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PREDICTION IN KARL MARXM. E. WeissABSTRACT

The thesis begins with an analysis of the 'three component sources' used by Marx in order to give context to the body of the thesis and to give a background to the concentration on Marx's theory of revolution as a central concern. Marx's theory of revolution is then analysed into its various aspects and a question is raised about the relationship of its purely economic aspects to those aspects involving political will. It is suggested that Marx's development and use of the concept of alienation is a key link between the economic and political and a brief analysis of his use of alienation follows. In conclusion it is stressed that Marx used this concept as an aid to the analysis and development of his economic theories although a brief analysis of his published work shows that he intended the economic aspects of his theory of revolution to stand alone.

Thus attention is once more focussed on his theory of revolution and the economic analysis that underpins it. Each of its elements is explained and assessed in terms of the predictive mechanism used enabling a final conclusion that a socialist revolution as a possibility seems proven but that as a necessary historical event it does not.

Title

Prediction in Karl Marx

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CHAPTER 1The Component parts of MarxismINTRODUCTION

Throughout history there appear outstanding figures whose work has brought to a pinnacle all previous thinking in their particular field and has, in consequence, affected the thought and lives of millions. Among their number may be included Darwin, Freud, Einstein and one powerful thinker who must stand towards the head of the list, Karl Marx. In his sixty five years he wrote more than ten major works with a resultant impact on Economics, History, Political Theory, Philosophy, Sociology and Psychology to name but the most obvious. He provided a challenging theory of history and of politics, a new direction in Philosophy, a penetrating analysis of the social consequence of economic forces and even found time to be involved in the practical politics of his day. One could be forgiven for attributing such achievement to inspiration and insight alone. However like others of his calibre his work represents synthesis and development fashioned from painstaking study of those who went before him and in our attempt to isolate the most important innovations in his work and to look at the predictive status of these it will be helpful to look at the origins of his work in order to give context to our own investigation and indeed to justify our choice of 'innovation' by showing the range from which they are taken.

The component parts of Marxism

In an article written in 1913 Lenin analysed the intellectual inheritance of the work of Marx. For Lenin Marx's work "...arose as a direct and immediate continuation of the teachings of the greatest representatives of philosophy, political economy and Socialism"¹ and took these from their three countries of origin "...German philosophy, English political economy and French Socialism".² It was a synthesis of these that, in Lenin's view, formed the substance of Marxism. "...these three sources of Marxism, which are at the same time its component parts,..."³

Of the philosophical dimension Lenin claimed that "The philosophy of Marxism is materialism"⁴ which consisted of a crude materialism developed in and around the French Revolution.

"Throughout the modern history of Europe and especially at the end of the eighteenth century in France, ...materialism has proved to be the only philosophy that is consistent, true to all the teaching of natural science and hostile to superstition, cant and so forth."⁵ This "He enriched...with the acquisition of German classical philosophy, especially of the Hegelian system, which in its turn led to the materialism of Feuerbach"⁶ and particularly the dialectical content therein. "The chief of these acquisitions is dialectics"⁷

The second component of Marxism, according to Lenin, was that of classical political economy and in particular the work of Adam Smith and David Ricardo. It was from the foundation laid by these two important political economists that Marx was able to shape his major economic theories. "Adam Smith and David Ricardo, by their investigations of the economic system, laid the foundations of the labour theory of value. Marx continued their work. He rigidly proved and consistently developed this theory."⁸

Socialist theory provided the third component of Marx's work. By this Lenin referred to a loosely related body of thought that arose in response to unfulfilled aspirations in the French Revolution. These were the articulations of a group of thinkers that hoped for an idealistic emancipation of 'man' and felt cheated by the replacement of one 'system of oppression' by another. "When feudalism was overthrown and 'free' capitalist society appeared on God's earth, it at once became apparent that this freedom meant a new system of oppression for the toilers. Various Socialist doctrines immediately began to arise as a reflection of and protest against this oppression."⁹ However the predominance amongst these socialist doctrines was that of a utopian reaction, answering reality with a dream. "But early Socialism was utopian Socialism. It criticised capitalist society, it condemned and damned it, it dreamed of its destruction, it indulged

in fancies of a better order and endeavoured to convince the rich of the immorality of exploitation."¹⁰ According to Lenin, Marx's 'genius' lay in the fact that he was able to identify a social force that was capable of bringing about a further social revolution and that he was further able to identify the historical existence of class struggle as that animating force.

The philosophical dimension

There is no doubt that the work of Hegel did, as Lenin suggests, have a profound effect upon Marx. Marx grew up in an intellectual climate dominated by the philosophy of Hegel, for it was the predominant philosophical creed of Germany of that time. "In the years immediately following Hegel's death (1831 on) his school was united and supreme in the German Universities. Its influence spreading out from Berlin, where Hegel had his chair, it had outposts in every university in Germany, its own philosophical club and its own periodical. The Prussian Minister of Culture, Altenstein, was favourable to Hegelianism and had helped to advance the academic careers of Hegelians. A complete edition of the master's works was prepared by seven of his pupils."¹¹ Bound for an academic career, as Marx was, it was impossible to avoid the influence of Hegel. His conversion to Hegelianism was painful: 'My vexation prevented me from thinking at all for several days and I ran like a madman around the garden beside the dirty waters of the Spree...My fruitless and failed intellectual endeavours and my consuming anger at having to make an idol of a view that I hated made me ill."¹² This conversion was thorough. He had read, during an illness, much of Hegel's work and that of most of his disciples, gained entrance to a graduate club of young Hegelians and immersed himself in the "current philosophy that I had thought to escape".¹³

Like many of the young intellectuals around him, his commitment to Hegelianism led him to regard his studies as an extension of the Hegelian tradition. However, even at this period, (to be accurate two years later in 1837) his extension of Hegelianism already showed signs of a radical break. In a dissertation on the difference between the philosophies of Democritus and Epicurus Marx took as his

starting point the continuation and correction of Hegel's 'Philosophy of History' and shaped his concern to deal with the central problem of the role of the philosopher after the establishment of a 'total system' such as that of Hegel. This historical analogy was that of the position of Greek Philosophy after Aristotle. "...the world that is opposed by a philosophy that is complete in itself is one that is rent asunder. Therefore, the activity of this philosophy appears too to be rent asunder and contradictory: its objective universality returns into the subjective forms of the individual minds in which it has its life...Someone who does not appreciate this historical necessity must consequently deny that man could continue to live at all after a total philosophy, or else treat the dialectic of quantity as such as the highest category of conscious minds and claim with some of our misguided Hegelians that mediocrity is the usual form in which absolute mind appears."¹⁴

In his relationship with Hegelian thought and with regard to his philosophical development in general it is difficult to maintain a separation from his political and occupational development. It seems certain that Marx's involvement in journalism, forcing him as it did to analyse political reforms, aided the transition, anticipated in his Ph.D. thesis, from philosophical criticism to 'praxis' and to the substitution of political and economic considerations for purely philosophic ones. This transition was stimulated by writing for a journal, supported by liberal Rhein industrialists, of which Marx became editor in chief. In a letter about his work for the journal and attacking the Freien (a group of young Hegelians in Berlin who criticised all reform) he illustrated his growing respect for practice "...in any case we are annoying a large number, even perhaps the majority, of liberals engaged in political activity who have assumed the thankless and painful task of conquering liberty step by step within the limits imposed by the constitution, while we, comfortably ensconced in abstract theory, point out to them their contradictions."¹⁵

This trend towards practice, the reaction to the post Hegelian total system, was itself stimulated by the philosophical ferment of the time and crucial within this was the work of Ludwig Feuerbach.

The importance that Marx attached to the work of Feuerbach is nowhere more dramatically illustrated than in a letter from Marx to Feuerbach requesting the latter to contribute to a magazine (the Deutsch-Französische Jahrbücher) that Marx and a number of associates were seeking to establish. The terms in which it is written are almost those of adoration: "The sincere youthful ideas which, with Schelling, remained an imaginative dream of his youth, have with you become truth, reality and virile earnestness. Schelling is therefore an anticipatory caricature of you and as soon as the reality appears opposite the caricature it must dissolve in dust and fog. Thus I consider you the necessary and natural opponent of Schelling - summoned by their majesties, Nature and History. Your struggle with him is the struggle of an imaginary philosophy with philosophy itself..."¹⁶

After this period the relationship between the work of Marx and Hegel becomes highly contentious and is reflected in the 'young versus mature Marx' debate. This debate centres around the status that is to be given to Hegel's influence upon Marx. Was Marx's work a modification of or a break from that of Hegel? Whichever is correct, what is unquestionable is that Hegel did influence Marx quite profoundly and it is necessary for any serious student of Marx to familiarise himself with at least the central themes of Hegel's work.

Hegel

Perhaps the two major influences on the development of Hegel's philosophy were those of Greek idealism and the modern philosophers including Spinoza and especially Kant. Hegel claimed for his philosophical system a universality that few other philosophers laid claim to. For him it represented a fundamental system that had all other philosophical systems related to it as its own particular aspects.

In addition to the novelty of the system itself the key to knowing it was also relatively original; it was not to be known

through a process of reasoning or ratiocinative method but through a process of "speculative reasoning". Being based on the work of Herder and his concern for developmental change, Hegel's speculative reasoning called upon the subject to identify with the content in question and to allow his mind to move and react to this content. A 'thinking into the problem' rather than a 'thinking about the problem'.¹⁷ (Although there are a number of formalised statements of the nature of dialectical logic, the structure of this 'thinking into a problem' given by Hegel in his *Logic*, Engels in *The Dialectics of Nature* and Lenin in his *Philosophical Notebooks*, it is none the less not possible to apply them to a content as may be the laws of formal logic and that to make any sense at all of Hegel's speculative method it may be as well to consider dialectics and the speculative methods as more akin to techniques for the liberation of intuition than to the rules of formal logic. This may be supported by the positive and creative nature of Hegel's dialectical accounts in which much appears and is not in any formally accepted way, deduced.)

Born in 1770 Hegel's early interest left him with an unshakeable belief in the 'oneness of all things' later to be characterised as the Absolute, but unlike Parmenides and Spinoza before him Hegel's Absolute was complex and self differentiating, passing through many moments or 'phases of being'. This absolute was, for Hegel, reason, logically prior to the world and including the world, (the universal, primordial abstraction)¹⁸ and absolute because it explained itself. This task of 'explaining itself' is fundamental to Hegel's work e.g. "In every other science, the subject dealt with and the Method of the Science, are distinguished from one another;...Logic on the other hand cannot take for granted any of these forms of reflection or rules or laws of thought, for these are part of the very fabric of logic and must be demonstrated within the boundaries of the science itself".¹⁹ The process by which pre-existing reason posited its aspects as the world was also the process of reason and therefore self-identical and by the insistence that reason cannot be self contradictory the solution of apparent contradictions became the generator and positor of the categories that constituted the world.²⁰

The process of contradiction and solution is the core of the Hegelian system. It was for Hegel the method by which reason posited and overcame its own contradictions and which he called the dialectic. The total Hegelian system, covering all fields of human knowledge, hinges upon the dialectical movement of reason and consists of an attempt to derive all of the categories of thought necessary to conceive the world from the first and single category of being - the simplest and most fundamental category posited by the act of thinking itself.

Each dialectical movement or triad has the same characteristics. First there is the thesis. "Reason" posits a category which it asserts as the sole and only category. This relates to the canon of identity in formal logic - reason posits the category and asserts that it is itself. The second category, antithesis or negative reason, is produced from the thesis by a process of reasoning and leads to the positing of a category which opposes the thesis. Positive reason, or synthesis, is a further reasoned negation of the antithesis, but positive in so far as it is able to reasonably explain and hold the existence of both the categories of thesis and antithesis and provide a thesis for a new triad. Underlying the whole process is the implicit assumption, already mentioned, that reality is the oneness of all things and that therefore each abstraction or category (thesis) taken alone posits its antithesis (or calls for correction) because reason is 'one' and partiality is therefore unreasonable or self-contradictory. Each successive synthesis, with its property of bonding the previous thesis and antithesis into a fluid unity (fluid because the contradiction does not completely disappear but is in a way explained or becomes acceptable and loses the disturbing nature of a contradiction without losing its ability to contain two concepts or moments that may define each other) contains all that went before until, in finality, all is contained within the last category; all is in the one; Philosophy, the total self consciousness of reason is all and knows itself in all its facets (moments) as all.²¹ Truth is this final category but for it to exist as the knowledge of all of its specific determinations the whole process must be enacted, for it is only in the process that each moment of the whole can emerge; it is only by virtue of the process that truth can become the property of individual minds. The total process is essential to and within its own end: and the

end is the whole process.

Whatever the efficacy of Hegel's system it is certainly an attractive idea to be able to derive all knowledge and truth itself merely by a process of thinking through the dialectic inherent, as Hegel would have it, in thought itself. His philosophic system to end all systems. But Hegel does not rest here for if all the world as we know it is thought thinking itself as a dialectical progression then so is any one dimension of that world. For example History.

This is precisely his task in the 'Philosophy of History' in which human affairs move through philosophical categories that form an integral part of his total philosophic system. World History is for Hegel the history of the development of the nation state, "Among all the phenomena of history, our true object is the state",²² from its most imperfect form in the Oriental state to its most perfect (rational) form in the Germanic or Nordic states, including Prussia. In fact History is the story of World Spirit (World oneness of all things) coming to know itself as such through time and the actions of men. "Like the soul-conductor Mercury, the Idea is, in truth, the leader of peoples and of the world; and Spirit, the rational and necessitated will of that conductor, is and has been the director of the events of the world's history."²³ But, of course, with Hegelian logic, if history is but a manifestation of spirit moving people through time why not each individual as a manifestation of spirit - and indeed even this does not escape Hegel's total system. In the Phenomenology he says: "...we find that what in former times occupied the energies of men of mature mental ability sinks to the level of information, exercises and even pastimes, for children; and in this educational progress we can see the history of the world's culture delineated in faint outline".²⁴

If Hegel's love of systematic order was his strength and B. Russell points to this as one of his major advances over previous idealist monist philosophers,²⁵ it may well have been the cause of his fall from regard also. For today his work is not widely read (in England, at least) and those who do read it often find it to be repugnant. It

seems that a case may be made for the point of view that sees his great desire to have everything subsumed under his philosophic system combined with a wish to justify the political regime under which he lived as creating within his philosophy of history and of Right the foundation of a philosophic system that could later be used to justify Naziism.²⁶

As has already been mentioned world spirit acts through the nation state in its inexorable and dialectical march of 'progress' and of these, the categories that constitute the Philosophy of Right deserve some further attention. These categories form the second division of the Philosophy of Spirit and derive and describe the main dimensions of abstract right, Morality and Social Ethics. This section starts with will, a Will that exercises its desires yet is not satisfied with this activity as it does not represent a universal. It therefore seeks a universal which is itself and so reflects upon itself. But to do so it makes an object of itself and hence puts itself out into the world as objects of its own thought - as institutions. Because it is a reflection into self it is self determined - free, 'The will contains the element of pure indeterminacy or that pure reflection of the ego into itself which involves the dissipation of every restriction and every content either immediately present by nature, by needs, desires and impulses, or given and determined by any means whatever'.²⁷ Therefore, Hegel claims as a perfectly and dialectically logical conclusion, the institutions that are the objective existence of will are also the embodiment of freedom.

The chief institutions among those of objectivised will are family, civil society and state. Spirit has become Ethical mind and Ethical mind shows its three moments, family, civil society and state: "The concept of this Idea has been only as mind, as something knowing itself as actual, because it is the objectification of itself, the movement running through the form of its moments. It is therefore (a) ethical mind in its natural or immediate phase - the Family. This substantiality loses its unity, passes over into division and into the phase of relation, i.e. into (b) Civil Society - an association of members as self-subsistent individuals in a universality which, because of their self-subsistence, is only abstract. Their association is bought about by their needs, by the legal system - the means of security of persons and property -

the means of security of persons and property - and by an external organisation for obtaining their particular and common interests. The external state

(c) is brought back to and wedded into unity in the Constitution of the State which is the end and activity of both the substantial universal order and the public life devoted thereto."²⁸ More simply ethical being in the social group gives way to the more universal social and ethical concerns of civil society. However the establishment of these comes into conflict with the private and more limited concerns of the family and the conflict is resolved by the regulation of family concerns by the constitution of the state.²⁹ That this should be so is no mere accident but due to the pre-ordained and necessary movement of spirit itself: "The march of God in the world, that is what the State is".³⁰

To Marx, of this part of Hegel's political philosophy, the triad dealing with Constitutional Law which gave rise to the Monarch, the Executive and the Legislature³¹ was of particular importance. These concerns constituted Hegel's theory of Government "The State as a political entity is thus cleft into three substantive divisions

(a) the power to determine and establish the universal - the Legislature

(b) the power to subsume single cases and the spheres of particularity under the universal - the Executive

(c) the power of subjectivity, as the will with the power of ultimate decision - the Crown. In the Crown the different powers are bound into an individual unity which is thus at once the apex and basis of the whole i.e. of constitutional monarchy".³² On the basis that individuals' common sense was not sufficient basis for knowledge of what is best in the political sphere "The deputies of the people or even the people themselves, must know best what is in their best interest...the truth is that if people means a particular section of the citizen then it means precisely that section that does not know what it wills. To know what one wills and still more to know what the absolute will wills, is the fruit of profound apprehension and insight, precisely the things which are not popular".³³ He saw that the Estate Assemblies, as manifestations of spirit, were more appropriate to the exercise of legislative power than councils elected by force of number.

