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The history and ideas of Marxism: the relevance for OR

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The paper examines the origins of Marxism in Europe in the second half of the 19th century in the context of the industrial and political revolutions of the previous century. The philosophical, economic, social and ethical ideas of Marxism are explained and critiqued. It is suggested that although many of Marx's predictions have proved wrong and the application of his ideas often disastrous, his concern for the exploited and his emphasis on the dynamic of change still has relevance today for OR. The paper explores where that relevance lies and how advantage might be taken of the insights Marx's analysis of society offers.

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Introduction

This is the second in a series of papers that describes the history and ideas of major intellectual movements and explores their relevance for OR today. The first paper took as its subject pragmatism (Ormerod, 2006). The current paper examines Marxism, the philosophy, ideology and social theorizing of Karl Marx and his followers. Isaiah Berlin concluded that, 'no thinker in the nineteenth century has had so direct, deliberate and powerful influence upon mankind as Karl Marx' (Berlin, 1948, p 1). Marx lived at a time of social unrest and nationalistic fervour. He was a revolutionary and sought to create an intellectual framework to support workers in their revolutionary intent. The framework was to be based on a scientific understanding of the historical development of the conditions of society and their inevitable consequences. These ideas spread rapidly after his death; by the second half of the 20th century much of the world was governed by communist regimes based on Marxist ideology. In the West, other forms of government prevailed and communist regimes are now losing political control of countries they once dominated. However, this demise is by no means universal and Marxism continues to be influential in the world of ideas.

Marxism has featured in a number of OR publications about the nature and role of OR and has been claimed in support of some methodologies; but most practitioners reject Marxist ideology as wrong headed, extreme or too destructive. However, there is a danger of losing sight of Marx's innovative attempts to theorize about society: how did he go about this difficult task and what conclusions did he reach? The paper offers a brief account of the development of Marxism and

suggests where its relevance might lie for OR practitioners. The paper can also be read as an introduction to one source of critical thinking, setting out Marxism's roots and consequences, its merits and limitations. From an OR perspective three questions are addressed. How can OR be understood today from a Marxist perspective? What are the implications of Marxist ideas for the practice of OR? How can Marx's analysis of society be utilized within an OR intervention?

Marx was one of the first social analysts to work with the ideas of Enlightenment writers, attempting to combine the philosophical and empirical traditions into an overall structure of thought that makes theoretical sense and is empirically rooted. His theoretical approach combines observation and reason, and many of his conclusions can be subjected to empirical tests. Marx's system combines a philosophical approach (the dialectic) with an analysis of history (materialism) and politics (socialism) and integrates these into an overall system of political economy, rooted in the economics of Smith and Ricardo. This theoretical framework provides an explanation for the economic, social and political structures of society and how they change (Gingrich, 2006).

Marx set out his intellectual framework in his book *Das Kapital*; Volume I (Marx, 1867) was published in his lifetime, Volumes II and III being completed and published by his collaborator Friedrich Engels after his death. The original texts of Marx (and his collaborators) are, on the whole, direct and easy to comprehend. Marx and Engels set out the main thrust of their revolutionary intent in the *Communist Manifesto* (Marx and Engels, 1848). The manifesto is assertive, argumentative, and fizzles with revolutionary zeal. Its main message was summarized after Marx's death by his daughter as follows:

'This manifesto opens with a review of the existing conditions of society. It goes on to show how gradually the old

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feudal division of classes has disappeared, and how modern society is divided simply into two classes—that of the capitalists or bourgeois class, and that of the proletariat; of the expropriators and expropriated; of the bourgeois class possessing wealth and power and producing nothing, of the labor-class that produces wealth but possesses nothing. The bourgeoisie, after using the proletariat to fight its political battles against feudalism, has used the power thus acquired to enslave the proletariat’ (Marx, 1883).

The next sections of the paper introduce Marx and Engels and describe the historical and social context of the time. The following four sections explain Marx’s theories on philosophy, economics, politics and ethics. Subsequent developments and criticism of Marxism are then described. Finally, the role of Marxism in the development of OR in the UK is outlined followed by a discussion of the implications for OR today.

