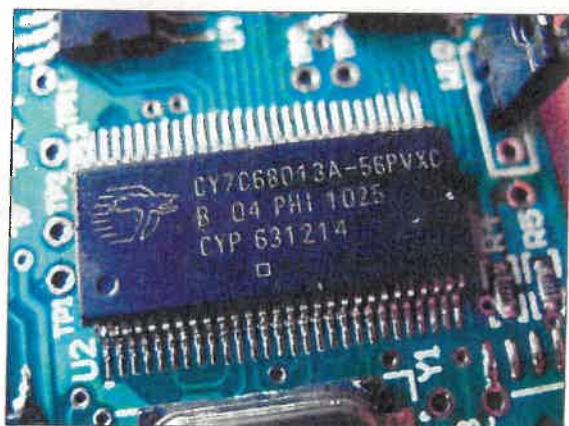


COMPUTERS, CAPITALISM AND SOCIALISM



Harry Powell

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REVOLUTIONARY PRACTICE 50P

The major technological innovation in recent decades has been the development and application of electronic computing, the *new information technology*. There is hardly an aspect of human life on which IT has not had an impact. Not only has IT greatly changed the production and distribution of goods and services but also it is having a pervasive influence on politics, warfare, the mass media, leisure, communications and personal relationships. This new technology has arisen within *capitalism* but here it is contended that it is a powerful force undermining the functioning of the capitalist economic system. Also the new IT could be an essential factor in facilitating the construction of a new social system; *socialism*.

Historical materialist theory claims that it is the process of *praxis* which is the fundamental determinant of the course of human development. People act on the world to obtain their material needs, in doing so change the world in various ways and at the same time change their own thoughts and behaviour. In particular it is the dynamic development of the *forces of production*, i.e. tools, techniques, machinery and human knowledge and skill, which in dialectical relationship with the *relations of production* to which they give rise, determines the general character of human society possible at a given time. The revolutionary transition from one stage of social development to another, e.g. from feudalism to capitalism, occurs because of the growing misfit between the developing forces of production and the existing relations of production, the two becoming increasingly incompatible. The form this antagonistic contradiction takes is that of *class conflict*, between the old ruling class based on the old forces of production and the new, rising class based on new forces of production. This contradiction is resolved by the revolutionary insurrection of the new, rising class replacing the old ruling class with a consequent adjustment in the relations of production so that they correspond with and are compatible with the new forces of production.

In an often quoted passage in the Preface to *A Contribution to the Critique of Political Economy* (1859) Karl Marx writes:

"No social order is ever destroyed before all the productive forces for which it is sufficient have been developed, and new superior relations of production never replace older ones before the material conditions for their existence have matured within the framework of the old society. Mankind thus inevitably sets itself only such tasks as it is able to solve, since closer

examination will always show that the problem itself arises only when the material conditions for its solution are already present or at least in the course of formation."

The position put forward here is that ***the new information technology, including artificial intelligence, is both a force of production which the present social order, capitalism, is unable to contain and at the same time is a necessary material condition for the existence of a new social order, communism.***

IMPACT OF IT ON CAPITALISM

If we consider the impact of IT on the material basis of capitalist society then its immediate effect is to reduce the amount of human labour power needed to produce a given output of goods and services. For example productivity in the car manufacturing industry has increased enormously during the last forty years. The amount of human labour power, as measured in hours of work, needed to produce a car has considerably declined and this is largely as a result of automation and robotisation. Capitalist enterprises operate in a competitive economic environment and so they are always looking for ways of reducing their costs of production so as to be able to undercut the prices of competitors. The main way in which this is done is by trying to reduce labour costs and this can be achieved by increasing productivity per worker and as a result needing to employ less workers to produce a given output. However, this process also undermines the ability of capitalist firms to make profits. This is because the capitalist's profit derives from the value created by the workers his firm directly employs. Profits are that part of the value created by the labour power of the workers but which they do not receive as part of their wages which are less than the value they have created. Marx's full analysis will not be set out here except to say that this rising *organic composition of capital*, i.e. a greater proportion of capital being laid out on materials, machinery, etc. and a lesser proportion on actually employing workers, brings about a *tendency of the rate of profit to fall* and thus the periodic economic crises of capitalism. (At first sight this may appear to be counterintuitive. For an explication see the Wikipedia article on 'Tendency of Rate to Fall') A force of production which makes it possible to virtually eliminate living human labour power from the process of production, i.e. the new information technology, is one which tends towards the destruction of the capacity of capitalist enterprises to make profits. Thus it is a force of production which capitalist relations of production ultimately