To Hegel the Prussian State contained free men. The 'German World' was the highest form of political organisation conforming to his outline in the Philosophy of Right; Spirit attains self-consciousness and freedom in three stages: despotism of the 'Oriental world', a mixture of aristocracy and democracy in Greece and Rome and in finality the state as described in the 'Philosophy of Right', the German World. A monarchy in whom was vested the freedom of the state³⁴ and an executive of chosen men for service to the state, representing the general will mediating between the specific interest of individuals within the state.³⁵

Marx devoted a year to a thorough-going criticism of Hegel's philosophy and, in particular, produced a paragraph by paragraph analysis in which he subjected Hegel's political philosophy to tests of internal consistency.³⁶ In 1844 he again takes up the concern with Hegel's philosophy but here (Economic and Philosophic Manuscripts of 1844) he summarises his overview and reaction to Hegel and philosophy in general based on a Feuerbachian critique. 'Feuerbach explains the Hegelian dialectic (and thereby justifies starting out from the positive, from sense-certainty) as follows...'³⁷ The effect of this Feuerbachian criticism was to invert Hegel's subject and predicate: man became the subject and 'spirit' became the predicate. In other words, the manifestations of spirit became the creations of men.

In 1845 Marx completed his criticism of Hegel's philosophy by criticising the premises of Feuerbach. 'The chief defect of all hitherto existing materialism (that of Feuerbach included) is that the thing, reality, sensuousness, is conceived only in the form of the object or of contemplation, but not as sensuous human activity, practice, not subjectively.'³⁸ Marx can thus be seen to move from a Hegelian interpretation of the world 'from the point of view of spirit' to a Feuerbachian interpretation 'from a point of view outside the world' to his final position in which the point of view is as much part of what is to be understood as is the object of the point of view - 'practical-critical activity'. "The coincidence of the changing of circumstances and of human activity or self changing can be conceived and rationally understood only as revolutionary practice."³⁹ What unites Marx and Hegel is the dialectical movement of man's self creation - a theme that first appears in Hegel, is

turned on its head by Feuerbach (rather than by Marx) and then turned in a second dimension by Marx as 'point of view' becomes united with self creating man as praxis.

Economic dimension

Marx's first interest in Economics arose as a result of his journalistic activities at about the time of January 1843. It was then that Marx wrote an article on the economic distress of the Moselle vintagers for the Rheinische Zeitung of which he was the editor in chief. In later writings Marx referred to this writing and an earlier essay on a wood theft law as his first "embarrassed attempt to deal with material interests", the impetus to his study of economics.⁴⁰

In the following summer Marx undertook a study of Hegel's philosophy of law as a major effort to resolve his doubts about the relation of socialism to economics from which he concluded "that neither legal relations nor forms of the state could be understood by themselves or explained from the so called general evolution of the human mind but they are rooted in the material conditions of life whose (reality) Hegel...summed up under the term 'civil society' and the anatomy of civil society is to be sought in political economy".⁴¹ It is interesting to note that the term used by Marx was Political Economy and not Economics as an understanding of this is, in some degree, essential to a proper understanding of Marx's economic concern. As opposed to the concerns of modern economics, political economy and in particularly the work of David Ricardo, was concerned with, in Ricardo's words "The produce of the earth - all that is derived from its surface by the united application of labour, machinery and capital - is divided among three classes of the community; namely, the proprietor of the land, the owners of the stock or capital necessary for its cultivation and the labourers by whose industry it is cultivated...to determine the laws which regulate this distribution, is the principal problem of Political Economy".⁴² and it is in the light of this purpose that Marx's concern with economics must be viewed.

Political Economy is often stated to begin, in a systematic way, with the work of Adam Smith and the period of economic study called Classical Economics. With the rise of merchant capitalism came the rise of systematic study of economic concerns. Inheriting a concern for 'what constitutes a just price in exchange' from their medieval predecessors, the Classical Economists (here used as Marx used the term but not strictly in congruence with modern usage where writers before Smith are seen as pre-classical - i.e. mid eighteenth century as opposed to seventeenth century) did not, however, inherit their simple market situation where values (seen in terms of production costs) equalled prices. The rise of Merchant capitalism had forced an intervening variable into existence between production cost and price consequently a complication upon the seeking of a just price; which shifted their concern to market prices and the attachment of the concept of a fair price to a new concept of a fair market price (undistorted by price fixing or monopoly). This pragmatic solution led, in turn, to the re-definition of value as 'worth to the buyer', whilst a vague notion of 'intrinsic value' continued but remained undefined both in itself and in its relation to price.⁴³

With the development of industrial capitalism the analysis of value reverted to a concern with production costs reflecting the emphasis of such a system of economic organisation on productive concerns and analysis sought and found the 'creator' of such value in human labour. Among the writers of this time Adam Smith stands out like a giant. His work and principally The Wealth of Nations represented a summary of what had gone before and was to influence Marx in two main ways. Firstly, Smith in stating that in a natural state the wages of labour are the products of labour "The produce of labour constitutes the natural recompense or wages of labour"⁴⁴ and that in modern society this is no longer the case but that a division of the produce of labour is made between different classes based upon social and other considerations "What are the common wages of labour, depends everywhere upon the contract made between those two parties, the same...The former are disposed to combine in order to raise, the latter in order to lower, the wages of labour"⁴⁵ sets the trend, taken up by Marx, of a political Economy that seeks to establish not purely an economic theory of society but a general one;

and secondly Smith laid foundations for a theory of exploitation that was to dominate Marx's economic work. "His (the labourer) maintenance is generally advanced to him from the stock of a master, the farmer who employs him, and would have no interest to employ him, unless he was to share in the produce of his labour, or unless his stock was to be replaced to him with a profit. This profit makes a second deduction from the produce of labour which is employed upon the land."⁴⁶

It was Smith's successor, David Ricardo, however who developed a labour theory of value capable of being used as the basis of a developed economics. Although this was not central to his work and was also found to be unsatisfactory by his immediate followers his statement was clear and unequivocal: "The value of a commodity or the quantity of any other commodity for which it will exchange, depends on the relative quantity of labour which is necessary for its production, and not on the greater or less compensation which is paid for that labour".⁴⁷

However if this 'theory of value' were to be adopted by Marx the problem of explaining the discrepancy between the ratio of different labour times expended on products and their exchange ratios had to be overcome. (This was, in fact, the problem that led many of the Ricardians to abandon the labour theory of value). Marx's solution which was, by a matter of definition, to make the value of a commodity (that is its value in exchange) identical with the labour embodied in it, transformed the problem; it was no longer to explain a variance between labour time ratios and value ratios but to explain a difference between given values and market prices. With this transformation he laid the foundation for his economic analysis.

Marx was thus able to develop his economic system on a political economic base - the labour theory of value - that simultaneously drew together his philosophic conclusions regarding the alienation of labour as the central animating force of capitalism; private property as the result of alienated labour (he was able to quantify economic alienation in the rate of profit) and a detailed qualitative analysis of capitalist economy and its dynamic.

Socialist thought

The aftermath of the French Revolution inevitably involved a questioning of the degree to which it would achieve its promises of 'liberty, fraternity and equality'. To the literal and bourgeois thinkers a programme based on private property, free market economy and unbridled individualism was the means to the fulfilment of the revolution's promise. The Socialists however rejected this as potentially destructive of social solidarity and human welfare. As a reaction to the rapidly decreasing hold of religion, the breakdown of the old feudalistic social order with its moral codes and community ties and to the savage degradation of working people that progressively took its place, early socialism was predominantly unsystematic, merely dreaming of a more just system.

By 1840 this had changed. Socialism had adopted the economic standpoint of the labour theory of value, developed a philosophical critique of individualism and made its appeal to the rational Political tradition of France. Among the many individual versions of socialist thought three themes seem to recur. A concern with ignorance, History and the State.

Owen, Saint Simon, Fourier and Proudhon all suggested that the key to progress lay in increasing knowledge. Their position might be summarised thus - teach the poor what they do not know and the evil effects of poverty and ignorance will quickly vanish.

'History' was always a history of progress that had led to socialist belief and eventually would lead to socialist society. Saint Simon attempted to develop a theory of historical and social change arising out of an analysis of social change since the eleventh century. Fourier offered 36 hierarchical and necessary stages of historical transition, the fifth of which was the modern western civilisation. In the eighth period social order ceased to frustrate man. Fourier never described the periods beyond the eighth. Proudhon saw a historical increase in knowledge and understanding derived from man facing and solving the problems that faced him in everyday life.

It was in the third area of general agreement, that of attitude to the state and description of future society, that the early socialists defined themselves as socialists. It was their description of future societies that articulated most forcefully their opposition to bourgeois society.

In the new socialist society the need for force (in the form of the State) to maintain order would be greatly diminished. The situation of a small and privileged class exploiting the majority of society and using force to maintain its property relations would cease. In the future society the good of each individual will be the good of all and it would all be achieved through increased knowledge. Saint Simon held that government of order by force would give way to the management of community resources, people contributing freely what was in their ability in a context of hierarchy based on ability. Fourier similarly looked forward to a non coercive yet cohesive society, an ideal society where all worked for the good of all under elected officials. For Proudhon the structure of the future society was to be a complex of small groups of freely contracting persons acting on an inner understanding of universal justice.

The heritage Marx received from the socialist thinkers of 'historical progress' of a more free society, stateless society, was, as has been stated, already bound up with the labour theory of value. Thus in relation to the synthesis that Marx was to perform between philosophy and political economy, socialist thinking, as a received body of thought, already adumbrated within it many of the inter-relations that were to be so important in what Gramsci calls Marx's theory of History. The central theme of Marx's rejection of Socialist thought was that it did not sufficiently understand the nature of capitalism and private property and as a result could not offer an analysis that would successfully lead to its own declared aims.

It is only through a full understanding of the dynamic relationship between labour and capital that the relationship can be traced to its conclusion of communism. It is only in understanding capital as the result of alienated labour that the 'true' nature of present society can be understood. It is only this understanding that explains (and

predicts) a 'contradiction' between labour and capital.

"The antithesis of propertilessness and property, so long as it is not comprehended as the antithesis of labour and capital, still remains an antithesis of indifference, not grasped in its active connection, its internal relation - an antithesis not yet grasped as a contradiction."⁴⁸

The socialists, in failing to comprehend this relationship were led to postulations of future action that would not lead to a fully human society but might, in some cases, extend the perniciousness of the present order. "Private property is first considered only in its objective aspect - but nevertheless with labour as its essence. Its form of existence is therefore capital, which is to be annulled 'as such'" (Proudhon). Or a particular form of labour - labour levelled down, parcelled and therefore unfree - is conceived as the source of private properties perniciousness, Fourier, who, like the physiocrats, also conceived agricultural labour to be at least the exemplary type, whilst Saint Simon declares in contrast that industrial labour as such is the essence and now also aspires to the exclusive rule of the industrialists and the improvement of the workers' condition.⁴⁹

This theme is further developed by Marx in the Communist Manifesto in which he describes the failings of the position of Proudhon, Fourier, Saint Simon and Owen. Referring to Proudhon as a Conservative or Bourgeois Socialist he characterises him as a thinker who systematises the 'conservative view'. "We may cite Proudhon's Philosophie de la Misere as an example of this form" - this 'form' results from the fact that "A part of the bourgeoisie is desirous of redressing social grievances, in order to secure the continued existence of bourgeois society".⁵⁰

Saint Simon, Fourier and Owen are characterised as Utopian Socialists. Their lack of comprehension of the 'contradiction' of capital and labour is the result of analysing only a partly formed proletariat.

They therefore appeal to a 'new social science' or 'new social

laws' as the movers of history. Their task, along with that of history is to bring knowledge to all. "They, therefore, violently oppose all political action on the part of the working class; such action, according to them, can only result from blind unbelief in the new gospel."⁵¹

For Marx it is the developing theme of the contradiction between labour and capital - between relations of production and means of production that signals the way forward - provides the revolutionary with an understanding of History that highlights class struggle as the means of achieving socialism.

CONCLUSION

Marx's reaction to the Philosophy of Hegel, Classical Economics and Socialist thought are inextricably bound together. It is only by considering all three that the adaption of any one can fully be understood. From Hegel Marx took the concept of man as self creating through his own labour and the relationship between his consciousness and nature interacting in a dialectical way through action (although for Hegel action = thought).

From the classical economists Marx took and developed the notion of the labour theory of value and from the Socialists the 'dignity' of democracy based on social intercourse and equality. It is only from these three sources taken together that Marx's 'mature' position can be understood.

The action that relates consciousness to the material world was forged, as we have seen, in juxtaposition to Hegel's concept of man's self creation in a purely idealistic framework. With Marx's economics that action becomes economic activity and the dialectical relationship between consciousness and nature becomes the relationship between ways of producing (means of production) and consciousness of the causes of production reflected in ownership (relations of production). With socialist thinking Hegel's dialectical movement of consciousness slowly regaining a lost self (the idea in and for other - the objective world) transforms to a sensorially active man regaining control of

his own powers of activity - overcoming economic alienation.

Similarly Marx's development of Classical economics - the application of the labour theory of value to explain a total economic system only takes on significance in his analysis when viewed both for its political (socialist) and philosophical content. Politically the labour theory of value allows Marx to predict the collapse of Capitalism Capitalism (see Chapter IV, especially the rate of profit) and philosophically it expands the concept of economic alienation to apply to every facet of economic life.

It therefore follows that Marx's roots in Socialist thinking are of little significance taken apart from the economic and philosophic traditions interwoven with it. It is these three essential elements taken together that give Marx's theory of History - an empirically derived sensitivity to 'class' conflict as the motive force of pre socialist history - its meaning and significance. Contrary to the belief of Gramsci⁵² it is only through understanding the essential unity of three component parts of Marx that a proper understanding of Marx's theory of history and within it his theory of revolution can be grasped.

CHAPTER 2The Theory of RevolutionINTRODUCTION

Pragmatically speaking the most important theory of the work of Marx is that of the 'inevitability of revolutionary change'. Whatever may be seen as the theoretical hinge of Marx's work, whether it be Alienation (as for example in the opinion of Meszaros in 'Marx's Theory of Alienation') or the development of the rules of 'scientific socialism', today the most important to the most people is his theory and prediction of revolution. (This assertion is based on no facts that are quantifiable or on any claim of a theoretical nature - for example that Marx's theory of revolution is important within historical analysis or goes 'beyond' other theories of political science - but on a perspective that sees men's actions as testimony to their evaluative choices and from a survey of the world political scene.) It would seem to be the theory of revolution and particularly the transition from Capitalist to Socialist society that has been the theoretical preoccupation of many nations of the world. In Portugal the removal of a right wing dictatorship resulted in a struggle for 'revolutionary progress'. In Chile military coup is seen as 'counter revolution'. Of Vietnam, Korea, Cuba, China, Cambodia, Mozambique and the U.S.S.R. the consuming concern has been with revolution, revolutionary progress and revolutionary transition and even the concern with economic growth has often been expressed as subordinate to political organisation. It is, of course, difficult to isolate any one major factor which unites all the various concerns with 'revolution' but a case may be made for 'property'. All those concerned with 'revolution' under the banner of Karl Marx would, I believe, generally subscribe to a notion of change that centred on the transfer of control of the major portion of large productive capital from private hands into public or state ownership. The major world ideological battle is between those who see virtue in private ownership of large capital and those who favour a public form of ownership.

It is certainly true that Marx's aims were practical and were aimed at revolution "In short, the Communists everywhere support every

revolutionary movement against the existing social order and political order of things".⁵³ and that his theoretical work, once it had reached a stage of providing an understanding of the mechanisms of revolution turned to the task of providing a structure to guide revolutionary activity.⁵⁴ It is therefore Marx's theory of Revolution and the associated predictions that we would see as central in his work and thus it forms the starting point of this chapter.

Marx's Theory of Revolution

According to Marx the immediate objective of class struggle within a capitalist system is the transfer of political power from the bourgeoisie to the proletarians. "We have seen above, that the first step in revolution by the working class, is to raise the proletariat to the position of ruling class, to win the battle of democracy."⁵⁵

Proletarians take power.

