still form a tiny element within society. Moreover, their position is, to a degree, protected by the fact that these workers continue to have familial ties to peasant producers or workers employed in the guilds. That has continued in Europe until today. Until quite recently, many German workers continued to derive part of their income from a smallholding. One reason that the current depression, in Spain, has not caused even greater misery and social upheaval is that workers have been able to rely on support from families still based on the land, or have returned to the land themselves.

“In country and town master and workmen stood close together socially. The subordination of labour to capital was only formal — i.e., the mode of production itself had as yet no specific capitalistic character. Variable capital preponderated greatly over constant. The demand for wage labour grew, therefore, rapidly with every accumulation of capital, whilst the supply of wage labour followed but slowly. A large part of the national product, changed later into a fund of capitalist accumulation, then still entered into the consumption-fund of the labourer.” (p 689)

Labour laws, which began, in England, with the *Statute of Labourers*, under *Edward III*, in 1349, are then, from the beginning, aimed at forcing the workers to work for a

minimum number of hours, and to limit their wages. Similar legislation is enacted in Europe.

“It was forbidden, under pain of imprisonment, to pay higher wages than those fixed by the statute, but the taking of higher wages was more severely punished than the giving them. [So also in Sections 18 and 19 of the Statute of Apprentices of Elizabeth, ten days’ imprisonment is decreed for him that pays the higher wages, but twenty-one days for him that receives them.] A statute of 1360 increased the penalties and authorised the masters to extort labour at the legal rate of wages by corporal punishment. All combinations, contracts, oaths, &c., by which masons and carpenters reciprocally bound themselves, were declared null and void. Coalition of the labourers is treated as a heinous crime from the 14th century to 1825, the year of the repeal of the laws against Trades’ Unions. The spirit of the Statute of Labourers of 1349 and of its offshoots comes out clearly in the fact, that indeed a maximum of wages is dictated by the State, but on no account a minimum.” (p 690)

In the 16th century, workers' position was even worse. Money wages rose, but the value of money fell, inflating prices, so real wages fell. Once the bourgeoisie is secure, the laws against trades unions are no longer required, and, in large part, repealed in 1825. But, as we know, to this day, the state stands ready to intervene, both by legal force or physical force, to limit the ability of workers to defend their interests.

Chapter 29 - Genesis of the Capitalist Farmer

In the previous chapter, Marx had described how the first proletarians had been created, as a result of force, and how the state had been employed to ensure that wages were minimised. Now Marx turns to the creation of the first capitalists, in particular the capitalist farmers.

The process of expropriation of the small peasants creates a smaller number of larger landowners. This in itself does not explain the development of capitalist farming. As seen previously, some of these large landowners simply turned over their estates to sheep, and then some to game for hunting. In order to understand the development of the capitalist farmer, it is necessary to look at the evolution of other social forces.

“The serfs, as well as the free small proprietors, held land under very different tenures, and were therefore emancipated under very different economic conditions. In England the first form of the farmer is the bailiff, himself a serf. His position is similar to that of the old Roman villicus, only in a more limited sphere of action. During the second half of the 14th century he is replaced by a farmer, whom the landlord provided with seed, cattle and implements. His condition is not very different from that of the peasant. Only he exploits more wage labour.” (p 694)

For a time, he shares the means of production with the landlord, each sharing the output, on the basis of a contract. But, in England, this is soon replaced with the payment of money rent, as the farmer provides their own means of

production and extracts surplus value, through the employment of wage labour.

But, the scale of operation here limits the degree to which the farmer can accumulate. On the one hand, the farmer continues to rely on their own labour alongside the employment of wage labourers. On the other, the wage labourers, themselves, are only dependent for part of their income on wages. They continue to produce some of their own food etc., via their own means of production.

It is the agricultural revolution, that begins in the last third of the 15th century, which transforms this situation. The gradual usurpation of common land means that the cattle that grazed on this land, also comes into the hands of these farmers at little cost. This also provides them with a supply of manure to improve their soils. Their ability to enclose their own larger farms, as opposed to the open strip system, means the crops are protected, and can be cultivated by more efficient methods.

But, these farmers also benefited from a piece of historical good fortune. In the 16th century, contracts for farms frequently lasted for 99 years.

“The progressive fall in the value of the precious metals, and therefore of money, brought the farmers golden fruit. Apart from all the other circumstances discussed above, it lowered wages. A portion of the latter was now added to the profits of the farm. The continuous rise in the price of corn, wool, meat, in a word of all agricultural produce, swelled the money capital of the farm without any action on his part, whilst the rent he paid (being calculated on the old value of money) diminished in reality. Thus they grew rich at the expense both

of their labourers and their landlords. No wonder, therefore, that England, at the end of the 16th century, had a class of capitalist farmers, rich, considering the circumstances of the time.” (p 695)

Chapter 30 - Reaction of the Agricultural Revolution on Industry. Creation of the Home-Market for Industrial Capital

In the towns, the regulations of the guilds restricted the ability of the guild masters to simply become capitalists, and of the journeymen to become proletarians. But, the expropriation of the peasants meant that a constant supply of wage workers came to the town unconnected to these restrictions. Marx compares the process to cosmological processes.

“The thinning-out of the independent, self-supporting peasants not only brought about the crowding together of the industrial proletariat, in the way that Geoffrey Saint Hilaire explained the condensation of cosmical matter at one place, by its rarefaction at another.” (p 697)

Now fewer people were employed on the land, but the revolution in farming, made possible by larger farms, meant that output increased. But, this process has wider implications!