cannot contain. The industry with no workers is an industry which cannot make any profits. As Marx wrote in the same place as the quote above:

"At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production... From forms of the development of the productive forces these relations turn into their fetters. Then begins an era of social revolution."

and:

"... the productive forces developing within bourgeois society create also the material conditions for a solution of this antagonism."

Of course, there is nothing automatic about this process of revolutionary transformation. True, a growing antagonistic contradiction between the forces of production and the relations of production will make capitalism increasingly unstable and prone to increasingly severe economic crises and all that follows from these. However, this will only result in revolutionary transformation to a higher order of society if this is striven for as an act of conscious will. Without such deliberate direction the outcome could well be the destruction of our species or reversion to some earlier stage of social development such as feudalism. The growing environmental devastation being brought about by capitalism makes the need for revolution increasingly urgent.

The same force of production, the new information technology, which undermines capitalism by progressively eliminating human labour power from the productive process also provides a necessary condition for the building of a classless, communist society. Marx theorised that the division of society into classes of exploiters and exploited only became possible when the forces of production had developed to the point where the typical member of society could produce a *surplus*. That is, the members of society were producing more than necessary for their bare subsistence so it became possible for some people to expropriate part of the produce of other people without these others perishing through lack of sustenance. By the same token the abolition of class society will only be possible when the forces of production are developed to the point where material sufficiency for everyone is possible. Marx thought that this was already the case in his own time and that it was simply a case of revolutionary upheaval changing the relations of production so that existing forces of production could be applied in such a

way as to meet the needs of the many instead of making profits for a few. But perhaps Marx's judgment on this matter was somewhat premature. After all, the forces of production have developed considerably since his time and capitalism is still the dominant mode of production in the world. Incidentally, in *Capital* Marx cites the views of Charles Babbage, inventor of the modern computer, on a number of occasions. Babbage wrote a book entitled *On the Economy of Machinery and Manufactures* and his interest in such calculating devices was at least partly because he foresaw their very useful impact on the capitalist economy.

Capitalist firms and states are using the new IT as a means of monitoring and controlling people's lives. It is a powerful market research tool for collecting information on spending and consumption patterns so as to promote greater sales of commodities. Computerised systems facilitate surveillance and control of personnel in workplaces. Also IT is being applied by the state to the monitoring of people's behaviour so as to exercise more effective social and political control. Examples include the scrutinising of phone calls and tracking movement on the road system.

At the same time the new IT has in many ways empowered ordinary people, especially through the worldwide *internet*. Now it is possible to disseminate ideas and information on an unprecedented, worldwide scale. The fact that this can have politically threatening consequences for the existing social order is shown by the attempts of states to control internet use, most notably in the case of the Chinese state. Although powerful capitalist organisations such as Google dominate the internet, at the same time it is being used to undermine capitalist property rights. This is particularly noticeable in the case of unauthorised downloading of musical recordings. Also ordinary people produce their own software such as computer operating systems and browsers in opposition to software giants such as Microsoft.

The new IT, in its various manifestations, is a locus of *class struggle* between capitalist ruling classes and their functionaries, on one side, and subordinate classes and strata on the other side.