Marx asserts that this cannot happen, or indeed the very process of the rise to power of the proletarians, without major changes in the relations into which men enter in order to produce the material wealth of society, without changes in the 'relations of production'. "The proletariat will use its political supremacy to wrest, by degrees, all capital from the bourgeoisie, to centralise all instruments of production in the hands of the state..."⁵⁶

Proletarians take power

Upset relations of production

Marx further asserts that the achievement of political power by the proletarians is identical with the 'capture' of the machinery of state as it is predominantly through such machinery that the ruling class exercises its power. "The State...is nothing more than the form of organisation the bourgeois necessarily adopt both for internal and external purposes, for the mutual guarantee of their property and interests."⁵⁷

Take power = take State

Upset relations of production

It follows, therefore, that for the proletarians to take effective power that effective power must rest with the state; that in the case of the 'socialist' revolution power must have come to be the prerogative of the bourgeoisie.⁵⁸ "The working class movement is never independent, never is of an exclusively proletarian character, until all the different factions of the middle class, and particularly its most progressive faction, the large manufacturers, have conquered political power and remodelled the State according to their wants."⁵⁹

Take power = the state ————— Power with Bourgeoisie

Upset relations of production

However the bourgeoisie and its 'representative', the State, will not easily abdicate power to the proletariat and hence the transition of power to the proletariat cannot be effected through a gradual process but must be through a revolution. "They openly declare their ends can be obtained only by the forcible overthrow of all existing social conditions."⁶⁰

Revolution=take power = State ————— Power with Bourgeoisie

Upset relations of production

The seizure of the State and political power in Marx's socialist revolution represents the political emancipation of one class of society, the proletarians, from a situation of suppression, exploitation and suffering. However, for Marx, the seizure of political power by the proletariat represents more than the liberation of the working class. Indeed it heralds the emancipation of all men and it is only in their role of being representatives of all men that the proletariat may conclude a successful revolution. Marx states: "If, therefore, the proletariat should overthrow the political rule of the bourgeoisie, its victory would only be temporary, only an episode in the service

of the bourgeois revolution, so long as the material conditions which would render necessary the abolition of the bourgeois mode of production and consequently the definitive overthrow of political rule of the bourgeoisie, had not yet been created in the course of historical development".⁶¹

The implication of this statement must be that as revolution is a human activity the material conditions of which Marx speaks and the success of revolution are mediated by a general will, or felt need, to replace the bourgeois system by the 'more advanced' socialist one. But as previously mentioned the bourgeoisie and its 'agent' the State administration would not readily give up power and thus, for the majority of the population to seek their overthrow, they must be seen as unjustly seeking the continuance of their own power. This Marx expresses as follows: "In order that the revolution of a people should coincide with the emancipation of a special class of society (and this, according to Marx is a necessary condition of a successful revolution) it is necessary for a class to stand out as a class representing the whole of society. This further involves, as its obverse side, the concentration of all the defects of society in another class...In order that one class should be the class of emancipation par excellence, another class must be the class of manifest subjugation".⁶²

If, then, the predicted outcome of the will of the proletariat to take political power is revolution and both this and the will to power cannot exist until the bourgeoisie themselves have captured political power, then what of the stage preceding this, and further what of the developments leading to revolution itself? This for Marx is the period of intensifying class struggle prior and leading to revolution. Of this period Marx states: "Meanwhile the antagonisms between the proletariat and the bourgeoisie is a struggle of class against class, a struggle which carried to its highest expression is a total revolution".⁶³ Let us analyse this build up of antagonism of class struggle to its 'highest expression'.

The first prerequisite of class struggle is that there be classes

and indeed this is one of the central political assertions of the entire Marxian system. Classes are fundamental, existent and the motors of history: "The history of all hitherto existing society is the history of class struggles".⁶⁴ "Freeman and slave, patrician and plebeian, lord and serf, guild master and journeyman, in a word oppressor and oppressed, stood in constant opposition to one another, carried on an uninterrupted now hidden, now open, fight..."⁶⁵

However Marx offers no systematic exposition of class as a concept other than at the end of the third volume of Capital and even here it is only to raise the question of definition and is left uncompleted. Marx's notion of class, therefore, remains implicit. Even in the Communist Manifesto, perhaps the work which provides the most systematic exposition of class, it is Engels who defines the two main classes of capitalist society. "By bourgeoisie is meant the class of modern capitalists, owners of the means of social production and employers of wage labour. By proletariat, the class of modern wage labourers, who, having no means of production of their own, are reduced to selling their labour-power in order to live"⁶⁶ and from this definition, which is perfectly consistent with Marx's main usage of the term, political class becomes persons grouped together by a common relationship to the means of production - machinery, land etc. - and most importantly for Marx, in capitalist society, the various relationships to the means of production (factory owners, land owners, managers of property and a propertyless work force) reduces to a central relationship of owners and non owners and consequently two main classes. "Our epoch, the epoch of the bourgeoisie, possesses, however, this distinctive feature: It has simplified the class antagonisms. Society as a whole is more and more splitting into two great hostile camps, into two great classes directly facing each other - bourgeoisie and proletariat."⁶⁷ It is implicit within Marx's use of the concept of class that to constitute a class persons must not only have a common relation to the means of production but must also act in support of claims aimed at the betterment of their common (socio-economic) lot; "In so far as millions of families live under economic conditions of existence that separate their mode of life, their interests and their culture from those of the other classes and put them in hostile opposition to the latter, they form a class.

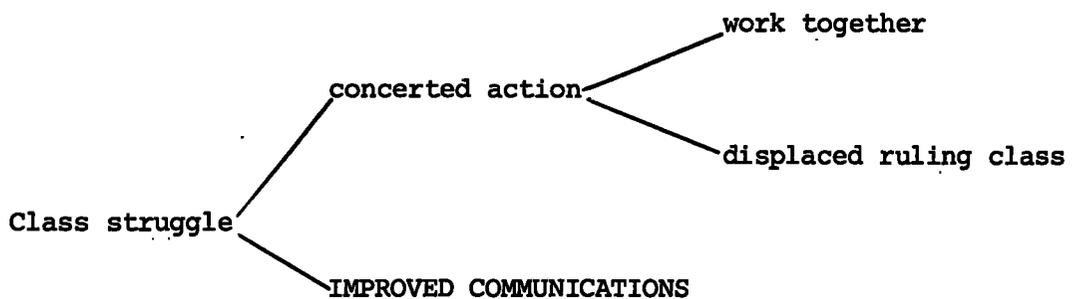
In so far as there is merely a local interconnection among those small holding peasants and the identity of their interests begets no community, no national bond and no political organisation among them, they do not form a class".⁶⁸

The first prerequisite of the making of the working class is that they be brought into constant association with each other. This, for Marx, is a necessary outcome of the centralisation of vast amounts of productive capital in large scale factories: "Modern industry has converted the little workshop of the patriarchal master into the great factory of the industrial capitalist. Masses of labourers, crowded into the factory, are organised like soldiers".⁶⁹ The class nature of the thus assembled workers is further enhanced by a cultural infusion brought by previously privileged persons who for economic reasons find themselves in the ranks of the propertyless workers. These Marx sees as providing elements of consciousness that contribute to the transformation of merely associated workers into a class of workers. "It is an inevitable phenomenon, rooted in the course of development, that people from what have hitherto been the ruling classes should also join the militant proletariat and contribute cultural elements to it."⁷⁰

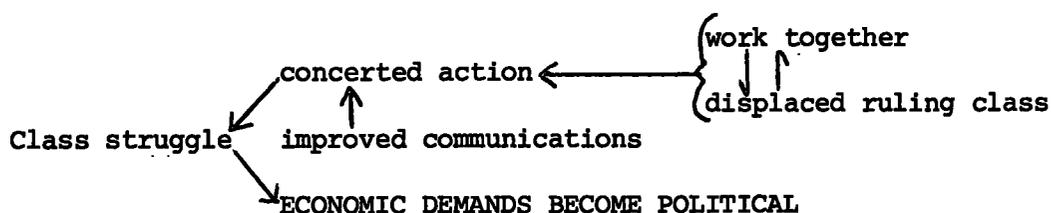
Initially the new groups of wage labourers seek to re-establish the dignity of craftsmanship in isolated struggle with individual factory owners. "The proletariat goes through various stages of development. With its birth begins its struggle with the bourgeoisie. At first the contest is carried on by individual labourers, then by the work people of a factory, then by operatives of one trade, in one locality, against the individual bourgeois who directly exploits them. They direct their attacks not against bourgeois conditions of production, but against the instruments of production themselves; they destroy imported wares that compete with their labour, they smash to pieces machinery, they set factories ablaze, they seek to restore by force the vanished status of the workmen of the Middle Ages."⁷¹ For Marx the importance of such activity is as the genesis of conscious action for the betterment of class interests - the gradual emergence of the wage labourers as a unified economically active class.

Class struggle - CONCERTED ACTION BY PROLETARIANS Workers together in large
factories
displaced ruling class

The next stage of development of the proletariat as a class is the increasing geographic scale of this unified activity. Here the vast improvements in communications play a role; "This union (the centralisation of numerous local struggles) is helped on by the improved means of communication that are created by modern industry and that place the workers of different localities in contact with one another".⁷²



Continued concerted action over wages and conditions continues to grow but the final stage of transition of the proletariat into a true class, fully conscious of its own common interest, only arrives when they begin to act politically. For, to Marx, the actions of a class are political and not merely economic. This transition to political activity is achieved by the proletariat actively pursuing the transition of economic gains into laws: "...the attempt in a particular factory or particular industry to force a shorter working day out of the capitalists by strikes, etc., is a purely economic movement. On the other hand the movement to force an eight-hour-day, etc., law is a political movement. And in this way, out of the separate economic movements of the workers there grows up everywhere a political movement that is to say a movement of the class, with the object of achieving its interests in the general form, in a form possessing a general social force of compulsion".⁷³



The whole of the build up of class consciousness and class struggle between the proletariat and the bourgeoisie cannot take place except in the setting of a society in which the bourgeoisie has already conquered economic and political power, for it is only under the condition of bourgeois centralisation that mass united classes can emerge: "The necessary consequence of this (economic centralisation) was political centralisation. Independent, or but loosely connected provinces, with separate interests, laws, governments and systems of taxation, became lumped together into one nation, with one government, one code of laws, one national class interest, one frontier and one customs tariff".⁷⁴ National class struggle can ensue; the proletariat achieves its full status as a politically conscious, united and active class.

Finally, in the development of class struggle, are the underlying economic developments which continually worsen the conditions of the working class; chief among which being their effect on wages. Wages, as 'the price of labour' fluctuate according to the law of supply and demand, when the supply of labour exceeds the demand wages fall. When the supply falls short of demand wages rise. The excess of labour supply over demand Marx refers to as the 'reserve army' of wage labour and claims that it is this reserve army that is the chief determinant of wages: "Taking them as a whole, the general movements of wages are exclusively regulated by the expansion and contraction of the industrial reserve army..."⁷⁵ and further he argues that the fluctuation of the reserve army's relative size⁷⁶ is effected by a complex of economic parameters but overall the ratio of working labourers to 'reserve army' tends to decrease bringing with it excess supply over demand and hence continually worsening conditions for the working population.

Chief among the causes of the changing ratio of reserve to active labour are the economic changes wrought by technological innovation.

Thus "The accumulation of capital, though originally appearing as its quantitative extension only, is effected, as we have seen, under a progressive qualitative change in its composition, under a constant increase of its constant, at the expense of its variable constituent".⁷⁷ - as capital increases the proportion of labour to machinery decreases - and as new production employing the freed labour does not expand at the same rate the expansion of capital it "...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".⁷⁸

Centralisation, (Marx cites here the effects of the introduction of joint stock companies making possible enormous capital investment in railways as an example centralisation bringing return to scale in machinery and capital investment)⁷⁹ representing increasing returns to scale, also increases the 'inorganic composition of capital' - the ratio of machinery to labour - and in its amassed form, at time of renewal, presents itself much more readily for technological innovation than its dissipated counterparts. "The masses of capital fused together overnight by centralisation reproduce and multiply as others do, only more rapidly..."⁸⁰ and "The absolute reduction in the demand for labour which necessarily follows from this is obviously so much the greater, the higher the degree in which the capital undergoing the process of renewal are already massed together by virtue of the centralisation movement".⁸¹

Implicit within the changes of capital composition wrought by centralisation is the revision of technique and machinery - innovation. It seems that throughout his work Marx considered innovation as a constant factor independent, to a degree, of economic forces and possibly even as the force underlying economic changes themselves. (The whole importance of relations of production, praxis, indeed Marx's ontology leads to change, in its form of technological innovation as being centrally causal to man's social and economic existence.) A further factor tending to increase the ratio of reserve army to employed is the absolute increase in the numbers of the working population brought about by the increasing employment of women and children and displaced members of the ruling class also help to

swell the ranks of the proletariat and consequently the reserve army.

For Marx, then, the intensifying class struggle is the political result of the increasing hardship felt by the working class as a result of growing unemployment, and its supply and demand corollary, a fall in wages to subsistence level. In periods of 'over production' the situation becomes even worse. Here the numbers of unemployed accelerate due to shrinkage of investment, but although an economic determinant of unemployment, Marx's analysis seeks to highlight this movement as of great political significance as well. As an accelerator of the increasing misery of the working class "a new revolution is possible only as a consequence of a new crisis".⁸² There is also the suggestion that the increasing frequency of crises in a capitalist society are themselves testimony to the underlying conflict between the organisation of production and the way it is owned, "the material productive forces of society come into conflict with the existing relations of production..."⁸³ a conflict, which in the Marxian system is the root cause of all major social and political change. "From forms of development of the productive forces the relations turn into their fetters. Then begins the epoch of social revolution."⁸⁴ and this may add to class conflict not only on an immediate level of increasing misery etc. but also on an ideological level as a consciousness of the underlying progression. Thus "in considering such transformations a distinction should always be made between the material transformation of the economic conditions of production ...and the legal, political, religious, aesthetic or philosophic - in short, ideological forms in which men become conscious of the conflict and fight it out".⁸⁵ Economic crisis is thus central to Marx's theory of revolution.

There are, according to Marx, a number of causes of recurrent crisis, the main being over production, the economic pressures of capital accumulation, credit changes and the renowned 'falling rate of profit'.

Over production

Marx divides productive activity within an economy into two 'departments', capital production and consumer production, and claims

that for economic stability to ensue each department must completely sell its products. However the rate of production within each department is independent of the other and hence renders inter-departmental supply and demand a matter of pure chance and crises inevitable. "A crisis could be explained only by a disproportion of production in various branches, and by a disproportion of the consumption of the capitalists and the accumulation of their capitals."⁸⁶ Let us look at this relationship, or lack of it, in more detail.

For equilibrium to obtain between supply and demand the demand from each department must equal the net production of each. The demand for capital production is the demand for capital needed in the production processes of 'Department II' (the consumer production 'department') plus the demand for capital in capital replacement from department I (the capital producing department). As Marx divides the factors of production into fixed capital (machinery etc.) 'c' and variable capital (labour) 'v' and includes in his 'productive equation' 's' the element of surplus value, the demand for capital goods derived from the equation for department II - commodities = $c_{II} + v_{II} + s_{II}$ is c_{II} . The net production in department I - that is the production of department I minus the cost of capital used up in those processes is $v_I + s_I$ or $C_I - c_I$ (full equation being $C_I = c_I + v_I + s_I$).

For equilibrium the production capacity of department I must be equal to the market capacity of departments I and II i.e. $c_I + c_{II}$. That is $C_I = c_I + c_{II}$.

For department II - the consumer department - its production capacity C_{II} must equal the market provided by the values produced by both its own production (net = $v_{II} + s_{II}$) and the production of department I, $v_I + s_I$ (and not, of course, consumed in capital replacement).

Thus the overall conditions for equilibrium are:

$$C_I = c_I + c_{II}$$

$$C_{II} = (v_I + v_{II}) + (s_{II} + s_I)$$

Now as the production in the two departments are intrinsically unrelated (although it is not specifically stated as such Marx's analysis does amount to an attempt to describe a relationship between the two departments of production - a relationship of cyclical slump and boom - he does not stress this perspective of dynamic equilibrium as it would be tantamount to conservatism in relation to his revolutionary theory) and as the ratio of machinery to labour used in their processes is always changing the probability of the two departments being in disequilibrium is great. For example: as the result of innovation etc. let us say that the ratio of machinery to labour (Marx calls this ratio of fixed capital to 'variable capital' - the organic composition of capital) decreases in consumer production. This would lead to a decreased demand for the products of department I i.e. $cI > cI + cII$ and consequently, due to reduced sales in department I, $cII < vI + sI$, i.e. the monies realised by department I are not enough to buy the net production of department II: department I is unable to sell all of its goods to department II and in consequence is unable to buy all of department II's net production. The rest of the argument is familiar to modern economics: over production of capital goods is corrected by reducing production causing reduced levels of employment. Reduced employment decreases demand for the net production of department II, department II cuts production and by this measure reduces the demand for the products of department I still further and cuts demand for its own products by reducing effective demand through reduced employment. The downward spiral is formed. A crisis follows.

Accumulation

The above model of interdepartmental supply and demand is modified by the capitalists' desire to accumulate capital; a rational desire based on the need to modernise in order to cut costs and stay ahead in the competition for markets. The effect of accumulation is to withhold monies from consumption (in modern economics Savings = Investments) and hence cut effective demand for the products of department II, precipitating over production, unemployment and the consequent downward spiral. In Marx's own words "The last named power (market capacity) is not determined either by the productive power, or by the absolute consuming power, but by the consuming power based on the antagonistic conditions of distribution, which reduces the consumption of the great mass of the population to a

variable minimum within more or less narrow limits. The consuming power is furthermore restricted by the tendency to accumulate, the greed for an expansion of capital and the production of a surplus value on an enlarged scale. This is the law of capitalist production imposed by incessant revolutions in the methods of production themselves, the resulting depreciation of existing capital, the general competitive struggle and the necessity for improving the product and expanding the scale of production, for the sake of self-preservation...But to the extent that the productive power develops, it finds itself at variance with the narrow basis on which the conditions of consumption rests".⁸⁷

Credit

As capitalism develops the use of credit to finance capital formation increases, especially in periods of prosperity. Marx affectively names those who finance enterprise almost totally from credit as 'knights of capitalism' "those knights now appear in large numbers, who work with reserve capital, or even without any capital at all and operate wholly on a credit basis".⁸⁸

A further complication arises in the form of the intervention of the wholesaler who provides credit notes on expected sales. In the event of market contraction, for what ever reason, changes in the availability of credit can precipitate a crisis. On the one hand those 'knights' find that credit is not extended them and consequently monies for capitalisation can only come from effective decreases in wages, extended hours of work etc. causing decreases in demand and crisis: "So long as the social character of labour appears as the money existence of commodities, and thus as a thing outside of actual production, money crises are inevitable, either independently of crises or intensifying them".⁸⁹

Falling Rate of Profit

One of the 'Laws' stressed within the work of Marx is the 'Law of the falling rate of profit'. Simply it consists of a prediction that the rate of profit will continually decline within a developing

capitalist economy. For present purposes suffice it to say that declining profits lead to a decline in the money available for investment - a decrease in demand for the products of department I. This leads to decreased employment and an ensuing crisis. Further, the falling rate of profit inhibits the formation of new capitals as well as capital replacement. The falling rate of profit "...checks the formation of new independent capitals and thus seems to threaten the development of the process of capitalist production".⁹⁰

Fixed Capital Replacement

The actual timing of the trade cycle, the recurring crisis and booms, is particularly determined by the need to replace large amounts of fixed capital - machinery, buildings etc. 'Circulating capital' (raw materials) is used up and replaced at each sale but fixed capital is only used up slowly and needs replacing only periodically. It follows, therefore, that for most periods of production the values produced are in excess of the values demanded; that is the values produced equal the value of labour, materials and fixed capital used up in the process, but the demand is the result of payment made to labour, the value of surplus and cost of materials replacement only.