“With the setting free of a part of the agricultural population, therefore, their former means of nourishment were also set free. They were now transformed into material elements of variable capital. The peasant, expropriated and cast adrift, must buy their value in the form of wages, from his new master, the industrial capitalist. That which holds good of the means of subsistence holds with the raw materials of industry dependent upon home agriculture. They were transformed into an element of constant capital. Suppose, e.g., a part of the Westphalian

peasants, who, at the time of Frederick II, all spin flax, forcibly expropriated and hunted from the soil; and the other part that remained, turned into day labourers of large farmers. At the same time arise large establishments for flax-spinning and weaving, in which the men “set free” now work for wages. The flax looks exactly as before. Not a fibre of it is changed, but a new social soul has popped into its body. It forms now a part of the constant capital of the master manufacturer. Formerly divided among a number of small producers, who cultivated it themselves and with their families spun it in retail fashion, it is now concentrated in the hand of one capitalist, who sets others to spin and weave it for him. The extra labour expended in flax-spinning realised itself formerly in extra income to numerous peasant families, or maybe, in Frederick II’s time, in taxes pour le roi de Prusse. It realises itself now in profit for a few capitalists. The spindles and looms, formerly scattered over the face of the country, are now crowded together in a few great labour-barracks, together with the labourers and the raw material. And spindles, looms, raw material, are now transformed from means of independent existence for the spinners and weavers, into means for commanding them and sucking out of them unpaid labour. One does not perceive, when looking at the large manufactories and the large farms, that they have originated from the throwing into one of many small centres of production, and have been built up by the expropriation of many small independent producers. Nevertheless, the popular intuition was not at fault. In the time of Mirabeau, the lion of the Revolution, the great manufactories were still called manufactures reunies, workshops thrown into one, as we speak of fields thrown into one.” (p 697-8)

In other words, the same process which dispossesses the self-sufficient peasants of their means of production, and makes them available to be employed as wage labourers, also creates a home market for all those goods the peasant previously produced for themselves, but now needs to buy for their subsistence. The means of production, previously owned by the self-sufficient peasants, have now been pulled together, in the same way that cosmic material is pulled together to form stars, planets, and galaxies. The now concentrated means of production, now in capitalist hands, therefore, finds both the workers it needs, and a market for its production.

“Formerly, the peasant family produced the means of subsistence and the raw materials, which they themselves, for the most part, consumed. These raw materials and means of subsistence have now become commodities; the large farmer sells them, he finds his market in manufactures. Yarn, linen, coarse woollen stuffs — things whose raw materials had been within the reach of every peasant family, had been spun and woven by it for its own use — were now transformed into articles of manufacture, to which the country districts at once served for markets. The many scattered customers, whom stray artisans until now had found in the numerous small producers working on their own account, concentrate themselves now into one great market provided for by industrial capital. Thus, hand in hand with the expropriation of the self-supporting peasants, with their separation from their means of production, goes the destruction of rural domestic industry, the process of separation between manufacture and agriculture. And only the destruction of rural domestic industry can give the internal market of a country that extension and consistence which the capitalist mode of production requires.” (p 699-700)

But, manufacture carries out this process incompletely. It continues to be based on handicraft production in the towns, and domestic production in rural areas, which provide manufacture with its raw materials. Only with the development of machine industry is the basis of industrial production – spinning, weaving – in the village completely undermined. At this point, capitalist agriculture can take over.

Chapter 31 - Genesis of the Industrial Capitalist

The evolution of the capitalist farmer proceeds over centuries. The creation of the industrial capitalist is much more rapid, though some may have evolved from being guild masters, artisans and even workers.

“In the infancy of capitalist production, things often happened as in the infancy of medieval towns, where the question, which of the escaped serfs should be master and which servant, was in great part decided by the earlier or later date of their flight. The snail’s pace of this method corresponded in no wise with the commercial requirements of the new world market that the great discoveries of the end of the 15th century created. But the middle ages had handed down two distinct forms of capital, which mature in the most different economic social formations, and which before the era of the capitalist mode of production, are considered as capital quand même — usurer’s capital and merchant’s capital.” (p 702)

As Marx has previously stated, the dominance of these two forms of capital is inimical to the existence of capitalism proper. Both act as a drain on surplus value that could be used for accumulation. From the Middle Ages, various laws are passed, across Europe, restricting the level of interest rates that can be charged. The quote Marx previously gave from Martin Luther, indicates the extent to which these kinds of capitalists were loathed. Shakespeare's *“Merchant of Venice”* is another example.

“The money capital formed by means of usury and commerce was prevented from turning into industrial capital, in the country by the feudal constitution, in the towns by the guild organisation. These fetters vanished with the dissolution of feudal society, with the expropriation and partial eviction of the country population. The new manufactures were established at sea-ports, or at inland points beyond the control of the old municipalities and their guilds. Hence in England an embittered struggle of the corporate towns against these new industrial nurseries.” (p 703)

This provides a glimpse of the way this bourgeoisie does not just grow the capitalist mode of production, within feudal society, but also, at the same time, develops its own geopolitical strongholds. Within these strongholds, the bourgeoisie develops its own political and state structures, arising from the economic base, long before any struggle for state power itself is undertaken.

The further elements of primitive accumulation, previously discussed, of piracy, slave trading, and the colonisation and plunder of foreign lands, then all provide impetus to this process.

“The different momenta of primitive accumulation distribute themselves now, more or less in chronological order, particularly over Spain, Portugal, Holland, France, and England. In England at the end of the 17th century, they arrive at a systematical combination, embracing the colonies, the national debt, the modern mode of taxation, and the protectionist system. These methods depend in part on brute force, e.g., the colonial system. But, they all employ the power of the State, the concentrated and organised force of society, to

hasten, hot-house fashion, the process of transformation of the feudal mode of production into the capitalist mode, and to shorten the transition. Force is the midwife of every old society pregnant with a new one. It is itself an economic power.” (p 703)

Of Holland, which was the main capitalist power of the 17th Century, Thomas Stamford Raffles, Lieutenant Governor of Java, wrote, it,

“is one of the most extraordinary relations of treachery, bribery, massacre, and meanness”. (p 704)

The same was true of the activities of the East India Company.