ATTEMPTS AT SOCIALIST CONSTRUCTION

Since Marx's time there have been two major attempts to abolish capitalism and move along a path of socialist transformation towards commun-

ism. I refer to the Russian and Chinese revolutions. Neither of these attempts have been ultimately successful. Quite clearly these societies have reverted from being in the early stages of socialism to a form of capitalism. Indeed some people question whether they ever were in any sense socialist. Some Marxist currents, especially Trotskyites, ascribe the failure to sustain revolutionary transformation in these societies to the fact that they were both, at the time of their revolutions, economically backward countries without highly developed capitalist economies based on advanced forces of production. Thus, it is argued, the material basis for moving towards communism was not yet present and so any attempts at socialist transformation were doomed at the outset. The only hope these revolutions had was proletarian revolution in the advanced capitalist countries resulting in the proletariat in these countries coming to their economic aid with advanced forces of production. Clearly this did not happen.

This analysis is not convincing. For a start it overlooks the fact that the forces of production do not just consist of tools, machinery, etc. but also embrace human knowledge and skill. Indeed the latter element is the most dynamic of the two elements of this contradiction. Thus workers and poor peasants mobilised by means of revolutionary enthusiasm are perfectly capable of creating and developing new forces of production and thus promoting economic growth and development. The classic example of this is the Soviet Union which from 1928 onwards was transformed from a country considerably more economically backward than many less developed countries today into a major industrial power within about ten years. The rapidity of this economic transformation is unmatched, either before or since. Similar technological and economic transformations were brought about in China from the nineteen fifties onwards. So the crucial problem in moving towards communism in the modern world is not simply an insufficiency of advanced forces of production. These can be created, true at great sacrifice on the part of the masses, but created nonetheless. This is a historical fact.

What seems to be the crucial problem in sustaining socialist transformation and moving towards communism is bringing about the firm establishment of the *dictatorship of the proletariat*. By this is meant that the working class and its allies, i.e. poor peasants, sections of the intelligentsia, etc., really do collectively rule, that they exercise real control over their lives and are the conscious, active agents in bringing about the revolutionary transformation of society towards communism. Now it is highly questionable that this ever was the case in the Soviet Union and China, that the dictatorship of the

proletariat ever really existed in those societies and it is certainly not the case now. Rather, what did happen in those countries was that a popular revolutionary movement led by a communist party and actively supported by large sections of the working class and poor peasantry overthrew the old order and set about creating a new one. During the revolutionary upheavals organs of popular democracy such as the Soviets in Russia, councils of workers, peasants and soldiers, did spontaneously emerge and exercise power at a local level for a while. However with the consolidation of the new regimes these popular bodies quickly became formalities with no real influence on important decisions. Power was effectively exercised by the communist party, a numerically relatively small body. In the early stages of the new regime it would probably be correct to say that the exercise of power by a genuinely popular communist party, brought to state power by mass insurrection and acting in the objective interests of the masses, does constitute a form of the dictatorship of the proletariat.

However, unless a way is found whereby the masses do increasingly actively participate in and really determine and decide upon the major decisions affecting the course of development of society, then sooner or later a new type of bourgeoisie will emerge and the process of socialist transformation will come to an end with the consequence of the inevitable restoration of capitalism. Quoting once again from the same passage by Marx, he says:

"It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness."

The significance of this proposition in this context is that in the Soviet Union and China it was the communist party leaderships who effectively decided economic and political policy. No doubt they thought they were doing this in the interests of the workers and peasants, as tribunes of the people so to speak, but nonetheless the objective reality of the situation was that it was this small elite who effectively controlled the means of production. In theory the means of production were owned by the proletariat and its allies but in practice they had no effective, overall control. Now, according to Marxist theory it is those people in society who control, in effect own, the means of production who constitute the *ruling class*. It really does not matter if those people imagine themselves to be acting in the interests of the majority. The important thing is their objective position with respect to the means of production and if it is essentially the

same as that of the bourgeoisie in capitalism, if indeed social being does determine social consciousness, then it will not be long before these people start thinking and acting like and as a bourgeoisie.