Supply = Value (labour, surplus, materials, capital used)

Demand = Value (labour, surplus, materials)

therefore S > D

Periodically the fixed capital requires replacing and at this point the values produced will fall far short of the values demanded. i.e.:

Supply = Value (labour, surplus, capital used)

Demand = Value (labour, surplus, materials, total capital replacement)

Thus "So much at least is evident that this cycle comprising a number of years, through which capital is compelled to pass by its fixed part, furnishes a material basis for the periodical commercial crisis in which business goes through successive periods of lassitude, average activity, over production and crisis. It is true that periods in which capital is invested are different in time and place. But a crisis is always the starting point of a large

amount of new investments. Therefore it also constitutes, from the point of view of society, more or less of a new material basis for the next cycle of turnover".⁹¹ If, and as, fixed capital becomes more complex, so the periods of total replacement become less frequent - the timing of the cycle elongates.

Of the mechanisms of recovery Marx has much less to say. After a crisis there is much bankruptcy and insolvency, old capital is to be had at prices well below its value bringing high levels of profit, added to which capitalists go for innovation with new machinery and increasing combination. The result is to reduce costs of production below the average (and their individual value below the accepted general social value - introducing an element of 'price-lag') thus also lifting levels of profit and thus a crisis becomes the start of recovery. The thus stimulated increased investment counteracts the downward pressure of the crisis initially equalising it to produce an overall effect of economic stagnation and then outstripping them to go on to a production of a higher level than that previous, eventually leading to crisis once again.

Before leaving the economic postulates of Marx's theory of revolution one factor, the falling rate of profit, deserves further examination. For Marx it had great importance "Simple as this law appears from the foregoing statements, all of political economy has so far tried in vain to discover it, as we shall see later on. The economists saw the problem and cudgled their brains in tortuous attempts to interpret it. Since the law is of great importance for capitalist production, it may be said to be that mystery whose solution has been the goal of the entire political economy since Adam Smith".⁹² Perhaps more than any other economic 'law' this formulation explained and foretold the worsening conditions of capitalism. The inevitable movement towards its dissolution and the economic force, born of its own development in which capitalism sired its own successor.

Marx's prediction of the falling rate of profit was derived as follows: Continuous technological change is a feature of modern capitalist society - the machinery available for productive purposes is continually being modified, improved and revolutionised. As the

result of the inclusion of new or modified machinery in the productive process the labour time necessary to produce each item falls and hence - in Marxian terms - the value of each item falls (as value is the amount of 'socially necessary labour time embodied in a product'). In current economic terms this would be equivalent to a statement that new more efficient machinery decrease the cost of production as the decrease in labour costs amounts to more than the increased cost of the machinery calculated as a marginal exhaustion of the new capital per item produced. Marx's concept of socially necessary labour time embodied in a product is but another way of stating the same thing except that it reduces the current three factors of production of modern economics to a Classical conception of one. Thus instead of capital - for Marx fixed capital - costed as according to market price etc. its value is costed as 'socially necessary labour time' used in its production.

To return to the main stream of the argument; the value of each item drops and hence the price drops.⁹³ In an atmosphere of competition the reduced prices of one firm force others into line and throughout that branch of industry either companies introduce similar machinery or face falling demand. Therefore for that branch of industry the proportion of variable capital (labour) to constant capital (machinery etc.) decreases - in Marx's terms the 'organic composition of capital' decreases.

Now the capitalist has a passion for accumulation "Accumulate, accumulate! That is Moses and the profits...Therefore save, save, i.e. reconvert the greatest possible portion of surplus value, or surplus product into capital! Accumulation for accumulation's sake, production for production's sake..."⁹⁴ and to do so they must strive for higher profits (increased surplus value) and as the only way to decrease the amount of necessary labour time spent in reproducing labour compared with total labour time is to make labour more efficient by introducing more and better machinery the capitalist must keep innovating.

The rate of profit in Marxian terms is
$$\frac{\text{surplus value}}{\text{value of capital used up} + \text{value of labour}}$$

Surplus value is defined as that value created in the application of

labour to raw materials etc., above that value necessary to reproduce labour - the value of food, clothing, housing etc., - represented as wages. The value of capital used up is the value of raw materials. The value of labour is as wages paid. In other words the rate of profit is the extra value created in production above and beyond the total outlay, as a proportion of the total outlay. It may be noted that Marx takes no account of fixed capital used up in the productive process but is only concerned with monies advanced as compared with monies received.

The main determinants of the rate of profit are: the rate of surplus value - the relation of the value produced by labour to the value consumed and the organic composition of capital. As has already been mentioned, the organic composition of capital is always increasing and if the rate of surplus value is taken as constant, then the rate of profit will fall:

e.g. $p_1 = \frac{s}{c+v}$

$p_2 = \frac{s}{2c+v}$ and if $\frac{s}{v} = K$

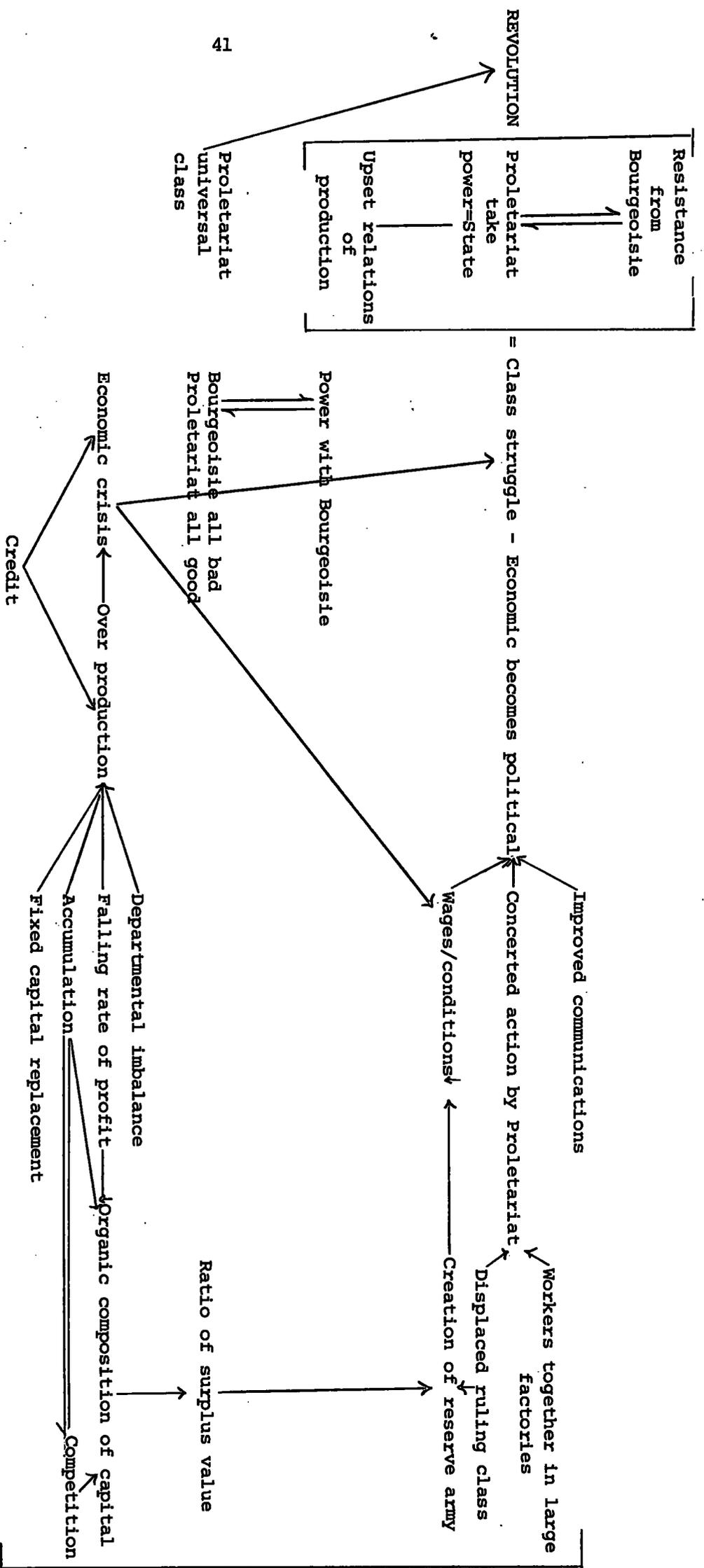
then $p_2 < p_1$

In taking account of the rate of surplus value which pretty obviously also changes Marx admits that in the increasing organic composition of capital the productiveness of labour must increase and it follows that the rate of surplus value as a function of the productiveness of labour must, to some extent, alleviate the effects on the fall in the rate of profit. However Marx claims that the increase in the rate of surplus value leads to increased unemployment - i.e. a decrease in the number employed - and that the overall factor of the increased rate of surplus value multiplied by the decrease in the numbers employed taken with the fall in the rate of profit (with rate of surplus value held constant) is greater than the increase due to the increased productiveness of labour: the overall effect is still a decreasing rate of profit. "The two movements (the increase in the rate of surplus value and the decrease in the number of labourers employed) not only go hand in hand, but mutually influence

one another and are phenomena in which the same law expresses itself. Yet they effect the rate of profit in opposite ways. The total mass of profit is equal to the total mass of surplus value, the rate of profit = $\frac{s}{C} = \frac{\text{surplus value}}{\text{advanced total capital}}$.

The surplus value, however, as a total, is determined first by its rate, or, what amounts to the same, by the magnitude of the variable capital. One of these factors, the rate of surplus value, rises, and the other, the number of labourers, falls (relatively and absolutely). In as much as the development of the productive forces reduces the paid portion of employed labour, it raises the surplus-value, because it raises its rate; but in as much as it reduces the total mass of labour employed by a given capital, it reduces the factor of the number by which the rate of surplus-value is multiplied to obtain its mass." but "It may, for this reason, well check the fall in the rate of profit, but cannot prevent it altogether".⁹⁵

The overall picture is therefore:



Thus the picture that Marx presents is of a deepening stress between ownership structures and production needs and the resulting plight of the wage labourer. This deepening stress combines with and feeds the 'revolutionary will' of the proletariat, or to state this in Marx's own terms; the social relations of production become a fetter on production providing a contradiction in the underlying economic structure that reflects itself at the ideological or super-structure as the revolutionary will and capacity of the proletariat.

INTRODUCTION

Thus Marx's theory of revolution is a complex model of relationships involving, even in this simplified form, upward of twenty-five variables. Further the model presented here does not trace the derivation of revolution back into Marx's most elementary concept of value itself. Even so sufficient outline is given to re-affirm that Marx's work is not merely economic alone but is, as was suggested at the outset, a synthesis of the three disciplines of economics, politics and philosophy and a consideration of the first four or so variables isolated in the previous chapter immediately reveals that in the construction of his theory Marx moves from the purely economic to the political, i.e. from 'economic crisis' and a relatively economistic class struggle to an overtly political 'will to revolution'. This, it is suggested, is achieved by the use of an approach borrowed from philosophy. It is suggested here that Marx postulates a social psychological state called 'Alienation', derived from philosophy, that allows him to predict the reactions of the 'proletariat' to the economic situation in which he predicts they will find themselves and it is the task of this chapter to look more closely at the nature and status of this concept before moving to a detailed consideration of the status of the more purely economic elements of his theory of revolution.

Alienation

In nineteenth century Germany philosophy was dominated by the intellectual tradition of Hegelianism which although not unique in its concern with alienation did cast it into a novel position. Hegel made it central to his total philosophical system - an idealism that saw nature and object as the process of thought going outside of itself (objectification) and in doing so causing a loss of reality to thought itself (alienation) - or as modified by Feuerbach into subjective terms, the individual through whom thought manifests itself,

in conceiving thought as object, loses himself in his own creation.

This conception of the world stressed the self creation of man's consciousness, a self generation that Marx wholeheartedly subscribed to, although it was expressed within a context that Marx rejected and it was adopted by Marx only after certain modifications to its idealist context had been achieved, first by Feuerbach and later by himself.

The Feuerbachian modification of Hegel's philosophy, as we have seen, centred on taking the concept of alienation developed by Hegel and turning it against philosophy itself.

Thus that thought, and the idea in particular, constitute a reality which goes out of itself, loses itself in a natural and objective world - is an alienated view of the world itself. Feuerbach's 'attack' consisted of simply reversing the subject and object of Hegel's philosophy - man became subject and idea became man's predicate. Hegel's philosophy was an alienation of man. All that man saw as 'idea' was a loss to him in the same way as for Hegel objective existence represented, in one of its moments, a loss to the thinking subject. For Feuerbach the Deity that for Hegel resided in the idea and spirit, resided in man: 'man becomes God for man'. (Of interest here is the implicit assertion that Alienation for Feuerbach requires a conscious element on the part of the subject in so far as he makes no claim of 'ownership' upon the manifestation of his own 'essence'; similarity can be found in later Marx when, again, it seems implicit that consciousness mediates practical alienation.)

Of those aspects Marx took directly from Hegel there was, most importantly, the role of activity in the process of alienation. Although in an alienated form in Hegel it represents a central premise of Marx's claimed connection between alienation and economic activity. Marx says of Hegel's work in general, "Hegel's standpoint is that of modern political economy. He grasps labour as the essence of man - as man's essence in the act of proving itself: he sees only

the positive, not the negative side of labour. Labour is man's coming-to-be for himself within alienation, or as alienated man".⁹⁶ Labour as the essential act of man's self-creation is recognised by Hegel but "The only labour which Hegel knows and recognises is abstractedly mental labour".⁹⁷ Where thought is self mediated by transmutation into objects for Hegel, man himself is mediated by a real objective existence for Marx.

It is the concern for man's self objectification is his economic activity that synthesises the philosophical and the economic in Marx and it is this transition, expressed in the 1844 manuscripts as a synthesis of philosophic and economic concerns through the concept of alienation, that is the base of the value position of the total Marxian system. The Marxian system starts with Alienation and ends with it.

Marx had very early on in his life concluded that only a democracy could truly accomplish the unity of mankind (for Hegel the oneness of all things). Democracy represented social control of the social product on a political level - the level of the State - an overcoming of the separation of the social nature of man from his practical everyday life. Put more simply Marx saw mental and physical activity, aimed predominantly at economic objectives (the satisfaction of material needs), as the creator of man's self consciousness. This activity had, for Marx, always been a predominantly social or co-operative and as such also held the key to satisfying a fundamental human need to interact with fellow men. The gradually developing conscious awareness of the forms of satisfying both the economic and social needs of men Marx saw as being institutionalised in various political rights and obligations in the form of the State.

In this way Marx adapts Hegel's similar concerns with man's self-creation and with the relationship of the State to this self-creation (albeit in a 'materialist' framework).

Marx continues his analysis by importing Hegel's concept of alienation into his framework by applying it to the labourers' loss

of control over this social labour. Marx saw the history of man as being one in which the control of social labour had resided with a ruling class whilst the effort resided with a ruled class. It was the resultant plight of the ruled that he characterised as alienation. Whilst a ruling class benefited from the products of social labour the ruled class tended to receive only that part of the results of their labour that would enable them to survive and in addition had to give up at least some part of the control of their own labour process to that ruling class.

Like man's consciousness in general the developing consciousness of this relationship was also reflected into institutions of the State although as the political representation of the right and duties necessary for the continuance of economic production, the State quite naturally tended to reflect the power of the ruling 'class' over the ruled.

Returning to man's self creation by his own labour; whereas Hegel saw the motive force of change as being 'Spiritual' Marx saw it as the pressure to satisfy new needs that arose out of the very processes of production itself. Thus although Marx saw History as the History of the 'rulers' and 'ruled' he did not see it as static, nor indeed did he see this relationship as static. As the drive to satisfy new needs went apace so the invention of new machinery and its consequent social organisation of production underwent change and was reflected at the political level. Marx characterised a number of such major changes as historical epochs and analysed, as we have already seen, the epoch of capitalism in great detail.

For Marx capitalism was signified by the extension of private ownership of the means of production by others than those who laboured in production (a social and political relationship) - and by the increasingly absolute separation of labour and the ownership of the products of labour which in turn raised social psychological alienation to a degree previously unknown in history. The labourer is forced to sell his 'life activity' in order to live and in selling

his labour gives up control of its use. "This relation is the relation of the worker to his own activity as an alien activity not belonging to him; it is activity as suffering, strength as weakness, begetting as emasculating, the workers own physical and mental energy, his personal life for what is life other than activity - as an activity which is turned against him, neither depends on nor belongs to him."⁹⁸

It is in response to the implied degradation and frustration that the wage worker feels in the extreme alienation of capitalism, that his political will to revolution emerges. Emerges presumably to alleviate a spiritual suffering and in restoring control over the methods and purpose of his own labour in 'communism' opens up a 'new phase in man's history'. As Lewis expresses it Marx's system is centrally concerned with social labour:

- " (a) producing man himself and his world;
 (b) proceeding by exploitation and creating alienation;
 (c) transcending class society to release the forces of production, overcoming alienation and achieving fully social labour and fully developed man."⁹⁹

It is surprising that so many modern commentators on Marx do not see that years after rejecting Hegel's spirit as the mover of history Marx returns to spirit as the historical mover. It is for Marx man's spirit, torn asunder by exploitation, that reasserts itself in revolutionary will, that gives the contradiction of society their meaning, that animates the whole of social and political history in the form of a need to overcome alienation.