“But even in the colonies properly so called, the Christian character of primitive accumulation did not belie itself. Those sober virtuosi of Protestantism, the Puritans of New England, in 1703, by decrees of their assembly set a premium of £40 on every Indian scalp and every captured red-skin: in 1720 a premium of £100 on every scalp; in 1744, after Massachusetts-Bay had proclaimed a certain tribe as rebels, the following prices: for a male scalp of 12 years and upwards £100 (new currency), for a male prisoner £105, for women and children prisoners £50, for scalps of women and children £50. Some decades later, the colonial system took its revenge on the descendants of the pious pilgrim fathers, who had grown seditious in the meantime. At English instigation and for English pay they were tomahawked by red-skins. The British Parliament proclaimed bloodhounds and scalping as “means that God and Nature had given into its hand.”” (p 705)

The colonies played an important role in the process of primary accumulation and transition from feudalism, and its relation to

merchant and money capital.

“The colonies secured a market for the budding manufactures, and, through the monopoly of the market, an increased accumulation. The treasures captured outside Europe by undisguised looting, enslavement, and murder, floated back to the mother-country and were there turned into capital. Holland, which first fully developed the colonial system, in 1648 stood already in the acme of its commercial greatness. It was,

“in almost exclusive possession of the East Indian trade and the commerce between the south-east and north-west of Europe. Its fisheries, marine, manufactures, surpassed those of any other country. The total capital of the Republic was probably more important than that of all the rest of Europe put together.” *Gulich forgets to add that by 1648, the people of Holland were more over-worked, poorer and more brutally oppressed than those of all the rest of Europe put together.”* (p 705-6)

Under feudalism, the merchants and money capitalists, like the landlords, live on a form of rent, in the sense that all secure a share of the surplus product of the producers. The landlords obtain their share by feudal right, and later on the basis that they are lending out their land, just as the money capitalists are lending out their money. The merchant obtains their surplus from buying low and selling high.

The merchants, especially through colonialism, both obtain control over foreign territories – the East India Company, which essentially colonised India and other parts of Asia, as well as the Hudson Bay Company, which did the same thing in North America, had their own private armies, and operated

under a Royal Charter – which meant landlords now had vast new areas from which they could extract rent, and also made available whole new ranges of products that those feudal rulers sought after, as their consumption increased.

The money capitalists were also able to lend money for ventures in the colonies, which were a lucrative source of additional profits. But, contrary to Lenin's argument, in *“Imperialism, The Highest Stage Of Capitalism”*, it is to this period of *“Mercantilism”* rather than the period of *Monopoly Capitalism* that colonialism can be attributed. It is during this period that the world is divided up into these colonial empires.

At this time, industrial capitalism has not yet developed – colonialism is one of the means by which the primitive accumulation takes place that makes the industrialisation possible. And, every country that industrialises uses it, one way or another.

The United States, for example, turned the southern Confederate States into essentially internal colonies, whilst Russia did the same thing with Siberia.

“Today industrial supremacy implies commercial supremacy. In the period of manufacture properly so called, it is, on the other hand, the commercial supremacy that gives industrial predominance. Hence the preponderant rôle that the colonial system plays at that time. It was “the strange God” who perched himself on the altar cheek by jowl with the old Gods of Europe, and one fine day with a shove and a kick chucked them all of a heap. It proclaimed surplus-value making as the sole end and aim of humanity.” (p 706)

Another means by which primary accumulation was achieved was via the state. The idea of state financing is not something that arose with Keynesianism. Although the Liberals and Libertarians would have us believe that the 18th and 19th centuries were golden eras of freedom and absence of state intervention, nothing could be further from the truth. The state was an active means of bringing about primary accumulation, and the growth of the *National Debt*, during this period, was the means by which this was done.

Today, the Liberal-Tories bemoan the fact that debt to GDP stands at 70%, but in 1700, as this process of primary accumulation proceeds, it stood at 250%!!!

Its worth quoting at length what Marx wrote about it in this context 150 years ago, given current discussion.

“The system of public credit, i.e., of national debts, whose origin we discover in Genoa and Venice as early as the Middle Ages, took possession of Europe generally during the manufacturing period. The colonial system with its maritime trade and commercial wars served as a forcing-house for it. Thus it first took root in Holland. National debts, i.e., the alienation of the state – whether despotic, constitutional or republican – marked with its stamp the capitalistic era. The only part of the so-called national wealth that actually enters into the collective possessions of modern peoples is their national debt. Hence, as a necessary consequence, the modern doctrine that a nation becomes the richer the more deeply it is in debt. Public credit becomes the credo of capital. And with the rise of national debt-making, want of faith in the national debt takes the place of the blasphemy against the Holy Ghost, which may not be forgiven.”

The public debt becomes one of the most powerful levers of primitive accumulation. As with the stroke of an enchanter's wand, it endows barren money with the power of breeding and thus turns it into capital, without the necessity of its exposing itself to the troubles and risks inseparable from its employment in industry or even in usury. The state creditors actually give nothing away, for the sum lent is transformed into public bonds, easily negotiable, which go on functioning in their hands just as so much hard cash would. But further, apart from the class of lazy annuitants thus created, and from the improvised wealth of the financiers, middlemen between the government and the nation – as also apart from the tax-farmers, merchants, private manufacturers, to whom a good part of every national loan renders the service of a capital fallen from heaven – the national debt has given rise to joint-stock companies, to dealings in negotiable effects of all kinds, and to agiotage, in a word to stock-exchange gambling and the modern bankocracy.