This is what happened in the Soviet Union and China. A new type of *state bourgeoisie* emerged from the heart of the communist movement itself. Towards the end of his life Mao Tse-tung, the leader of the Communist Party of China, came to realise that this is what had happened in the Soviet Union and was happening in China. He spent the last ten years of his life, the period known as the Cultural Revolution 1966-76, urging the Chinese workers and peasants to rise up, depose the emergent state bourgeoisie and exercise power themselves. In many parts of China the masses did do this but in the end the new state bourgeoisie, led by people such as Deng Hsiaoping, managed to reassert themselves and bring about progressive capitalist restoration. Of course, many observers would claim that all this just goes to show how impossible is the dream of a classless, communist society. In a sense, in the past these people were right in so far as a new force of production that would make such a society possible did not yet exist - the new *information technology*. So what then is the special significance of IT?

IT AND SOCIALIST DEMOCRACY

Marxist theory holds that it is ownership, effective control of the means of production that confers power on a class. Thus it is the proletariat and its allies who must own and control the material basis of society if they are really to be in command and have the opportunity to reconstruct and develop society in a communist direction. As already argued, this cannot be done by a few representatives on behalf of the class but must be done, increasingly, by the class *as a whole*. The question which immediately arises is whether or not it is *practicable* for many millions of people to actively and effectively participate in economic decision making. One solution put forward is a system of workers' control whereby each separate enterprise runs on much the same lines as present with the difference being that the workers in each workplace periodically elect the managers and receive the profits in addition to their wages. This proposal is known as *market socialism*. The fallacy here is that such an economic system would be just as much capitalist in its essential workings as before. The different enterprises would be striving to maximise their individual profits and thus would be operating in a competitive environment with all the consequent negative features of capitalism we are familiar with now, i.e. periodic economic crises etc.. The anarchy of capitalist production, the organisation of production to meet

human needs instead of maximising capitalist money profits, can only be overcome if production is *centrally planned* in a conscious, rational manner.

In the past, in the Soviet Union and China, central economic planning in practice meant a large bureaucracy of economists, administrators, etc. effectively making the important decisions and the great mass of the people simply carrying them out. Sometimes attempts were made, especially in China, to draw the masses into the planning process but in practice this consisted of little more than consultation as opposed to real decision making. What we have here can be seen as a problem of *information processing*. On the one hand there is the problem of a central planning bureau being able to collect and process an adequate amount of data, drawn from throughout the whole of society, to formulate a viable economic plan that really does meet the needs of the masses and does so in an efficient, rational way. On the other hand there is the problem of how the members of society as a whole are to be adequately informed in a detailed way on the state of the economy at any given time so that they are in a position to make sensible decisions on economic policy and do so in such a way that these can be brought together centrally so as to really determine policy. The *new information technology* provides the means, is the force of production, whereby this can be done now. IT allows the efficient, speedy centralised collection of the necessary data for effective economic planning and could allow mass participation in and control over this process. The new information technology is the technical means whereby there can be both *centralism* and *democracy* in economic life, what communists call a system of *democratic centralism*. Previous information systems, i.e. meetings, post, telephone, etc., were quite inadequate to this task.

Critics of socialism, such as the right wing economist Friedrich Hayek, have attacked central planning on the grounds of its inadequacy as an information system. They argue that the *market* is a much more effective information system for communication between producers and consumers than is central economic planning. There is some truth in this assertion. The strength of centralised economic planning as experienced in the past was that such "command economies", as they are sometimes called, were very good at mobilising people and resources on a massive scale and quickly to carry out very large scale projects. For example, the development of steel production and heavy engineering in the Soviet Union in the 1930s and then, in conditions of great adversity, outproducing

Germany in armaments such as tanks in World War II. Its weakness was a certain insensitivity to people's more diverse and particular needs in terms of consumer goods and services, etc. e.g. satisfying the changing demand for fashionable items such as clothing. In other words, the capitalist market was the type of economic information system possible on the basis of forces of production such as mail conveyed by railways and steamships, electrical communication such as the telegraph and telephone, etc, and these communication systems permitted the development of the economy on an integrated national and international basis as opposed to the essentially self-contained localised economic life of feudal society. This economic information system functioned much more effectively than its predecessors. The first attempts at centralised, socialist economic planning were premature in the sense that the necessary information technology for their highly efficient operation did not yet exist. But now it does. An economic system based upon an information network where the totality of the members of society can actively participate virtually instantaneously is potentially vastly superior in its capacity to develop production in a way which meets all fundamental human material needs than is the relatively slow and crude mechanism of the capitalist market.