Certain questions, though, remain. In his theory of revolution is it necessary for the proletariat to come to understand the nature of their own 'spiritual frustration' in order to understand its solution as a political and, according to Marx, revolutionary one or is alienation merely a contributor to the will to change and therefore neither a necessary or, on its own, a sufficient condition for revolution? On these points Marx is unclear (as indeed are many of his commentators) and although nowhere in his writing is there a clear statement on this point his writings do provide a clue

to the status he places upon the concept of alienation.

Whilst alienation is central to parts of his 1844 manuscripts is it not mentioned in the Communist Manifesto. Whilst his draft notes for 'Foundations of the Critique of Political Economy' (Grundrisse) '...contains hundreds of pages where the problems of alienation are analysed in a comprehensive way'¹⁰⁰ it is hardly touched upon directly in Capital. The 1844 manuscripts and the Grundrisse are both self clarificatory tracts; the Communist Manifesto and Capital are public statements aimed at 'the proletariat and its allies'.

Drawing these points together enables us to begin to formulate an answer to the question of the status of alienation. That it appears early and late in Marx's writings testifies to its consistent importance in his thinking and work. That it appears centrally in works of clarification suggests that it is a key and consistent animating concept within the structure of Marx's thinking and theoretical development. However, that it does not appear as in any way central in his two major 'public' and therefore political works (we say political for by his own admission his task was to change the world and therefore it is fair to assume that his writing for publication represented one way in which he hoped to achieve such changes) suggests that although the concept might be central in some way it is not necessary for the 'proletariat' to be familiar with it to move from economic to political concerns. In other words an understanding of alienation is necessary to understanding what causes the proletariat to move from economic to political action but such an understanding is not necessary on the part of the proletariat for this to happen.

We are thus able to conclude that whilst the concept of alienation is central to Marx's thinking it is central as a tool used in analysis and that indirectly through analysis of his own work it is clear that his revolutionary theory, as he wished to present it to the public, (and therefore hope to cause such a revolution) does not depend on the analysis of the concept of alienation but on more purely economic concerns.

In assessing the status of his theory of revolution, then, it is to a closer analysis of its economic dimensions that we must return.

CHAPTER 4Prediction

To make an assessment of the status of Marx's predictions necessitates an exploration of and answer to three fundamental questions:

1. What type of predictive mechanisms are used by Marx?
2. What status can be attached to these predictive mechanisms in themselves?
- 3.a In what way and how well does he use them: to what extent does evidence support the prediction and perhaps also
- 3.b Which are the central predictions which are of lesser importance?

It is suggested in this paper that the predictions which are of central importance to the Marxian system are those contained in his theory of revolution underpinned by a general theory of Alienation although we have argued that it is the economic dimensions of his theory of revolution that Marx would have his worth judged upon. So we turn first to the complex theory of revolution¹⁰¹ and, within this, to the 'Law of the falling rate of profit'.

THE FALLING RATE OF PROFITThe Law

"Assuming a given wage and working day, a variable capital, for instance 100, represents a certain number of employed labourers. It is the index of this number. Suppose £100 are the wages of 100 labourers for, say, one week. If these labourers perform equal amounts of necessary and surplus labour, if they work as many hours for themselves, i.e. for the reproduction of their wage, as they do for the capitalist, i.e. for the production of surplus value, then the value of their total product = £200 and the surplus value they produce would amount to £100. The rate of surplus value, s/v , would = 100%. But, as we have seen, this rate of surplus value would nonetheless express itself in very different rates of profit, depending on the different volumes of constant capital c and

consequently of the total capital C, because the rate of profit
 $= s/c$ "¹⁰²

In more simple terms, if a labourer's productivity is constant and he produces products in a given period of say twice the value of his own wage then surplus-value (the value of production in excess of wages) S is equal to the value of labour V (for our purposes at this stage we will ignore the specific meaning that value of labour has for Marx and just consider it as the same as the wages paid) then the rate of production of surplus-value (for Marx the rate of surplus-value) is 1:1 or 100%. Now although the rate of surplus value may be constant as Marx defines the rate of profit as the net return of capital advanced, then if the amount of (fixed) capital advanced in production varies so does the rate of profit. To take Marx's own example where C = fixed capital (all means of production) and P = rate of profit, V = wages (value of labour) and S = surplus value, then:

$$\begin{aligned} \text{"If } C = 50 \text{ and } V = 100 \text{ then } P &= \frac{100}{150} = 66\frac{2}{3}\% \\ \text{If } C = 100 \text{ and } V = 100 \text{ then } P &= \frac{100}{200} = 50\% \\ \text{If } C = 200 \text{ and } V = 100 \text{ then } P &= \frac{100}{300} = 33\frac{1}{3}\% \\ \text{If } C = 300 \text{ and } V = 100 \text{ then } P &= \frac{100}{400} = 25\% \\ \text{If } C = 400 \text{ and } V = 100 \text{ then } P &= \frac{100}{500} = 20\%" \end{aligned}$$
¹⁰³

In this example it is the monies advanced for purchases other than labour that represent the independent variable, as this 'inorganic capital' (productive means other than labour, itself called organic capital) increases in proportion to the organic capital so the rate of profit falls.

The law of 'falling rate of profit' was considered by Marx to be one of his most important contributions to the understanding of capitalist economic structure. Writing to Engels during the period in which he was beginning to formulate the 'law' he stated, "I am getting some nice developments. For instance, I have thrown over the whole doctrine of profits as it has existed up to now...the

tendency of the rate of profit to fall as society progresses. This already follows from what was developed in Book 1 on the change in the composition of capital with the development of the social productive forces. This is one of the greatest triumphs over the great pons asini of all previous economics".¹⁰⁴

Thus far then, in its simple unmodified version, the law of the falling rate of profit may be represented as:

If V = value of labour = K

C = equipment and materials

S = value produced in excess of cost of labour = K

P = rate of profit

$$\text{and } P = \frac{S}{C + V}$$

as S and V are held constant

$$P \propto \frac{1}{C}$$

i.e. as the amount of materials and equipment increases in proportion to a fixed propensity to produce on the part of labour, then the rate of profit falls.

Central to this relationship is the relationship between C (the value of materials and equipment) and V (the value of labour) which Marx calls the organic composition of capital: that is

"...the proportion of its (Capitals) active and passive components, i.e. of variable and constant capital...A definite quantity of labour power represented by a definite number of labourers is required to produce a definite quantity of products in, say, one day and - what is self-evident - thereby to consume productively, i.e. to set in motion a definite quantity of means of production, machinery, raw materials etc. A definite number of labourers corresponds to a definite quantity of means of production and hence a definite quantity of living labour (organic) to a definite quantity of labour materialised in means of production (inorganic)...This proportion forms the technical composition of capital and is the real basis of its organic composition".¹⁰⁵

For the rate of profit to fall it is necessary for the organic composition of capital to increase, that is for the ratio of machinery and materials to labour to grow. Indeed this is so central to the law of falling rate of profit that Marx cites these relationships as almost interchangeable: "The law of the falling rate of profit... states, in other words, that any quantity of the average social capital, say, a capital of 100, comprises an ever larger proportion of means of labour and an ever smaller proportion of living labour".¹⁰⁶ and goes on to state the law in converse - i.e. that decreasing organic composition of capital is necessarily effective as a fall in the rate of profit: "Therefore, since the aggregate mass of living labour operating the means of production decreases in relation to the value of these means of production, it follows that the unpaid labour and the portion of value in which it is expressed must decline as compared to the value of the advanced total capital".¹⁰⁷

$$\text{and } \frac{P}{c^t} < \frac{c}{p^t} \Delta t$$

$$c^t > p^t \Delta t$$

Simply then this is Marx's prediction of the 'law of the falling rate of profit' and before moving to an analysis of the predictive type, status and effectiveness of Marx's 'law' it remains to explicate the mechanism of the law in detail.

THE MECHANICS OF THE LAW OF THE FALLING RATE OF PROFIT

Technological change

Throughout Marx's work technological change, underpinning changes in the methods of production used by Capitalists, is presupposed. Indeed it is one of the prime features of the capitalist mode of production: "The feudal system of industry, in which industrial production was monopolised by closed guilds, now no longer sufficed for the growing wants of the new markets. The manufacturing system took its place...Meantime the markets kept ever growing, the demand ever rising. Even manufacture no longer sufficed. Thereupon,

steam and machinery revolutionised industrial production. The place of manufacture was taken by the giant, modern industry the place of the industrial middle class by industrial millionaires, the leaders of whole industrial armies, the modern bourgeois".¹⁰⁸ and, in the continuation of the bourgeois mode of production, innovation is implied as constantly underlying the ability and need of the system continually to up-date its methods of production: "The Bourgeoisie cannot exist without constantly revolutionising the instruments of production...Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones"¹⁰⁹ and to up-date methods well before existing machinery is fully used up in the productive process. Writing about the continuing increases in complexity and useful life of new forms of capital he states: "Whereas the development of fixed capital extends the length of this life on the one hand it is shortened on the other by the continuous revolution in the means of production, which likewise incessantly gains momentum with the development of the capitalist mode of production".¹¹⁰ (my emphasis)

The capitalist must, according to Marx, make use of and take account of technological innovation. It is not merely a condition of capitalism in general but is also a necessity placed upon each individual capitalist, and each must make provision for it. "He (the capitalist) must accumulate capital in order to extend his production and build technical progress into his productive organism."¹¹¹ In these and many other passages in Capital and the Grundrisse Marx continually assumes a constant 'revolutionising of the means of production' based on technological change. Although, nowhere, (in his major economic works) does he explicitly state this it is none the less both obvious and central. Central to Marx's work is the prediction of CONTINUOUS TECHNOLOGICAL CHANGE.

Continuous technological change - the continuing presentation of new methods and techniques in machinery - is for Marx a necessary condition of the development and continuation of capitalism. However, in no way, from the statements found in the works of Marx, can it be considered to be a central causal factor of the existence of capitalism and certainly it is not a sufficient condition.

Although it is perfectly consistent with a Marxian reading of history to claim that it is from within a dialectical relation between man and nature that directions of change in his economic and social institutions are forged and that technological changes as one side of that relationship reflect 'within them' that development, they are not, on their own, causes. It is only in the unity of themselves as the effects of human will exercised upon the natural laws and propensities that exist for human 'wills', along with those socially conditioned wills, that they take, for Marx, a realistic status in a description of the socio-historical genesis of man. There is for Marx no central cause of historical change; no geist in the machine, only the complexity of human interaction in a context of the present, conditioned by the past and by virtue of imagination directed toward the future. In terms of technological change the past provides the concepts and tools which are used to analyse, synthesize etc. the natural possibilities - an 'engineering science' - the present and future condition the aspirations and effective demand that is placed upon them.

Although continuous technological change, for Marx, is but an expression of an ontology that sees man as a being whose central life activity is change (change of himself - his consciousness - and change of his world - technology and art) there is undoubtedly a suggestion that capitalism is in some way synonymous with an upturn in the rate of technological innovation and conversely the demand for it. In so far as capitalism does represent such an acceleration Marx does suggest a set of causes for this. Predominant among these causes is the opening up of vast new markets for industrial production: "The discovery of America, the rounding of the Cape, opened up fresh ground for the rising bourgeoisie. The East Indian and Chinese markets, the colonisation of America, trade with the colonies, the increase in the means of exchange and in commodities in general, gave to commerce, to navigation, to industry, an impulse never before known and, thereby, to the revolutionary element in a tottering feudal society, a rapid development"¹¹² and as the markets increased, so did the propensity to supply new markets: "Modern industry has established the world market, for which the discovery

of America paved the way. This market has given an immense development to commerce, to navigation, to communication by land. This development has, in its turn, reacted on the extension of industry; and in proportion as industry, commerce, navigation, railways extended, in the same proportion the bourgeoisie developed, increased its capital..."¹¹³ Eventually this modus operandi becomes an end in itself and the capitalist continually seeks new markets extending production and consequently demanding the technologies that will enable this growth: machinery for transport, communication and production. "The need of a constantly expanding market for its products chases the bourgeoisie over the whole surface of the globe. It must nestle everywhere, settle everywhere, establish connections everywhere...The bourgeoisie, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all, even the most barbarian, nations into civilisation."¹¹⁴

Thus technological change is stimulated by the discovery of new markets in the period of capitalist revolution. However, the discovery of new markets is a temporary phenomenon and although this is not dealt with adequately by Marx it is the substance of much concern to later 'Marxists' predominant amongst which is Lenin in 'Imperialism, The Highest Stage of Capitalism' leading to a well developed theme with later Marxists of the notion of the two world wars as 'Imperialist wars' of economies in a state of over production seeking new markets by force. Whatever the final status to be given to the expansion of markets and their saturation it remains a fundamentally important factor in the rise of capitalism and the upturn in the rate of technological change and may be viewed, without violation of Marx's theories, as the breeding ground for a more important economic mechanism resulting from innovation: the mechanism of super-profits that accompany innovation in a particular firm and for a particular capitalist.

ACCUMULATION

Before turning our attention to the relation between super-profits and innovation and through these the declining rate of

profit it is necessary to look at the motivation of the Capitalist. For Marx it is the will of the capitalist that mediates between the mode of production and the necessity to innovate. In Marx's analysis of capitalism it is perfectly possible for an economic unit to reproduce its own capital and to be placed in a position of ongoing production without expansion. This is simple reproduction and is a necessary precondition of all societies. "No society can go on producing...unless it constantly reconverts a part of the products into means of production, or elements of fresh products. All other circumstances remaining the same, the only mode by which it can reproduce its wealth, and maintain it at one level, is by replacing the means of production...by an equal quantity of the same kind of articles."¹¹⁵ Even within this simple statement there is the assumption of a human motivation to at least keep a stable economy. Marx takes this as given and indeed, as we shall see later, takes the concept of a growth economy as given.

In capitalist society the above simple process is also a minimal necessity (if a stable economy is to ensue) and is capitalist only in so far as the money that is advanced in the process of production is taken at the end of the production cycle and re-used to start a further cycle. "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, so in the latter it figures but as a means of reproducing as capital...It is only because his money constantly functions as capital that the economic guise of a capitalist attaches to a man."¹¹⁶ There is, in all this, no economic necessity that a capitalist should expand his capital, for although he may receive a surplus after repayment of capital advanced he is perfectly at liberty to consume the surplus and simply re-invest the original capital. The possibility Marx calls simple reproduction. "If this revenue (the surplus above monies advanced) 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."¹¹⁷ It is when the surplus produced in the economic cycle of simple reproduction is used, at least in part, as an increase in capital advanced for the subsequent cycle that capitalist accumulation is said to obtain.

The motive force of accumulation is considered by Marx to be the 'historical mission' of the capitalist "Accumulate, accumulate! That is the Moses and the prophets!...Therefore, save, save, i.e. reconvert the greatest possible portion of surplus-value, or surplus-product into capital. Accumulation for accumulation sake, production for productions sake: by this formula classical economy expressed the historical mission of the bourgeoisie".¹¹⁸ This historical mission is his driving force and motivation; in history he is the supreme saver, withholding from present consumption in order to expand future production. Power and wealth become an end in themselves. "At the historical dawn of capitalist production - and every capitalist upstart has personally to go through this historical stage - avarice, and the desire to get rich, are the ruling passions."¹¹⁹ Simple as such statements may seem Marx complicates such simplicity by a frequently recurring claim that the capitalist is in some sense no more than a personification of capital itself; "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." and "As such, he shares with the miser the passion for wealth as wealth. But that which in the miser is a mere idiosyncrasy, is, in the capitalist, the effect of a social mechanism, of which he is but one of the wheels".¹²⁰ This notion of the capitalist as personified capital is never substantiated. Marx considers that to present the mechanism enabling capital to grow and congruently showing that this is indeed the mechanism that is used by the capitalist in his seeking after wealth is sufficient evidence upon which to make such an assertion. This assertion is most difficult to understand from the writings of Marx. Certainly the capitalist as an individual entrepreneur in a developed capitalist system, given a wish to survive, becomes subject to market pressures which force him to accumulate - expressed by Marx as follows: "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 imminent laws of capitalist production to be felt by each individual capitalist, as external coercive laws".¹²¹ But this applies in an economic state of competition and as such is a statement of behaviour which results in the continuance of the system but not its initiation. It is curious to note that in analysing the establishment of capitalist

accumulation, the act of initial accumulation, Marx uses sources such as Luther and Goethe rather than economists to substantiate the subjective desire to accumulate that provides the essential motivation leading to expansion.¹²² There is, in Marx, a definite assumption that the capitalist has a will to growth and wealth for its own sake which in turn, given a system of commodity production and competition leads to a need to grow (accumulate) merely to survive. (Presumably as firms expand and enjoy returns to scale they threaten the viability of non expanded members of the system.)