At their birth the great banks, decorated with national titles, were only associations of private speculators, who placed themselves by the side of governments, and, thanks to the privileges they received, were in a position to advance money to the State. Hence the accumulation of the national debt has no more infallible measure than the successive rise in the stock of these banks, whose full development dates from the founding of the Bank of England in 1694. The Bank of England began with lending its money to the Government at 8%; at the same time it was empowered by Parliament to coin money out of the same capital, by lending it again to the public in the form of banknotes. It was allowed to use these notes for discounting bills, making advances on commodities, and for buying the

precious metals. It was not long ere this credit-money, made by the bank itself, became the coin in which the Bank of England made its loans to the State, and paid, on account of the State, the interest on the public debt. It was not enough that the bank gave with one hand and took back more with the other; it remained, even whilst receiving, the eternal creditor of the nation down to the last shilling advanced. Gradually it became inevitably the receptacle of the metallic hoard of the country, and the centre of gravity of all commercial credit. What effect was produced on their contemporaries by the sudden uprising of this brood of bankocrats, financiers, rentiers, brokers, stock-jobbers, &c., is proved by the writings of that time, e.g., by Bolingbroke's." (p706-7)

But, then as now, these huge debts, run up in the interests of capital, do not fall on capital to repay. It is society at large that must cover these debts, in redemption payments and interest. Then as now, of course, it is not capital that pays the taxes that make these repayments possible. The burden of the taxes falls on the producers.

"As the national debt finds its support in the public revenue, which must cover the yearly payments for interest, &c., the modern system of taxation was the necessary complement of the system of national loans. The loans enable the government to meet extraordinary expenses, without the tax-payers feeling it immediately, but they necessitate, as a consequence, increased taxes. On the other hand, the raising of taxation caused by the accumulation of debts contracted one after another, compels the government always to have recourse to new loans for new extraordinary expenses. Modern fiscality, whose pivot is formed by taxes on the most necessary means of subsistence (thereby increasing their price), thus contains

within itself the germ of automatic progression. Overtaxation is not an incident, but rather a principle. In Holland, therefore, where this system was first inaugurated, the great patriot, DeWitt, has in his "Maxims" extolled it as the best system for making the wage labourer submissive, frugal, industrious, and overburdened with labour. The destructive influence that it exercises on the condition of the wage labourer concerns us less however, here, than the forcible expropriation, resulting from it, of peasants, artisans, and in a word, all elements of the lower middle class. On this there are not two opinions, even among the bourgeois economists. Its expropriating efficacy is still further heightened by the system of protection, which forms one of its integral parts." (p 707-8)

Alongside this state intervention in relation to debt and fiscal policy, as Marx says, also comes the policy of *Protectionism*.

"The system of protection was an artificial means of manufacturing manufacturers, of expropriating independent labourers, of capitalising the national means of production and subsistence, of forcibly abbreviating the transition from the medieval to the modern mode of production. The European states tore one another to pieces about the patent of this invention, and, once entered into the service of the surplus-value makers, did not merely lay under contribution in the pursuit of this purpose their own people, indirectly through protective duties, directly through export premiums. They also forcibly rooted out, in their dependent countries, all industry, as, e.g., England did. with the Irish woollen manufacture. On the continent of Europe, after Colbert's example, the process was much simplified. The primitive industrial capital, here, came in part directly out of the state treasury. "Why," cries Mirabeau, "why go so far to seek the cause of the

manufacturing glory of Saxony before the war? 180,000,000 of debts contracted by the sovereigns!”

Colonial system, public debts, heavy taxes, protection, commercial wars, &c., these children of the true manufacturing period, increase gigantically during the infancy of Modern Industry.” (p 708-9)

Chapter 32 - Historical Tendency Of Capitalist Accumulation

The basis of the primary accumulation of capital resolves itself into the expropriation of the direct producers, i.e. of the private property of tens of thousands of peasants, and its concentration in the hands of a relatively few capitalists.

“Private property, as the antithesis to social, collective property, exists only where the means of labour and the external conditions of labour belong to private individuals. But according as these private individuals are labourers or not labourers, private property has a different character. The numberless shades, that it at first sight presents, correspond to the intermediate stages lying between these two extremes. The private property of the labourer in his means of production is the foundation of petty industry, whether agricultural, manufacturing, or both; petty industry, again, is an essential condition for the development of social production and of the free individuality of the labourer himself. Of course, this petty mode of production exists also under slavery, serfdom, and other states of dependence. But it flourishes, it lets loose its whole energy, it attains its adequate classical form, only where the labourer is the private owner of his own means of labour set in action by himself: the peasant of the land which he cultivates, the artisan of the tool which he handles as a virtuoso. This mode of production presupposes parcelling of the soil and scattering of the other means of production.” (p 712)

It is this classical form of petty production that gives rise to the ideas of individualism and liberty (i.e. to be left free of

interference by the state) of the 18th century. *Rousseau*, who epitomises this Libertarian ideology, for example, based his model on the small self-sufficient, Swiss peasant community he was familiar with. It is also no wonder that these kinds of ideas had, and have, a powerful grip in the United States, which developed from these kinds of roots.

But, this kind of individualistic, petty production is nevertheless doomed. It is, by its nature, limited and inefficient.