It is interesting to note that in 1962 Mao Tse-tung, discussing the problems of socialist economic development, said:

"Unless we fully promote people's democracy and inner-Party democracy and unless we fully implement proletarian democracy, it will be impossible for China to have true proletarian centralism. Without a high degree of democracy it is impossible to have a high degree of centralism, and without a high degree of centralism it is impossible to establish a socialist economy. And what will happen to our country if we fail to establish a socialist economy? It will turn into a revisionist state, indeed a bourgeois state, and the dictatorship of the proletariat will turn into a dictatorship of the bourgeoisie, and a reactionary, fascist dictatorship at that."

Unfortunately, this is precisely what has happened in China. It is not simply being asserted that if microchips had been around fifty years ago then China would have stayed on the socialist road. No, there is also the question of revolutionary political consciousness and the degree to which the masses have embraced this and use it as a guide to action. However, even if there is a high degree of political consciousness present it cannot lead to the revolutionary transformation of reality if the forces of

production which permit and facilitate such a development are not yet available. After all, the vision of a communist society has been present through the capitalist epoch and, in crude forms, even before that but it could be nothing more than a utopian dream all the while the forces of production were insufficiently developed.

By definition in talking about mass control of the economy I am talking about *democratic* control. Such democratic control cannot be confined to economic life alone if society is to move towards communism but must extend to all aspects of social life, i.e. to the ideological superstructure. In particular political life, the state, must be truly democratic. Marxists argue that while bourgeois liberal democracies, such as the one we live under, claim to practise mass democracy through the ballot box this is in fact a sham and that it is the bourgeoisie who exercise real power. However other commentators, such as Max Weber and Roberto Michels, have claimed that while democracy can work on a small scale, e.g. in the small European city states such as Geneva at the end of the Middle Ages, it is not possible on a very large scale for technical reasons, these being the impracticality of everyone being adequately informed and in a situational position to effectively participate in major decision making. Again there may be some truth in this analysis as it relates to past experience of attempts to create mass democracy but now the information processing power of the new IT means that the technical means for transcending this problem are at hand. In the past democracy was in fact something that of technical necessity could only be confined to a tiny minority of society, the ruling class, but this need no longer be the case.

A final point should be made. A society where a qualitative change occurs in the way in which people communicate and thus relate to each other is one where *human consciousness* itself is undergoing a *qualitative* transformation. One of the important, perhaps characteristic features of our consciousness in capitalist society is its individualism, where the focus is upon the individual psyche and its separation from other psyches, indeed its estrangement from other psyches, that is, a condition of *alienation*. Of course, in earlier types of societies there was less emphasis on individualism and one of the achievements of capitalism was to bring about a certain liberation of the individual from a very restrictive type of collective consciousness but the price of this escape from the restraint of the collectivity was estrangement between people. The new information technology could play a key role in overcoming this contradiction between community and freedom. On the one hand it permits the

recreation of a genuine community, a state of genuine fraternity, by allowing all members of society to intercommunicate in a highly effective manner, while at the same time the individuals can retain a certain autonomy, free to develop their individuality unrestrained by the dead hand of rigid convention. Such a development would bring about a new, higher stage of human consciousness as a result of the consequent generation of new types of self-concepts and new ways of thinking. As a concomitant of new ways of organising economic, political and all other aspects of human life a new type of psyche, *communist person*, would emerge. It would indeed, as Marx said, be "the end of human prehistory and the beginning of the real history of the human species".

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“... the productive forces developing within bourgeois society create also the material conditions for a solution of this antagonism.”

Karl Marx



Website: www.revolutionarypraxis.org

Contact: info@revolutionarypraxis.org