THE CAPITALIST HAS A PASSION FOR ACCUMULATION

Expanded reproduction - a continuing accumulation of productive capital on a quantitative basis - as already mentioned brings returns to scale. Returns to scale, in lessening the amount of labour time necessarily spent in producing each commodity - gives higher rates of profit. Although no explicit mention is given in Marx's economic works of the capitalist as a maximiser of profit it is a necessary corollary of his passion for accumulation, for, any increase in the amount of surplus-value produced - i.e. the amount of value created in a given cycle of production above and beyond the value advanced by the capitalist for that productive cycle - provides extra funds for new capitalisation. (Marx assumes that these belong to the capitalist.) This motivation to 'maximise profits' is central to the Marxian model. As stated profit is the return to a capitalist extra above and beyond the value or money advanced in a cycle of production. This is not the same thing as the surplus value produced, for from such a surplus various deductions must be made: "The capitalist who produces surplus-value...has to share it with capitalists, with landowners etc. who fulfill other functions in the complex of social production, surplus-values, therefore, splits up into various parts. Its fragments go to various categories of persons and take various forms...such as profit, interest, merchants, profit, rent etc."¹²³ For a typical statement of such we may turn to 'Political Economy' by John Eaton: "The law of survival in the world of competing capitals is accumulation: the capitalist seeks ever more and more profit in the essential aim of capitalist production.

The satisfaction of the needs of the masses of the people is not the aim of capitalist production, nor even the provision of luxury goods for the propertied classes. The aim is profit."¹²⁴ albeit an oversimplification and as such not an explicit statement of Marx it does follow from Marx's assertion of the capitalist's passion for accumulation. To accumulate he must make profit and the more profit he can make the more his passion may be fed.

Therefore

THE CAPITALIST SEEKS MAXIMISATION OF PROFITS

Let us now leave the question of the initial impetus of the capitalist 'class' to grow and look at the implication of maximisation of profit within an ongoing capitalist economy. Given Marx's assertion that there is a continuous flow of technological improvements relating to machinery employed in production let us look at the mechanisms of their exploitation by the capitalist in his attempt to increase his rate of profit.

SUPER PROFITS AND INNOVATION

The introduction of a new piece of machinery into a process may have the effect of increasing the efficiency of production i.e. in Marx's terms lessening the amount of monies necessarily advanced by the capitalist. To do this, for Marx, the new machinery must decrease the 'socially necessary labour time' embodied in each article and this may be achieved by virtue of the new machinery taking less extra labour time to produce than the saving in labour time it effects in the new production process.

The increase in labour productivity consists precisely in that the share of living labour is reduced while that of past labour (in the machinery and materials) is increased, but in such a way that the total quantity of labour incorporated in that commodity declines, in such a way, therefore, that living labour decreases more than past labour increases. Or, what is but another expression of the same thing - the new fixed capital must be used up at a value rate of less than the value saved in decreased necessary materials and living labour: "The past labour contained in the

value of a commodity - the constant part of capital - consists partly in the wear and tear of fixed, partly of circulating, constant capital entirely consumed by that commodity, such as raw and auxiliary materials. The portion of value deriving from raw and auxiliary materials must decrease with the increased productivity of labour...On the other hand, it is most characteristic of rising labour productivity that the fixed part of constant capital is strongly augmented, and with it that portion of its value which is transferred by wear and tear to the commodity. For a new method of production to represent a real increase in productivity, it must transfer a smaller additional portion of the value of fixed capital to each unit of the commodity in wear and tear than the portion of value deducted from it through the saving in living labour".¹²⁵ As it is fundamental to the Marxian system that the value of a product is determined not by its cost of production but by the average socially necessary labour time embodied in it - i.e. by an analysis of the last quotation it can be seen that Marx treats raw materials, machinery and labour as equivalents - that is the value of each is in terms of an identical factor - the labour time embodied in them - machines in terms of labour spent making them; materials in terms of labour spent extracting them; labour in terms of labour spent feeding them etc. - therefore when he talks of the value of a commodity he is referring to the amount of these three factors qua value and hence as homogeneous, represented within the commodity and the value referred to here is value in exchange. Thus to say that productivity increases - that there is less overall labour time spent in the production of each commodity - is to say that its value decreases. Ignoring for a moment the complex question of the 'transposition problem' of the congruency of values and prices, we may say that the cost of production falls for the individual capitalist who has introduced an innovatory technology leading to increased productivity. However, as, according to Marx, the market price (value) of a given commodity is the average socially necessary labour time embodied within it and, assuming that this individual capitalist is alone in introducing the new technology, then the market price will reflect the average and be well above his normal rate of profit. "Yet every such new method of production cheapens the

commodity. Hence, the capitalist sells them originally above their prices of production, or, perhaps, above their value. He pockets the difference between their costs of production and the market prices of the same commodities produced at higher costs of production. His method of production stands above the social averages."¹²⁶ He will therefore enjoy a very much higher rate of profit than is normal. It is presumably this promise of high rates of profit that encourages him in the first instance to make use of innovation to allow him to accumulate faster.

PASSION FOR ACCUMULATION → (INNOVATION) → SUPER PROFITS

However, in the state of competition that Marx assumes in his model of capitalism the effect of one capitalist reducing costs in this way is to reduce the average socially necessary labour time embodied within each commodity and hence to reduce the average price of its commodity. This in its turn means that producers not having introduced the new technologies will have to sell at a price below production prices and even in some cases below cost and thus in order to survive they must in turn 'modernise'. The overall effect being that the market price settles to a new level commensurate with the new production prices and average profits are once again earned by all. As Marx puts it, "As soon as the new production methods begin to spread, and thereby to furnish tangible proof that these commodities can actually be produced more cheaply, the capitalists working with the old methods of production must sell their product below its full price of production, because the value of the commodity has fallen, and because the labour-time required by them to produce it is greater than the social average. In one word - and this appears as an effect of competition - these capitalists must also introduce the new methods of production..."¹²⁷ For Marx this is an ongoing process and the capitalist's quest for ever increasing accumulation leads him to innovate in order to obtain super profits which in turn, through the mechanism described, forces others in the same branch of industry to innovate. The passion for accumulation leads to the necessity to continually innovate.

ORGANIC COMPOSITION OF CAPITAL

Within Marx's economic work - and particularly in Volume 3 of 'Capital' - it is assumed, stated and implied time and time again that, by and large, innovation makes itself felt as an increase in the amount of machinery and 'congealed labour' compared with the amount of active labour employed. Certainly according to Marx it is a matter of historical fact that at a given time there is a definite proportion of machinery etc. to labour in a given commodity production. Indeed it is a tautology and gives no clue to the mechanism of change. "By composition of capital we mean... the proportion of its active and passive components...The first proportion rests on the technical basis, and must be regarded as given at a certain stage of development of the productive forces."¹²⁸ But it is this 'technical basis', which is a reference to the state of innovation, that is the independent variable in the equation. We have seen that the capitalist is forced to innovate continually and the assumption is that as he does so the proportion of capital to labour (fixed to variable capital) increases. "Now we have seen that it is a law of capitalist production that its development is attended by a relative decrease of variables in relation to constant capital, and consequently to the total capital set in motion."¹²⁹ It seems that Marx's case is as follows: The introduction of new machinery enables a labourer to produce more commodities in a given time. The machine represents congealed labour time and is used up in the process, therefore it has a contribution to make to the value of the commodity in terms of necessary labour time. Now the capitalist would not introduce new machines/methods if they did not decrease the value of the commodity - i.e. allow each commodity to be produced using less necessary labour time. Therefore caeteris paribus the labour time of living labour necessary in the production of each commodity must decrease - otherwise the capitalist would not invest. It is a necessary condition for the capitalist to innovate and that he should expect a decreased organic composition of capital in his projected production.

CAPITALIST INNOVATION = DECREASED ORGANIC COMPOSITION
OF CAPITAL

RATE OF PROFIT

The concern of the capitalist is profit. In advancing capital for production his sole concern is profit. "The capitalist does not produce a commodity for its own sake, nor for the sake of its use value, or his personal consumption. The product in which the capitalist is really interested is not the palpable product itself, but the excess value of the product over the value of the capital consumed by it."¹³⁰ Within Marx's analysis of profit his attention is first directed toward surplus value. This is the value produced in excess of the value consumed; labour power is the 'magical' commodity that can produce values in excess of its own and is also, as socially necessary labour time, the measure of value: so Marx first measures the value of a commodity in terms of labour time. "We know that the value of each commodity is determined by the quantity of labour expended on and materialised in it, by the working-time necessary, under given social conditions, for its production."¹³¹ He then looks at exchange and use values. A commodity, an article produced for exchange, finds its final resting place not as an exchange value but as a use value - i.e. the person whom eventually purchases the commodity purchases it for its value in use. For Marx, "Labour power is no different, in a capitalist economy it is for sale and is bought for its use value." However the price paid, as for all commodities, is the equivalent to the labour time expended in its production; the 'magical' quality of labour power is thus layed bare as "the specific use value which this commodity possesses of being a source not only of value, but of more value than it has itself".¹³² and this is the key to all capitalist production, it is the source of wealth and therefore accumulation - it is the enabler of economic growth. Once purchased the use value belongs to the capitalist and thus "First, the labourer works under the control of the capitalist to whom his labour belongs" and "Secondly, the product is the property of the capitalist and not that of the labourer, its immediate producer".¹³³ Thus within the process of production of commodities it is possible for the capitalist to own more value at the end of a production cycle than he advanced at the beginning with regard to the labour power purchased at the outset. However before it can be assumed that an overall surplus is

possible some analysis of the other factors present in commodity production is necessary. The process of labour that the capitalist puts into motion involves not only labour power, as we have seen, but also 'nature'. "Labour is, in the first place, a process in which both man and nature participate, and in which man of his own accord starts, regulates, and controls the material reactions between himself and nature."¹³⁴ Thus for Marx labour is a combined activity of nature and man - there is no exercise of labour power without a 'nature' upon which to act. If we return to Marx's definition of value as the necessary labour time embodied in an object then 'nature' as air, minerals, water etc. has no value (it is to be remembered that value refers to exchange value which for Marx is the concern of political economy - use value which of course is present in air, water etc. is a necessary condition of economy but once present simply makes an article 'marketable': in the market and its analysis, it is exchange value that for Marx regulates and explains the total system). As objects of no value their cost is then nil or, what is but another way of expressing the same, no labour power is needed to create them. Therefore they have no value and hence do not enter into the productive equation. Marx does, however, distinguish 'raw materials' from nature - nature as the 'subject' of labour, raw materials as 'worked up' nature: "The soil (and this, economically speaking, includes water) in the virgin state in which it supplies man with necessities or means of subsistence ready to hand, exists independently of him, and is the universal subject of human labour. All those things which labour merely separates from immediate connection with their environment, and subjects of labour spontaneously provided by nature...If, on the other hand the subject of labour has, so to say, been filtered through previous labour, we call it raw material."¹³⁵ As nature with labour time expended upon it, raw materials have value and therefore are a cost to the capitalist. However before turning to an analysis of the way in which the value of raw materials enters into the production equation it is necessary to isolate a further factor in production which has value. These are the instruments of labour "An instrument of labour is a thing, or 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".¹³⁶ Marx later extends his definition of instruments of labour to include all items of worked up nature effecting the process enacted upon the raw materials and not just those directly intervening. Thus "In a wider sense we may include among the instruments of labour, in addition to those things that are used for directly transferring labour to its subject, and which therefore, in one way or another, serve as conductors of activity, all such objects as are necessary for carrying on the labour process...Among instruments that are the result of previous labour and also belong to this class, we find workshops, canals, roads and so forth".¹³⁷ Productive labour, for Marx, is thus a combination of human labour power with nature, raw materials and tools of production and it is labour power, raw materials and tools of production, by virtue of the fact that they embody previous human labour power, that have value and therefore a cost to the capitalist.

We are now in a position to look at the derivation of surplus within the commodity production of a capitalist society and to see how Marx arrives at a surplus for the capitalist and further how he is able to claim labour as the sole cause of that surplus. (This will help later in the relation between rate of profit and the organic composition of capital.) Marx's famous formula explains the basic business of the capitalist. $M - C - M'$ "More money is withdrawn from circulation at the finish than was thrown into it at the start..." The exact form of this process is therefore $M - C - M'$, where $M' = M + \Delta M$ = the original sum advanced, plus an increment. "This increment or excess over the original value I call "surplus-value"."¹³⁸ We have seen labour may be hired at its value and in use produces more value than its own which Marx would claim is the sole creator of surplus value. The other factors, now isolated, of raw materials and tools of production also enter into the process but according to Marx do not add any more value to the commodities produced than an equivalence of their own value

used up in the process. Let us examine this claim. First the raw materials. For Marx raw materials re-appear in the finished product by virtue of the qualitative, and therefore non value creating, operation of labour power, i.e. it is for Marx a necessary condition of the production of a use-value that raw materials, purchased for the productive process enter that process as use values and are transformed into new use values without any increase to their value because as use values they have no value. (This is a difficult point and will be raised again in the analysis of the role of Marx's production equation in lending validity or otherwise to the prediction of falling rate of profit.) In Marx's own words: "...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, abstractly 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 living process, and combines with them to form the new products".¹³⁹ Marx treats the tools of production in an exactly identical way with the exception that, by and large, although they enter into the production process their value is only consumed a portion at a time. Thus "At the same time, though with diminishing vitality, the machine as a whole continues to take part in the labour-process. Thus it appears, that one factor of the labour process, a means of production, continually enters as a whole into that process, while it enters into the process of the formation of value by fractions only".¹⁴⁰ It is clear that Marx considers that any increase in value in the production process is solely due to labour as both raw materials and machinery (all 'fixed' capital) only contribute and transfer their own original value to the products. LABOUR IS THE SOLE CREATOR OF VALUE. The surplus value created in the M - C - M' formulation is the effect and responsibility of labour alone.

SURPLUS VALUE AND RATE OF PROFIT

The rate of surplus value is defined by Marx as "The rate of surplus value measured against the variable capital..."¹⁴¹ and is

represented by three interchangeable formulae:

$$\frac{\text{"surplus value}}{\text{variable capital}} = \frac{\text{Surplus value}}{\text{value of labour power}} = \frac{\text{surplus labour}}{\text{necessary labour}}^{142}$$

From the foregoing it can be seen that the importance for Marx of arriving at a definition of the rate of surplus value production before moving on to a definition of the rate of profit was to enable him to identify the cause of surplus value creation as labour power, for by his own admission surplus value is neither an obvious constituent of profit creation: "Surplus value and the rate of surplus-value are, relatively, the invisible and unknown essence that wants investigating, while rate of profit and therefore the appearance of surplus value in the form of profit are revealed on the surface of the phenomenon."¹⁴³ nor, as far as the capitalist is concerned a necessary part of analysis "So far as the individual capitalist is concerned, it is evident that he is only interested in the relation of the surplus value, or the excess value at which he sells his commodities, to the capital advanced for the production of commodities, while the specific relationship and inner connection of this surplus with the various components of capital fail to interest him, and it is, moreover, rather in his interest to draw the veil over this specific relationship and this intrinsic connection".¹⁴⁴ For the capitalist, according to Marx, what is of concern is the rate of profit - that is the 'rate of surplus-value measured against the total capital' or in other words, assuming full value is realised in sale, the value received in sale compared with the outlay in production.

DECREASING ORGANIC COMPOSITION OF CAPITAL AND RATE OF PROFIT

The rate of profit, as we have seen, is the relation of surplus value to total outlay (or 'capital') and further that as the capitalist seeks profit maximisation (and super profit) through the mechanism of competition he is forced to innovate. This innovation leads to a decreasing organic composition of capital i.e. innovation inevitably means an increasing proportion of machinery and raw materials to hired labour. As labour is the sole source of surplus value, given that the rate of surplus value remains constant, the amount of surplus value expressed as a per

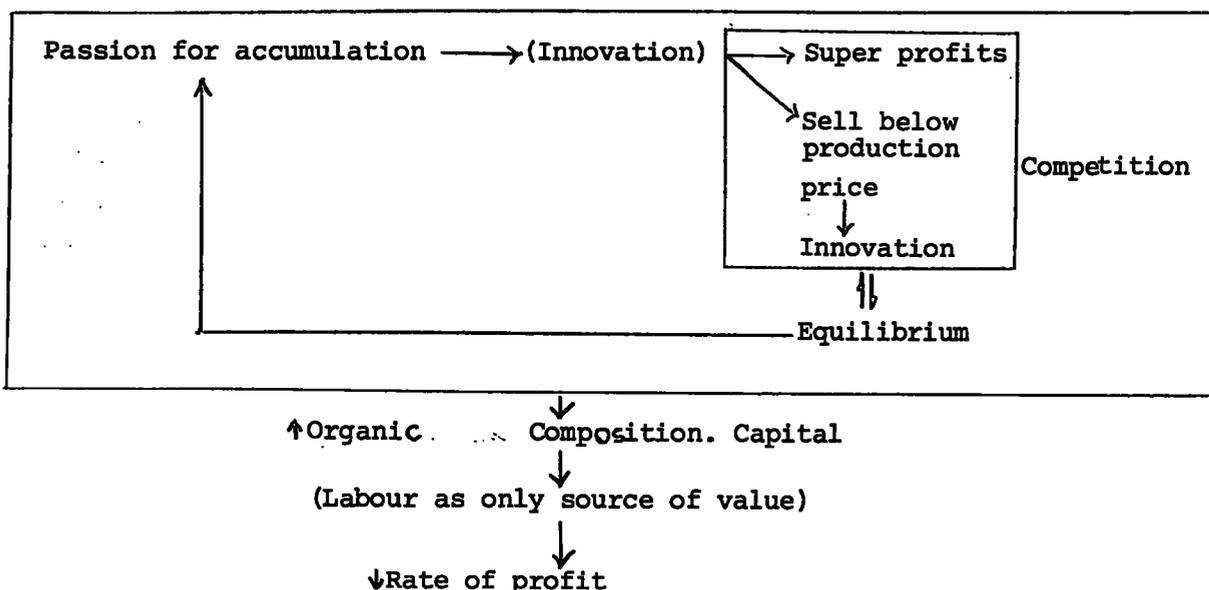
centage of total outlay must decrease - the rate of profit decreases. "Since the mass of the employed living labour is continually on the decline as compared to the mass of materialised labour set in motion by it, i.e. to the productively consumed means of production, it follows that the portion of living labour, un-paid and congealed in surplus-value, must also be continually on the decrease compared to the amount of value represented by the invested total capital. Since the ratio of the mass of surplus-value to the value of the invested total capital forms the rate of profit, this rate must constantly fall."¹⁴⁵

This then completes the analysis of Marx's law of the falling rate of profit. He does indicate a number of conditions that mitigate against the falling rate but before going on to these it may be appropriate to summarise the main assumption and prediction concerning the law and secondly, in diagrammatic form, the relation of the various factors of the 'law'.