“As it excludes the concentration of these means of production, so also it excludes cooperation, division of labour within each separate process of production, the control over, and the productive application of the forces of Nature by society, and the free development of the social productive powers. It is compatible only with a system of production, and a society, moving within narrow and more or less primitive bounds. To perpetuate it would be, as Pecqueur rightly says, “to decree universal mediocrity”. At a certain stage of development, it brings forth the material agencies for its own dissolution. From that moment new forces and new passions spring up in the bosom of society; but the old social organization fetters them and keeps them down.” (p 713-4)

The bourgeoisie is forced to confront those fetters and to destroy them, in order to ensure its own development. As its economic power grows, in the towns, so those towns also form the political strongholds for the bourgeoisie, where it creates its own state structures, in the form of the *Municipal Authorities*, which it uses to back up its economic interest.

“Its annihilation, the transformation of the individualized and scattered means of production into socially concentrated ones, of the pigmy property of the many into the huge property of the few, the expropriation of the great mass of the people from the soil, from the means of subsistence, and from the means of labour, this fearful and painful expropriation of the mass of the people forms the prelude to the history of capital. It comprises a series of forcible methods, of which we have passed in review only those that have been epoch-making as methods of the primitive accumulation of capital. The expropriation of the immediate producers was accomplished with merciless Vandalism, and under the stimulus of passions the most infamous, the most sordid, the pettiest, the most meanly odious. Self-earned private property, that is based, so to say, on the fusing together of the isolated, independent labouring individual with the conditions of his labour, is supplanted by capitalistic private property, which rests on exploitation of the nominally free labour of others, i.e., on wage labour.” (p 714)

Once capital has developed, beyond a certain point, this process is increased qualitatively, as the bourgeoisie is able to use, not only its economic power, but also its state power, to expropriate the direct producers. And, once that process has been completed, then, as described earlier, it is no longer the direct producers who are expropriated, but also the small capitalists, via the process of concentration and centralisation of capital.

“This expropriation is accomplished by the action of the immanent laws of capitalistic production itself, by the centralization of capital. One capitalist always kills many. Hand in hand with this centralization, or this expropriation of many capitalists by few, develop, on an ever-extending scale,

the cooperative form of the labour process, the conscious technical application of science, the methodical cultivation of the soil, the transformation of the instruments of labour into instruments of labour only usable in common, the economizing of all means of production by their use as means of production of combined, socialized labour, the entanglement of all peoples in the net of the world market, and with this, the international character of the capitalistic regime. Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself. The monopoly of capital becomes a fetter upon the mode of production, which has sprung up and flourished along with, and under it. Centralization of the means of production and socialization of labour at last reach a point where they become incompatible with their capitalist integument. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated.” (p 714-5)

As a result of 100 years of statism, and particularly of Stalinism, the meaning of this passage has become completely distorted. What Marx is describing here is the death knell not of capitalism per se, but of a particular form of capitalism, i.e. of "*capitalist private property*". Capitalist private property is that early form of capitalism, where firms were largely owned by private individuals and families. The process of concentration and centralisation, in which "*The monopoly of capital*" in the hands of a "*diminishing number of the magnates*

of capital", had its limits. To go beyond those limits, capital itself had to break the monopoly ownership of firms by private individuals, and put in its place socialised, or collectively owned, but still **CAPITALIST** property.

It does so by replacing the old form of individual and family owned businesses with *Joint Stock Companies*, open to ownership to all who could afford to buy shares, with their own resources, or by using credit, as well as in the form of *Co-operatives*. It is not the expropriation of the expropriators, by some kind of top down process, carried out by the state, that Marx is describing here, but the expropriation of private capitalist property by socialised capitalist property!

This process goes along with the abolition of the social function of the capitalists, themselves, and their replacement, in that role, by a class of professional managers, who form a part of a growing middle class, which, in itself, is one of the sources of buyers of these shares. Its partly in this regard that Marx describes the joint stock companies as resolving the antagonism between capital and labour negatively, because this ownership of shares continues on an individual basis, and the ownership of shares themselves becomes concentrated in the hands of a rich few. He says, in *Volume III, Chapter 27*,

"III. Formation of stock companies. Thereby:

1) An enormous expansion of the scale of production and of enterprises, that was impossible for individual capitals. At the same time, enterprises that were formerly government enterprises, become public.

2. The capital, which in itself rests on a social mode of production and presupposes a social concentration of

means of production and labour-power, is here directly endowed with the form of social capital (capital of directly associated individuals) as distinct from private capital, and its undertakings assume the form of social undertakings as distinct from private undertakings. It is the abolition of capital as private property within the framework of capitalist production itself.

3) Transformation of the actually functioning capitalist into a mere manager, administrator of other people's capital, and of the owner of capital into a mere owner, a mere money-capitalist...

This result of the ultimate development of capitalist production is a necessary transitional phase towards the reconversion of capital into the property of producers, although no longer as the private property of the individual producers, but rather as the property of associated producers, as outright social property. On the other hand, the stock company is a transition toward the conversion of all functions in the reproduction process which still remain linked with capitalist property, into mere functions of associated producers, into social functions."

He goes on to elaborate the role of credit in this process.

"Conceptions which have some meaning on a less developed stage of capitalist production, become quite meaningless here. Success and failure both lead here to a centralisation of capital, and thus to expropriation on the most enormous scale. Expropriation extends here from the direct producers to the smaller and the medium-sized capitalists themselves. It is the point of departure for the capitalist mode of production; its

accomplishment is the goal of this production. In the last instance, it aims at the expropriation of the means of production from all individuals. With the development of social production the means of production cease to be means of private production and products of private production, and can thereafter be only means of production in the hands of associated producers, i.e., the latter's social property, much as they are their social products. However, this expropriation appears within the capitalist system in a contradictory form, as appropriation of social property by a few; and credit lends the latter more and more the aspect of pure adventurers. Since property here exists in the form of stock, its movement and transfer become purely a result of gambling on the stock exchange, where the little fish are swallowed by the sharks and the lambs by the stock-exchange wolves. There is antagonism against the old form in the stock companies, in which social means of production appear as private property; but the conversion to the form of stock still remains ensnared in the trammels of capitalism; hence, instead of overcoming the antithesis between the character of wealth as social and as private wealth, the stock companies merely develop it in a new form."