A 1. FACTORS IN THE 'LAW' OF FALLING RATES OF PROFITS

1. Continuous technological change.
2. The capitalist has a passion for accumulation.
3. The capitalist seeks maximisation of profits.
4. The capitalist must innovate.
5. There is a decreasing organic composition of capital.
6. Value only emanates from labour.

B 2. SUMMARY OF LAW (DIAGRAMATIC)



COUNTERACTING INFLUENCES

"If we consider the enormous development of the productive forces of social labour in the last 30 years alone as compared with all preceding periods; if we consider, in particular, the enormous mass of fixed capital, aside from the actual machinery, which goes into the process of social production as a whole, then the difficulty which has hitherto troubled the economist, namely to explain the falling rate of profit, gives place to its opposite, namely to explain why the fall is not greater and more rapid. There must be some counteracting influences at work, which cross and annul the effect of the general law, and which give it merely the characteristic of a tendency, for which reason we have referred to the fall of the general rate of profit as a tendency to fall."¹⁴⁶

INCREASING INTENSITY OF EXPLOITATION

The main way of increasing the intensity of exploitation, that is of increasing the amount of surplus value creation as compared with the value of labour without significantly effecting the amount of fixed capital employed, is by lengthening the working day. "But notably, it is prolongation of the working-day, this invention of modern industry, which increases the mass of appropriated surplus-labour without essentially altering the proportion of the employed labour-power to the constant capital set in motion by it, and which rather tends to reduce this capital relatively."¹⁴⁷ However, in the last analysis, although lengthening of the working-day may counteract the fall in the rate of profit, it does not do so indefinitely and indeed eventually hastens the process: "It might be asked whether the factors that check the fall of the rate of profit, but that always hastens its fall in the last analysis..."¹⁴⁸ and "This factor does not abolish the general law. But it causes that law to act rather as a tendency, i.e. as a law whose absolute action is checked, retarded, and weakened, by counteracting circumstances".¹⁴⁹

DEPRESSION OF WAGES BELOW THE VALUE OF LABOUR-POWER

"This is mentioned here only empirically, since, like many other things which might be enumerated, it has nothing to do with the general analysis of capital...However, it is one of the most important factors checking the tendency of the rate of profit to fall."¹⁵⁰ Although this may seem a relatively simple statement it raises a number of questions that will, in the next section, have to be dealt with. It is sufficient for our purpose here to note that the important factor is the value of labour. It is the value of labour that according to Marx the capitalist pays the labourer: as may be recalled, the labour-power once purchased may produce in excess of its own value. The crucial factor in profit - the rate of surplus value is calculated as a proportion of excess value to necessary value and if a capitalist can, as Marx suggests here, reduce pay to labour below its value then it follows that the rate of surplus value will increase and, caeteris paribus, the rate of profit will increase.

RELATIVE OVER POPULATION

According to Marx as the rate of profit declines and the organic composition of capital increases so progressively more and more labourers are made redundant forming a surplus population. He therefore states, "The relative over-population becomes so much more apparent in a country, the more the capitalist mode of production is developed in it".¹⁵¹ Alongside the process, however, new branches of luxury production spring up which use a high proportion of labour to constant capital - a low organic composition - rendering high rates of profit. These new forms of production 'feed' upon the surplus population available and often pay relatively low rates for that labour. Eventually these new forms of production become subject to the same law as all production and the high rates of profit dwindle, like all others, under the law of diminishing rates of profit. "On the other hand, new lines of production are opened up, especially for the production of luxuries, and it is these that take as their basis this relative over-population,

often set free in other lines of production through the increase of their constant capital. These new lines start out predominantly with living labour, and by degrees pass through the same evolution as other lines of production. In either case the variable capital makes up a considerable portion of the total capital and wages are below the average, so that both the rate and the mass of surplus-value in these lines of production are unusually high."¹⁵²

FOREIGN TRADE

In his comments on the role of foreign trade Marx lays one of the foundation stones for the later, Leninist, theories of imperialism. In the growth period of capitalism the mechanism that leads to super profits in a home market - this is innovation to enable production costs to fall below the socially average production costs - also work on an international scale. For an advanced capitalist country with relatively low production costs the markets of other countries provide the possibility of vast profits to be made. In a less 'capitalised' economy production costs are relatively high and therefore commodity prices are also high. The more advanced economy is able to sell its products at a price somewhere between its own costs and the going price in the new market - it makes super profits. "Capitals invested in foreign trade can yield a higher rate of profit, because, in the first place, there is competition with commodities produced in other countries with inferior production facilities, so that the more advanced country sells its goods above their value even though cheaper than the competing countries."¹⁵³ Thus the higher rates of profit so earned counteract the falling rate of profit.

PREDICTION

To assess the validity of the law of falling rate of profit (or as Marx modified it, the tendency for the rate of profit to fall) it is necessary to analyse the validity of each of its component parts for even if the overall theory is both plausible and imaginable serious weaknesses in such predictions would none

the less be thrown up if any of the components of that theory were found to be invalid in some way. The intention here, then, is to examine each element of the theory before moving on to an analysis of the complete theory itself.

1. THERE WILL BE CONTINUOUS TECHNOLOGICAL CHANGE

As has already been stated Marx predicts that there will be continuous technological change in the methods of production. It is the task of this section to discover on what grounds Marx makes this prediction and to assess the validity of those grounds. Such a prediction sub-divides into a number of elements: i. Man is a productive animal. ii. He desires his production to increase. iii. Tools aid increased production. iv. Therefore there is a human will to innovate technologically. Before entering into a substantiation of each of these factors it must be pointed out that the approach taken here is intent upon showing Marx's prediction regarding technological change as in some way bound up with his definition of man and that, in part, on the basis of this definition, as an explanatory premise, the behaviour of continuously innovating necessarily follows. The type of predictive mechanism that Marx uses here is what Nagel calls the 'deductive model': "A type of explanation commonly encountered in the natural sciences...has the formal structure of a deductive argument, in which explicandum is a logically necessary consequence of the explanatory premises. Accordingly, in explanations of this type the premises state a sufficient (and sometimes, though not invariably, a necessary) condition for the truth of the explicandum".¹⁵⁴ It is of course possible for Marx to use a forecasting model of prediction in which a past empirical state of affairs is assumed to continue into the future - a method of predictive mechanism called by De Jouvenal the 'Prolongation of a tendency'. That is that in referring to phenomena 'they will change in the same direction and even at the same rate as in the past'.¹⁵⁵ However Marx makes no mention of this as the ground of his prediction. Of course to do so would severely weaken its predictive status.

i. Man is a productive animal. "...we must begin by stating the first premise of all human existence and, therefore, of all history, the premise, namely, that men must be in a position to live in order to be able to 'make history'. But life involves

before everything else eating and drinking, a habitation, clothing and many other things. The first historical act is thus the production of the means to satisfy these needs, the production of material life itself".¹⁵⁶ (my emphasis) It is clear that in understanding 'man' Marx puts forward this definition of man as a need bearing animal which must act on his environment to satisfy those needs - he is a productive animal.

ii. Man seeks increasing production. This statement constitutes the second element of Marx's prediction. It is as fundamental and essential to man as is his survival represented in productive nature. It arises out of the first part of Marx's definition of man in that in the productive activity necessary for man to create his own conditions of survival, those fundamental needs of food, water and shelter, he develops, as a matter of inevitability, new needs. In the very process of production man becomes aware of further potential of nature in the form of needs. Thus: "The second point is that the satisfaction of the first need (the action of satisfying and the instrument of satisfaction which has been acquired) leads to new needs; and this production of new needs is the first historical act".¹⁵⁷

That man seeks increased production as a way of satisfying new needs developed in production would seem to be a central postulate in Marx's definition of man. However, although this accounts for increasingly diversified production it does not account for increased production as such, although it does make it very likely. It is to increased population that Marx turns for the cause of increased production: "This production (for the basic needs of life) only makes its appearance with the increase in population".¹⁵⁸ Later, in discussing man's self procreation Marx returns to this theme: "The family, which to begin with is the only social relationship, becomes later, when increased needs create new social relations and the increased population new needs, becomes a subordinate one".¹⁵⁹ (my emphasis)

The statement that 'Man seeks increased production' is therefore based on empirical grounds which are strengthened by logical

arguments. It is an empirical fact that population increases. It is to be empirically justified that such increases lead to increases in production. It is very likely that such is the case as man is always developing new needs alongside increases in numbers.

iii. Tools aid increased production. "An instrument of labour is a thing, or a complex of things, which the labourer interposes between himself and the subject of his labour...leaving out of consideration such ready-made means of subsistence as fruit...the first thing of which the labourer possesses himself is not the subject of labour but its instrument."¹⁶⁰ For all production, other than the most primitive of fruit gathering, tools are essential. Unlike ⁱ and ⁱ this statement can only be an empirical one; although it hides under the guise of 'common-sense' the very fact that Marx distinguishes between production without tools (fruit gathering) and production with tools by definition makes tool use stand outside of any logical validation - it is therefore an empirically based statement.

If Marx does make an explicit statement that man is a 'tool using animal' the second part, the quantitative element of the relationship between tool use and production is by no means explicit; however, there are a number of statements which suggest that this was very much in his mind. For example: "No sooner does labour undergo the least development, than it requires specially prepared (my emphasis) instruments."¹⁶¹ and "The use and fabrication of instruments of labour...is specifically characteristic of the human labour-process."¹⁶² and in inverse form "Instruments of labour not only supply a standard of the degree of development to which human labour has attained..."¹⁶³ The implication is clear - man's development is dependent on his developing tool production, or tools aid increased production. Although this is central to the 'will to use technology' proposition unlike the other elements it is never made explicit in either the German Ideology, Grundrisse or Capital. The reason for this would seem to be that whereas with the other elements of the prediction an explicit statement is necessary, the basis of Marx's so called materialist approach to History, tool production and its relationship

to increased production only appears incidentally in an analysis of exchange value, for increased production as such is an increase in use values (i.e. the satisfaction, in use, of new desires) and use values are for Marx, although a necessary condition of economic exchange and change, only secondary in an understanding of the central mechanism of a commodity based economy. As empirical statements Marx frequently refers to examples of machinery increasing productivity and its validity must therefore be taken as being dependent not on any a priori quality but on empirical evidence which as a trend Marx extrapolates into the future. "The tool, as we have seen, is not exterminated by the machine. From being as a dwarf implement of the human organism, it expands and multiplies into the implement of a mechanism created by man...it is clear at the first glance that, by incorporating both stupendous physical forces, and the natural sciences, with the process of production, modern industry raises the productiveness of labour to an extraordinary degree..."¹⁶⁴ All three volumes of Capital abound with examples to substantiate this claim.

In summary then the mechanism enabling Marx to predict a continually changing technology is as follows:

MAN IS A PRODUCTIVE ANIMAL

By definition (and ontology)

TOOL → INCREASED PRODUCTION → WILL TO
EMPIRICAL INNOVATE

MAN SEEKS INCREASING PRODUCTION

By definition/empirical

MAN IS A TOOL USING ANIMAL

EMPIRICAL

This may be simplified into:

MAN SEEKS INCREASED PRODUCTION, TOOLS LEAD TO INCREASED PRODUCTION
THEREFORE MAN HAS A WILL TO INNOVATE.

It may be necessary to add that this will (need/necessity),

as far as Marx is concerned, has always mothered invention. If we can accept Marx's definition of man it seems reasonable to accept his prediction concerning technological change.

2. THE CAPITALIST HAS A PASSION FOR ACCUMULATION

Although at first sight this statement seems to be purely empirically based closer examination does reveal certain logical features. We will deal with the possibility that it is an empirically derived prediction first.

Marx makes numerous claims that his work is empirically based; it is like physics in its relations to empirical evidence as the base from which to generate theory: "The physicist either observes physical phenomena where they occur in their most typical form and most free from disturbing influences, or, wherever possible, he makes experiments under conditions that assure the occurrence of the phenomenon in its normality. In this work I have to examine the capitalist mode of production, and the conditions of production and exchange corresponding to that mode. Up to the present time, their classic ground is England. That is the reason why England is used as the chief illustration in the development of my theoretical ideas."¹⁶⁵ and even defends his empiricism against those who, because of the derivation of immense amounts of theory, view his work as though it is in some way a 'mere a priori construction'. "Of course the method of presentation must differ in form from that enquiry. The latter has to appropriate the material in detail, to analyse its different forms of development, to trace out this inner connection. Only after this is done, can the actual movement be adequately described."¹⁶⁶ Following his wishes we will instigate a search for the empirical data that substantiates his accumulation proposition.

Marx concludes in Capital II that: "The circuit made by money-capital is therefore the most one-sided, and thus the most striking and typical form in which the circuit of industrial capital appears, the capital whose aim and compelling motive - the self expansion of value, the making of money, and accumulation - is thus conspicuously revealed."¹⁶⁷ (buying to sell dear) and

concludes this after 59 pages of complex theory totally devoid of a single empirical reference. Indeed there is only one reference to authority (page 52 to A. Chuprov) and this is only to an analytical point of view and without exception every figure that is mentioned is purely fictitious and illustrative. Similarly in Chapter 20 of the same volume he states: "Simple reproduction, reproduction on the same scale, appears as an abstraction, in as much as on the one hand the absence of all accumulation or reproduction on an extended scale is a strange assumption..."¹⁶⁸ and yet no empirical evidence is put forward to substantiate this, or many of the other statements claiming accumulation as essential in capitalist production. It seems that Marx here, as he does with so many of his claims, considers that evidence is so obvious that it needs no stating. That there is growth in the amount of use values being produced is obvious; that accumulation in the form of new machinery, increases in raw materials etc. are an essential causal factor in such growth has already been seen to be substantiated by Marx. That it is the capitalist's desire for accumulation that leads to accumulation is, on the other hand, not so obvious.

With regard to the human desire as a causal factor Marx is somewhat less clear. Certainly Marx is consistent in claiming that the capitalist accumulates but he shows two distinct approaches to this. On the one hand a 'humanistic' approach: "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".¹⁶⁹ On the other the capitalist's desire is in some sense not causal but merely a reflection of capital - he is no more than capital personified. "But that which in the miser is a mere idiosyncrasy is, in the capitalist, the effect of the social mechanism, of which he is but one of the wheels."¹⁷⁰

Whichever approach is taken they certainly do not amount to an empirical justification for his claim - such a justification would presumably have to be in the form of reference to attitudinal survey. It seems, therefore, that the only hope of providing validity for the accumulation proposition (qua attitude of the capitalist) is to seek some a priori, or derivation, from his ontological position. It seems that what Marx is trying to convey by at one time referring to the capitalist as a willful accumulator and at another as a mere

mechanism of the capitalist system is to emphasise an historical and theoretical perspective that is common and explicit in many later 'Marxists': that people are a product of their time. If we refer back to the 'German Ideology' we can see the basis of this statement in its most abstract form. You are what you do: "This mode of production must not be considered simply as being the reproduction of the physical existence of the individuals. Rather it is a definite form of activity of these individuals, a definite form of expressing their life, a definite mode of life on their part. As individuals express their life, so they are".¹⁷¹ (my emphasis)

However, the type of being or productive activity that man enters into is an expression both of a subjective potential as well as a natural potential (i.e. a nature in the context of which man fashions his activity). In the case of the capitalist the subjective potential is greed and the objective or natural context is capitalism. Marx suggests that until capitalism evolves the potential capitalist's 'greed' has no economic (and social) function. "Except as personified capital, the capitalist has no historical value, and no right to that historical existence..."¹⁷² The confusion may now be dispelled - the capitalist is a personification of capital only in a Marxist historical context - and this context is a teleological view of history that sees it as an evolution toward communism. In Marx's own words: "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 force the real basis of a higher form of society...Only as personified capital is the capitalist respectable".¹⁷³

We can therefore dismiss the capitalist as personification of capital as having anything to do with the validity of the accumulation proposition. It is clearly a political stance masquerading in teleological form as some form of historical destiny. This leaves us with 'a productive individual who wants to expand production' as the subject of our enquiry.

It may be recalled that Marx's ontology starts with man producing what he needs for his own existence and that in this production he develops new needs. If we assume this to be a constant process, and

it is certainly treated as such in the German Ideology, then to say that man seeks to produce ever increasing use values by his very nature is but another form of statement of Marx's basic ontological position. The transition of this desire into one of greed, or accumulation, concerns us with what has already been referred to as one of the central theories of Marx's work and that is his theory of alienation.

Marx takes capitalist production as an alienated form of production. The labourer sells - alienates - his labour power to the capitalist and thereby loses control over his own labour and the products thereof. The position of the capitalist is therefore one of having control over the productive process and the labour of performing it. If we now take the labour process as one of working to produce ever increasing use values then their production falls to the labourer and the will to increase production, as a part of the control or purpose of production, falls to the capitalist. The capitalist therefore seeks to increase wealth, but as it is wealth without labour it is represented by Marx as greed. We have already seen that the predominant mechanism of increasing production is to introduce an ever increasing amount of fixed capital (machinery etc.), therefore the capitalist seeks to accumulate as much wealth as possible as capital. Marx's proposition concerning the will to accumulate on the part of the capitalist is a theoretically based proposition dependent on his ontology and his theory of alienation.

3. THE CAPITALIST SEEKS MAXIMISATION OF PROFITS

It follows from the accumulation proposition, given the mechanisms of capitalism, that the capitalist will seek to maximise profits. The capitalist has a will to accumulate, to do so he must utilise the production mechanisms of capitalist economy so as to receive greater returns in sales than his initial outlay in production. In the most general terms this difference is categorised as profit and it is from profit that new and increased investment may follow. That the means of accumulation is profit is purely dependent upon the economic mechanisms of capitalism and as the historical existence of capitalism is, for Marx, the result of

the interaction of man (as an unknown and infinite potential) and a pre-given nature this leads to the conclusion that the intervening variable between the will to accumulate and the will to higher rates of profit - the mechanism of the capitalist economy - must be empirically established. That this is necessarily so is substantiated by Marx's conception of history: "...at each stage (of history) there is found a material result: a sum of productive forces, a historically created relation of individuals to nature and to one another...circumstances make men just as much as men make circumstances."¹⁷⁴ and there is no 'essence of man' from which to derive, in some logical way, the existence of capitalism. Indeed the whole idea of essence of man unfolding in a necessary and sequential order is a 'misreading' of history: "This sum of productive forces, capital funds and social forms of intercourse, which every individual and generation finds in existence as something given, is the real basis of what philosophers have conceived as 'substance' and 'essence of man'".¹⁷⁵

Thus with no 'essence of man' from which to derive the existence of capitalism the existence of capitalism and its economic form becomes a matter of empirical establishment and the maximisation of profit prediction is based on both logical and empirical grounds for its validity.

CAPITALIST'S WILL TO ACCUMULATE → ECONOMIC MECHANISM OF CAPITAL = WILL TO		
(LOGICAL)	(EMPIRICAL)	HIGHER
		RATES OF
		PROFIT

4. THE CAPITALIST MUST INNOVATE

"Circumstances make men just as much as men make circumstances."¹⁷⁶ This statement becomes very relevant here for it underlies the relation between the innovation proposition and the proposition regarding the capitalist's will to accumulate, and incidentally provides a good illustration of the dialectical logic that underpins Marx's thinking. As has already been seen the derivation of the proposition concerning the 'capitalist's will to accumulate' was

dependent, among other things, on the empirically validated conclusion that the use of tools increased production. We now see the argument become circular, for the proposition that the capitalist must innovate depends on a knowledge, by him, of this very fact. Thus we have a relationship in which innovation (tools - production etc.) is at the same time both cause and result. Cause in so far as 'material' conditions are causal in human behaviour and result in so far as human consciousness and will act upon material conditions - the materialist dialectic of Marx.

5. THERE IS AN INCREASING ORGANIC COMPOSITION OF CAPITAL

Once again there is dualism of predictive mechanism being used by Marx in the establishment of this prediction. On the one hand there is the empirically based mechanism - it has occurred in the past and it is a trend that is likely to continue - and on the other hand there is an implied logical structure to the prediction.

As with many other of his empirically based propositions there is a dire lack of factual evidence presented to justify his claim. It is presented as obvious and only needing fictitious illustrative figures to substantiate what one can only presume Marx considers so obvious a trend as to need no 'repetition' of substantive evidence. It is therefore not possible, based on the work of Marx alone, to consider this prediction as proven to be empirically based - we only have his own assurances of this.

The implied logical validation is as follows: the capitalist seeks maximisation of profits; this can only be achieved by decreasing the value of his products in comparison with other producers of similar products. To do this, as Marx defines the value of a product as the necessary labour time embodied in it, it is necessary for the capitalist to reduce the amount of labour time 'within' his product - in simple terms to increase the productivity of labour. This is achieved by labour saving devices. The increasing organic composition of capital prediction, given certain parameters (that the value of raw materials and capital goods are constant) can thus be logically derived - that if the value of raw materials is constant and the value of capital goods

is constant a decrease in value of a product can only occur by reorganisation of production or by increasing the ratio between the amount of constant capital to raw materials with the value of labour constant. The choice between fixed capital or reorganisation of process as the causal factor must, in the last resort, rely on empirical justification. Thus the 'increasing organic composition of capital' prediction is thus simply a logical corollary of his definition of the value of a commodity, the assertion that the capitalist will seek to maximise profits and an understanding of the 'market' in which the capitalist sees the way to increased profits as reduction of a commodity value below its value in general production. As a commodity contains a constant amount of organic capital - raw materials and worn machinery - (which are valued according to the labour used to produce them) - the reduction in value necessary to produce increased profits must come from reduced labour time spent on each commodity. Therefore, as a purely logical corollary, the organic composition of capital must increase if an increase in profits is to be obtained.

6. FALLING RATE OF PROFIT

Given that the organic composition of capital is always increasing (capital:capital + labour) and that the rate of surplus value remains constant, then it follows that the rate of profit (surplus: total outlay) will fall, i.e. as less labour is used so less surplus is produced. This is a purely logical deduction but is dependent on the rate of surplus value remaining constant.

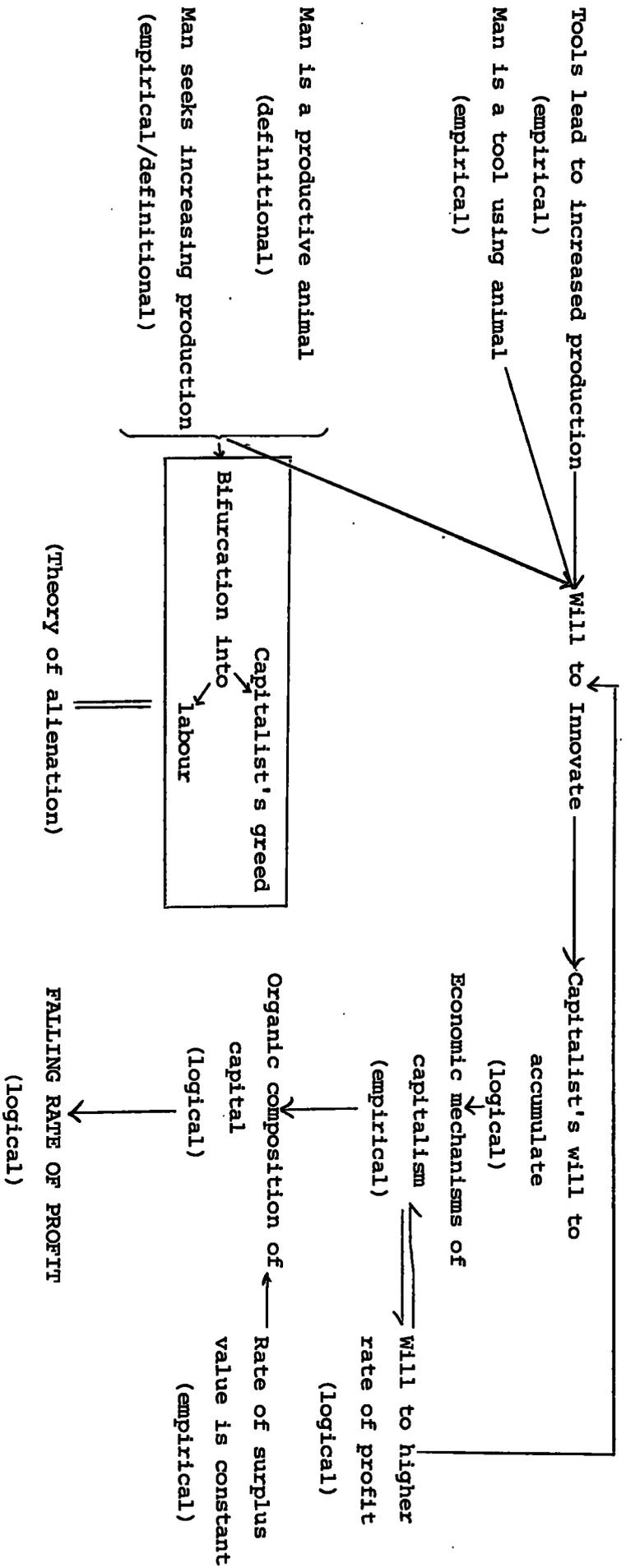
Marx offers no empirical or logical grounds for why this should be so.

SUMMARY

See diagram page 84

CRISIS

The central crisis of over production is, as previously explained, the result of an inability to completely sell the results of production - an imbalance between productive capacity and market capacity. This, according to Marx, occurs as a result of the lack of co-ordination between capital and consumer production. His argument is basically logical once the structure of capitalist production offered is accepted. That is as the production capacities



and outputs are intrinsically unrelated imbalance in demand and supply is very likely. What Marx does not establish is that the imbalance is necessary.

CONCLUSION

"The philosophers have only interpreted the world, in various ways; the point, however, is to change it."¹⁷⁷

"The communists disdain to conceal their views and aims. They openly declare that their ends can be attained only by the forcible overthrow of all existing social conditions. Let the ruling classes tremble at a communist revolution. The proletarians have nothing to lose but their chains. They have a world to win. Working men of all countries, unite!"¹⁷⁸

What has been taken as the central concern of Marx is the need to change the basic structures of society and a viewpoint has been adopted that sees his theoretical work as a systematic justification of his political motives. The strength or weakness of his call to revolution therefore rests upon the correctness of his analysis and the force of prediction that he brings to bear upon the inevitability of socialist revolution. His call to revolution is two-pronged: firstly on the grounds that the majority of the members of capitalist society have no interest in maintaining it, and secondly that it is in their interests to change such a society to one that is based on public ownership of the productive resources. The validity of this call rests upon his economic predictions.

The falling rate of profit postulation suggests that accumulation becomes increasingly difficult within the framework of capitalist economy and that as a result wages must be forced down and conditions become harder for that section of society that sells its labour power on 'the free market'.

The crisis prediction points to recurrent periods of mass unemployment, lowering of wages and economic instability.

The combination of the crisis prediction with the tendency of the rate of profit to fall points to the increasing frequency and increasing severity of crisis and economic instability - in short to a continually accelerating threat to the conditions of the vast majority of society.

The implication of both analyses, and one that Marx seldom fails to point out, is that an economic system that is not dependent on private profit as its motivating, controlling and regulative mechanism is the only way to overcome the economic instabilities of capitalism and it is those who suffer as the result of economic instability who will change that system - the 'revolutionary working class'.

The status of Marx's prediction has been classified under two main headings; those elements that are logically based and those that are empirically based. With regard to the crisis prediction and to the tendency of the rate of profit to fall Marx uses a combination of both to justify his claims and as such each part of the argument must be valid for the whole to be valid.

Looking at the basic elements in turn we have:

1. Man is a productive animal. The force of this statement is related to Marx's ontology. This ontology (what it is for something to be in the world) is most succinctly stated in juxtaposition to the materialism of Feuerbach: "The chief defect of all hitherto existing materialism (that of Feuerbach included) is that the thing, reality, sensuousness, is conceived only in the form of the object or of contemplation, but not as sensuous human activity, not subjectively - Feuerbach wants sensuous objects, really distinct from the thought objects, but he does

not conceive human activity as itself an objective activity".¹⁷⁹ Thus for Marx for an object 'to be' in the world involves both an element of contemplation and one of sensuous activity. In extending this basic position to explain the 'coming to be' of an object in the world (for Marx a coming to be in relation to man's knowledge - an object comes to be known) man must act in a thoughtful way - in a 'practical-critical' way. Although, therefore, Marx's ontology does not provide sufficient conditions for the statement of man as a productive animal it certainly lays down a necessary condition for man to have knowledge of the world of objects. However, when taken in conjunction with either a statement that man does act in respect of knowledge (a description of the present condition of man) or, working from first premises, 'man must produce his means of subsistence to survive; man as a productive animal is the conclusion. Thus, in summary, all objects in the world are objects for man. For an object to exist for man it must be conceived in a practical critical way. The generative aspect of a practical critical mode of working is material production. Given his present condition as having and generating knowledge man is therefore a productive animal.

2. Man seeks increasing production.

The force of this statement is again related to Marx's definition of the human condition. Man is of infinite potential, as he produces to satisfy existing needs so new needs are developed. He must expand his production to meet them.

3. Man is a tool using animal.

It is arguable that this statement is also bound up with Marx's ontology: it is certainly central to Marx's concept of what man fundamentally is, however, I have chosen here to take the force of this argument as empirically based. In all developed economic production man uses tools (or machinery).

4. Tools lead to increased production.

Central to Marx's work is that it is by the use, and the increasing use, of tools and machinery that man is able to produce in excess of his immediate demands - the production of surplus. This is basically an empirically based statement in that there is no inherent necessity in Marx's concept of 'man' that accounts for or has as a necessary corollary instrumentally caused increases in productive power.

5. The will to innovate. This is a logically derived proposition from 1 - 4 above. It is certainly sound enough. Man seeks increased production, tools give increased production therefore man invents tools.

Thus far there is nothing contentious in Marx's statements. The five basic statements above are both feasible and acceptable. They contribute to his major predictions as subjective certainties.¹⁸⁰ They are fundamental to the whole construction of Marx's theory of revolution for they represent a view of man that allows Marx to analyse economic structures as phases in a general historical development and hence give credence to his intention to show that capitalism develops into a new and 'higher' form in socialism.

Marx's attitude toward economic structures is that given these five basic assumptions that account for man's need of economic structure and also for the dynamic nature of those economic structures the detailed form that such structures (or epochs) take is a matter of empirical analysis. The work of 'Capital' is such an analysis and the twin predictions of the falling rate of profit and recurrent crisis are necessarily based, therefore, on an empirical analysis. This empirical (and historical) analysis leads to an understanding that in economic production the social actions resulting from the discovery of new tools (and the consequent reorganisation of the productive processes) is fundamentally conditioned by the social actor's ownership relation to those tools and technologies. That throughout history it is a fact that one group in society had control over the means of production and that another laboured with significantly less control. That as methods of production changed so new classes of social actors emerged with an interest in the new methods and struggled for the political power to control the new means of production. That the old methods of control could not cope with new methods of production and instability occurred helping the new class to take power: that the final stage of the struggle between bourgeois and proletarians and its empirical existence is represented in the falling rate of profit, crisis, and the 'resultant' call for a socialist society. This is Marx's

fundamental hypothesis of the relation of production (power structure of ownership and control) coming into conflict with means of production (method and organisation).

Re-occurring throughout Marx's predictions is the underlying suggestion that there is some sort of inevitability about them. It is this, above all else, that remains in question. With regard to crisis and breakdown Marx does not show that departmental imbalance is inevitable, only that it is likely. With the falling rate of profit Marx does not show that the value of labour cannot fall at such a rate as to maintain rates of profit. Concerning the emergence of socialist ideas, class conflict and political consciousness in general, Marx does not show how these fundamental pre-requisites for a political revolution necessarily arise out of economic hardship and finally Marx does not show why a revolution as opposed to adaptation is a necessary mode of change.

That a socialist revolution is a possibility seems proven. That it is a necessary historical event does not.

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92. Capital, Vol. III., op. cit., pages 249-50.
93. The relationship between value qua 'socially necessary labour time' and prices is a much contested question with many economists. The problem of equating values and prices, the way in which prices are determined by values, constitutes what has come to be known as the 'transposition problem'. This problem is seemingly insurmountable and renders Marx's economic system virtually useless in terms of modern economics. However, there is another school of thought that claims Marx's 'Capital' as a work of descriptive status and that the predictions that he makes are of a political significance and not merely economic. Hence, to this way of thinking, the problem of transposition of value to price does not arise.
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Chapter 3 Alienation

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Chapter 4 Prediction

101. It may be noted here a theoretical complex or 'law' is taken as a statement having predictive status. It is one of the functions of law formulation to enable the generation of an hypothesis that 'makes sense' of some previously unrelated phenomena. Marx's theory of revolution certainly has as one of its functions this

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155. B. De Jouvenel, The Art of Conjecture, (London: Wiedenfeld and Nicholson, 1967), page 61.
156. The German Ideology, op. cit., page 39.
157. Ibid., page 40.
158. Ibid., page 32.
159. Ibid., page 40.
160. Ibid., page 179.
161. Ibid.
162. Ibid.
163. Ibid., page 180.
164. Ibid., page 387.
165. Capital, Vol. I., op. cit., page 8.
166. Ibid., page 19.
167. Capital, Vol. II., op. cit., page 59.
168. Ibid., page 395.
169. Capital, Vol. I., op. cit., page 592.
170. Ibid.
171. The German Ideology, op. cit., page 32.
172. Capital, Vol. I., op. cit., page 592.
173. Ibid.
174. The German Ideology, op. cit., pages 50-51.
175. Ibid.
176. Ibid.
177. Ibid., page 667.
178. Manifesto of the Communist Party, op. cit., page 241.

179. The German Ideology, op. cit., page 659.
180. "The subjective certainties are the features of the future that he treats as known (foreknown) and does not question, on which he bases his calculations, and in relation to which he regulates his course of action." De Jouvenal, op. cit., page 61.

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