When Marx speaks above of "*The monopoly of capital*" becoming "*a fetter upon the mode of production*", he is not talking about a monopoly in the sense we understand capitalist monopoly today - and he could not have meant that, because such monopolies did not exist at the time he was writing! - but of that specific monopoly, in the hands of individuals, as opposed to the collective ownership that arises, in its place, in the form of those joint stock companies, and of co-operatives.

In *Volume III of Capital*, Marx describes this process of expropriation in similar terms to that described in relation to the expropriation of the direct producers. It is private capitalist ownership which disappears. Engels describes what this means in his “*Critique Of The Erfurt Programme*”, where he argues that, by the end of the 19th century, this private capitalist property had already come to an end. It had been replaced by collectively owned capitalist property.

“What is capitalist private production? Production by separate entrepreneurs, which is increasingly becoming an exception. Capitalist production by joint-stock companies is no longer private production but production on behalf of many associated people. And when we pass on from joint-stock companies to trusts, which dominate and monopolise whole branches of industry, this puts an end not only to private production but also to planlessness.”

Marx makes the same point in *Vol. III of Capital* (edited by Engels, and in this section, with none of his usual detailed notes, to suggest that what Marx had written earlier had been overtaken by events). Explaining how private capitalist ownership is transformed into collective ownership, Marx writes,

“The co-operative factories of the labourers themselves represent within the old form the first sprouts of the new, although they naturally reproduce, and must reproduce, everywhere in their actual organisation all the shortcomings of the prevailing system. But the antithesis between capital and labour is overcome within them, if at first only by way of making the associated labourers into their own capitalist, i.e., by enabling them to use the means of production for the

employment of their own labour. They show how a new mode of production naturally grows out of an old one, when the development of the material forces of production and of the corresponding forms of social production have reached a particular stage. Without the factory system arising out of the capitalist mode of production there could have been no co-operative factories. Nor could these have developed without the credit system arising out of the same mode of production. The credit system is not only the principal basis for the gradual transformation of capitalist private enterprises. into capitalist stock companies, but equally offers the means for the gradual extension of co-operative enterprises on a more or less national scale. The capitalist stock companies, as much as the co-operative factories, should be considered as transitional forms from the capitalist mode of production to the associated one, with the only distinction that the antagonism is resolved negatively in the one and positively in the other.”

But, as the initial development of capitalist production is slow, and isolated, and thereby limited, until such time as it can be fostered by other means, so the development of isolated co-operatives is too slow on its own. As Marx put it in the “*Grundrisse*”,

"As the system of bourgeois economy has developed for us only by degrees so too its negation, which is its ultimate result." (p 712).

It can only proceed adequately if it is developed on a national (today at least European we would say) basis, which requires not just the use of credit as suggested by Marx above, but also, as he pointed out in his “*Address to the First International*”, by the working class gaining political power, in other words,

utilising the power of the state, in the same way that the bourgeoisie had done.

This is spelled out by Marx and Engels' closest ally, within the First International, *Ernest Jones*. In a letter to a Co-operators Conference, Jones wrote,

“Then what is the only salutary basis for co-operative industry? A NATIONAL one. All co-operation should be founded, not on isolated efforts, absorbing, if successful, vast riches to themselves, but on a national union which should distribute the national wealth. To make these associations secure and beneficial, you must make it their interest to assist each other, instead of competing with each other—you must give them UNITY OF ACTION, AND IDENTITY OF INTEREST.

To effect this, every local association should be the branch of a national one, and all profits, beyond a certain amount, should be paid into a national fund, for the purpose of opening fresh branches, and enabling the poorest to obtain land, establish stores, and otherwise apply their labour power, not only to their own advantage, but to that of the general body.

This is the vital point: are the profits to accumulate in the hands of isolated clubs, or are they to be devoted to the elevation of the entire people? Is the wealth to gather around local centres, or is it to be diffused by a distributive agency?”

But, as Marx sets out, just as the bourgeoisie had to build up its political organisation and alternative state structure, to confront the political fetters it faced from feudalism, so the workers would have to build up their political organisations and

alternative state organs, to confront the opposition of the bourgeoisie. As Marx stated,

“To save the industrious masses, co-operative labour ought to be developed to national dimensions, and, consequently, to be fostered by national means. Yet the lords of the land and the lords of capital will always use their political privileges for the defence and perpetuation of their economic monopolies. So far from promoting, they will continue to lay every possible impediment in the way of the emancipation of labour. Remember the sneer with which, last session, Lord Palmerston put down the advocates of the Irish Tenants’ Right Bill. The House of Commons, cried he, is a house of landed proprietors. To conquer political power has, therefore, become the great duty of the working classes. They seem to have comprehended this, for in England, Germany, Italy, and France, there have taken place simultaneous revivals, and simultaneous efforts are being made at the political organization of the workingmen’s party.”

(Inaugural Address To The First International)

In other words, even if this process were pursued via Parliament, the workers would have to prepare to use extra parliamentary force to put down a “*slave holders revolt*”, as the bourgeoisie attempted to hold on to their power and privileges by force, just as the aristocracy had done, when its time was up.

“The transformation of scattered private property, arising from individual labour, into capitalist private property is, naturally, a process, incomparably more protracted, violent, and difficult, than the transformation of capitalistic private property, already

practically resting on socialized production, into socialized property. In the former case, we had the expropriation of the mass of the people by a few usurpers; in the latter, we have the expropriation of a few usurpers by the mass of the people.” (p 715)

Chapter 33 - The Modern Theory of Colonisation

“Political economy confuses on principle two very different kinds of private property, of which one rests on the producers’ own labour, the other on the employment of the labour of others. It forgets that the latter not only is the direct antithesis of the former, but absolutely grows on its tomb only.” (p 716)

In Western Europe, Marx writes, the latter form of capitalist production had already predominated. Even where other forms of production continued within these economies they were subordinated to capitalist production.

In the colonies - and Marx argues that economically the US was still a colony of Europe – capitalist ownership comes into sharp conflict with private ownership of property.

“There the capitalist regime everywhere comes into collision with the resistance of the producer, who, as owner of his own conditions of labour, employs that labour to enrich himself, instead of the capitalist. The contradiction of these two diametrically opposed economic systems, manifest itself here practically in a struggle between them. Where the capitalist has at his back the power of the mother-country, he tries to clear out of his way by force the modes of production and appropriation based on the independent labour of the producer. The same interest, which compels the sycophant of capital, the political economist, in the mother-country, to proclaim the theoretical identity of the capitalist mode of production with its

contrary, that same interest compels him in the colonies to make a clean breast of it, and to proclaim aloud the antagonism of the two modes of production. To this end, he proves how the development of the social productive power of labour, co-operation, division of labour, use of machinery on a large scale, &c., are impossible without the expropriation of the labourers, and the corresponding transformation of their means of production into capital. In the interest of the so-called national wealth, he seeks for artificial means to ensure the poverty of the people.” (p 717)

The American Marxist, Oliver Cromwell Cox, in “*Race, Caste and Class*”, argued that racism arises out of this contradiction. He sets out the way that, in previous modes of production, such as slavery and feudalism, there was no presumption of equality of individuals underpinning the ruling ideology. Quite the opposite, the societies took as read the idea of inequality between individuals. They were highly structured societies based on social rank. Consequently, under the Roman Empire, you could be a Roman citizen whether you were white, black or yellow. By the same token, you could also be a slave. Roman ideology did not have to explain why some people were free and others unfree on the basis that they were in some way not equally human – which is the fundamental basis of racism – because it never claimed that all humans were equal to begin with. By the same token, Cox argues, it was quite common in feudal Spain, for black servants, brought home from the colonies, to marry the woman of the house, after her husband had died. No kind of social taboo attached to such arrangements.

However, Cox argues, bourgeois ideology, in its struggle against feudalism, does assert the equality of individuals, alongside its insistence on the inalienable *Rights of Man*, based on freedom of the individual. That bourgeois ideology develops as an ideology of class struggle, as capital develops, within feudal society, and in opposition to it. But, the point at which this ideology reaches its pinnacle, in the writings of people like *Tom Paine*, is also the point where the primitive forms of capital – merchant and money capital – are in a symbiotic relation with feudalism. The merchant and money capitalists act as pioneers, opening up new markets for themselves, but, at the same time, they open up new territories upon which the landlords can continue their rent seeking activities. It is on this basis that colonialism develops. But, as Marx says, the process of destroying the individual producers, in Western Europe, had proceeded over centuries. Colonialism did not have the luxury of waiting that long in the colonies. It acted to destroy the direct producers quickly by outright force. But, that contradicted the fundamental claim of bourgeois ideology of freedom and equality of the individual, as inalienable human rights. The only way that could be reconciled, therefore, was by claiming that those being enslaved were not really human, not deserving of those inalienable human rights. What, as Marx has demonstrated, is a fundamental requirement for the exploitation of labour, in Western Europe, and production of surplus value, the notion of *Equality* and *Freedom*, that free and equal individuals enter into free and equal contracts, for the sale of commodities, in the colonies turns into its opposite!

Colonialism, in operating in that way, is, therefore, at odds with the objective requirements of capital proper. That is so both because capitalism proper, industrial capitalism, extracts surplus value on the basis of relative surplus value, which in itself relies on a reasonably well provisioned, and contented working-class (which is the basis of the *Fordism* and *Welfarism* of the 20th century), and because it undermines the main ideological tenet of bourgeois society, of the fundamental freedom and equality of individuals. But, colonialism does not emerge on the basis of this developed form of capitalism, it emerges under feudalism and develops under the mercantilism that separates feudalism from capitalism proper. It emerges not on the basis of free and equal exchanges, or even of surplus value production, but on the basis of inequality and unequal exchange, which is the hallmark of the form of profit extracted by merchant and money capital.

In the same way that the early forms of capitalism adopt methods, which are not ultimately sustainable as means of capital accumulation, and, indeed, are contrary to it, in the longer term, so colonialism develops as a means of rapidly bringing about capital accumulation, which is nevertheless not sustainable, in the longer term, and is contradictory to the longer-term interests of capital. In fact, its for these very reasons that once industrial capital becomes dominant, and exerts its hegemony over previous forms of capital, it begins to dismantle colonialism, and modern *imperialism* begins. Modern imperialism, like modern industrial capital in general, is based not on unequal exchange but on the extraction of relative surplus value. The effective extraction of relative

surplus value itself relies on a working-class that believes that it is both free and equal, and that its rising standard of living is a reflection of its sharing, on that basis, in the fruits of its co-operative relation with capital. That is the basis of the *Social Democracy* that modern capitalism has established, during the last century. It is why, in large swathes of the globe, in Latin America and Asia, this kind of economic development has gone hand in hand with the removal of previously *Bonapartist* regimes, and the establishment of this kind of *Bourgeois Social Democracy*.

That, of course, does not mean that capitalism abandons colonialist methods entirely, just as it does not abandon absolute surplus value, as a means of exploitation entirely, but the nature of that colonialism changes. It becomes another tool in the toolbox, rather than the primary driver. Colonialism, instead of being the basis of exploitation, becomes instead a means of control, through which imperialist states exercise their geopolitical interests. For example, the Argentinian invasion of the Falklands had nothing to do with their economic exploitation, but with the Argentinian state attempting to exercise its political muscle, just as Britain's response was based on a similar assertion of its place in the imperialist system of states. The invasion of Iraq, similarly had nothing to do with economic exploitation – industrial capitalism could just as easily have achieved that via economic contracts and arrangements with Saddam Hussein – but with the assertion of imperialist geopolitical interests within the region.

The same is true of racism and the associated nationalism. Once capitalism reaches the stage of large

scale multinational capital, and where the nation state has become an impediment to capital accumulation, nationalistic and racist sentiments become a hindrance to “*Capital in General*”, even though these sentiments continue to dominate, and to reflect the interests of the more backward, small-scale, nationally based, sections of capital. That is the material basis of the divisions which repeatedly rack the Tory Party over Europe, and immigration controls.

As Marx says here, what colonialism and racism do is to expose the true nature of capitalist exploitation by undermining the notion that individuals are free or equal.

“It is the great merit of E.G. Wakefield to have discovered, not anything new about the Colonies, but to have discovered in the Colonies the truth as to the conditions of capitalist production in the mother country. As the system of protection at its origin attempted to manufacture capitalists artificially in the mother-country, so Wakefield’s colonization theory, which England tried for a time to enforce by Acts of Parliament, attempted to effect the manufacture of wage-workers in the Colonies. This he calls “systematic colonization.”

First of all, Wakefield discovered that in the Colonies, property in money, means of subsistence, machines, and other means of production, does not as yet stamp a man as a capitalist if there be wanting the correlative — the wage-worker, the other man who is compelled to sell himself of his own free will. He discovered that capital is not a thing, but a social relation between persons, established by the instrumentality of things.” (p 717)

This is a reference to the point Marx also makes in *“Value, Price and Profit”*, and elsewhere, that, in the US, workers who emigrated there soon saved up enough money to buy a piece of land and turn themselves back into peasants, into private property owners. In so doing, they undermined capitalist production, so capital attempted to use legislation to impose artificially high land prices.

In fact, its this inability to hold on to free wage labourers, in the colonies, that provokes a resort to the use of slave labour, which is, as Marx elaborated earlier, a very inefficient form of labour for extracting surplus production.

But, under these conditions, not only is the price of labour raised, and the possibility of accumulating capital diminished, the other things that go along with it are also absent. The division between town and country does not exist, and so the basis for division of labour based on it, of trade between town and country, and development of the home market are absent.

Marx quotes Merivale, who exposes the true situation.

“On account of the high wages, says his disciple, Merivale, there is in the colonies “the urgent desire for cheaper and more subservient labourers — for a class to whom the capitalist might dictate terms, instead of being dictated to by them.... In ancient civilized countries the labourer, though free, is by a law of Nature dependent on capitalists; in colonies this dependence must be created by artificial means.” (p 721)

The solution proposed by Wakefield was to subvert all of the supposed laws of capitalism based on the notion of freedom and equality.

“The trick is how to kill two birds with one stone. Let the Government put upon the virgin soil an artificial price, independent of the law of supply and demand, a price that compels the immigrant to work a long time for wages before he can earn enough money to buy land, and turn himself into an independent peasant. The fund resulting from the sale of land at a price relatively prohibitory for the wage-workers, this fund of money extorted from the wages of labour by violation of the sacred law of supply and demand, the Government is to employ, on the other hand, in proportion as it grows; to import have-nothings from Europe into the colonies, and thus keep the wage labour market full for the capitalists.” (p 722-3)

The consequence was that the emigrants avoided the English colonies, where this was practised and went instead to the US. But, ultimately, the surplus population, created in Europe, flooded into the Eastern United States, to an extent that its westward drift could not keep pace with it. An increasing working class population, thereby, accumulates in the Eastern Seaboard of the United States, where the majority of capitalist development occurs.

The Civil War, as well as creating an internal colony for US capital, in the South, also creates the strong centralised state that industrial capital requires. The South becomes a market for Northern industrial goods, that are developed behind high tariff walls, erected against foreign imports, by the new, strong, centralised Federal State, and it also becomes the source of cheap raw materials, required by the northern industries, as well as a source of a latent reserve army of labour. The needs of northern industrialists for wage labour are also further met by the movement North, to the industrial centres, of freed slaves. But, the Civil War brings other things with it.

“On the other hand, the American Civil War brought in its train a colossal national debt, and, with it, pressure of taxes, the rise of the vilest financial aristocracy, the squandering of a huge part of the public land on speculative companies for the exploitation of railways, mines, &c., in brief, the most rapid centralization of capital. The great republic has, therefore, ceased to be the promised land for emigrant labourers. Capitalistic production advances there with giant strides, even though the lowering of wages and the dependence of the wage-worker are yet far from being brought down to the normal European level.” (p 723-4)

In Australia, land was simply handed over by the British Government, to aristocrats and capitalists. Their demand for labour was partly filled by the regular supply of convicts, sent from England, for heinous crimes, such as sheep or rabbit stealing, or for setting up trades unions. In part, it was met from the endless numbers who went in search of gold. Rapidly, a surplus population was created in Australia too.

“However, we are not concerned here with the conditions of the colonies. The only thing that interests us is the secret discovered in the new world by the Political Economy of the old world, and proclaimed on the housetops: that the capitalist mode of production and accumulation, and therefore capitalist private property, have for their fundamental condition the annihilation of self-earned private property; in other words, the expropriation of the labourer.” (p 724)

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