Throughout the paper use is made of various reference books without further citation including the *Chambers Dictionary of World History*, the *Chambers Biographical Dictionary*, the *Oxford Dictionary of Quotations*, and the *Oxford Companion to Philosophy*. In particular, use has been made of those entries in the latter that describe Marxism and the contributions of its precursors, originators and subsequent developers. (P Singer on Hegel; A Wood on Marx and Engels; D McLellan on Marxism; MJ Inwood on Hegelianism and the Frankfurt school; and C Norris on Habermas). In researching the history and ideas of Marxism significant use is made of Berlin (1948), Bottomore (1991), Carew Hunt (1950), Giddens and Held (1982), Gingrich (2006), Jay (1973), Rattansi (1982) and Tucker (2002). Fuller accounts of Marxism can be found in these and many other standard texts and, of course, in the writings of Marx and Engels themselves.

Marxism attracts fierce commitment and equally fierce antagonism. No account can satisfy both sides of the argument. The paper is intended to inform those not familiar with the subject, and to stimulate interest by exploring the history of Marx’s theories, their subsequent impact, and some criticisms of them. It is in this argumentative sense a critique. Further, it attempts to draw some conclusions for OR. Marx would recognize this as a dialectical process of which we can presume he would approve without necessarily approving the synthesis reached.

Marx and Engels

Karl Heinrich Marx (1818–1883) was the son of a successful Jewish lawyer of conservative political views who converted to Christianity. He studied at the Universities of Bonn and Berlin (changing from law to philosophy) under the influence of Ludwig Feuerbach (1804–1872), Bruno Bauer (1809–1882), and the Young (or Left) Hegelian movement. He completed his doctorate in philosophy in 1841 but the young Hegelians came under attack from the government and Marx lost all chance of an academic career in philosophy. Between 1842 and 1848 he edited radical publications in the

Rhineland, France and Belgium, each country forcing him to leave. In 1844, while in Paris, Marx was introduced both to the working-class movement and to the study of political economy by Friedrich Engels (1820–1895). In 1848 Marx and Engels played a key role in founding the Communist League and as part of its activities wrote the *Communist Manifesto* (Marx and Engels, 1848). In the same year Marx was expelled from Prussian territories and after a brief spell in Paris he took up residence in London where he lived in poverty (Berlin, 1948, pp 175–189). Throughout the 1850s and 1860s, when not confined to bed by illness, Marx regularly spent 10 h a day in the library of the British Museum studying and writing. There he had access to the results of Parliamentary inquiries and the history of the introduction of factory legislation in Britain (which, for instance, limited working hours in nearly all manufacturing or cottage industries to 60 h per week for women and young people under 18, and to 39 h for children under 13). These provided ample material spanning almost 40 years on the actual relations existing between capital and labour as they had reached in England (Engels, 1869).

Engels hoped for a career in literature but his father, a textile manufacturer, insisted that he work in the family business. He was attracted to Young Hegelian radicalism while doing military service in Berlin. After participating in the unsuccessful Paris revolution of 1848, Engels moved to Manchester where he worked in the family business until 1869 and produced a series of writings on history, politics, and philosophy. After Marx’s death in 1883 he devoted the last 10 years of his life to the posthumous publication of the second and third volumes of Marx’s *Das Kapital* (*Capital*). Engels acknowledged Marx to be the more profound and original member of the partnership. He helped popularize the thought of his friend and extended it to the realms of science and philosophy. However, some of the principal doctrines identified with Marxism are more Engels than Marx.

The historical and social context

Marx’s writing was strongly influenced by what he observed in 19th century Europe: the intellectual changes of the enlightenment, the technological developments of the industrial revolution, the political struggles in the aftermath of the American (1776) and the French (1789) revolutions, and the development of global trade and empire dominated by Europe.

The Enlightenment

Marx was born into a Europe whose intellectual landscape had been completely reshaped by the Enlightenment. The Renaissance in the 14th and 15th century and the Reformation in the 16th century, both vast and fundamental changes in western civilization, had paved the way for the Scientific Revolution of the 17th century and the Enlightenment of the 18th century (approximately bracketed by the ‘Glorious

Revolution' of 1688 and the French Revolution of 1789). Prior to the Enlightenment Europe was a theologically conceived and ordered regional society, based on hierarchy and ecclesiastical authority and a culture rooted in the sacred, magic, and kinship. By contrast, the Enlightenment attacked and severed the roots of traditional European culture, secularized all institutions and ideas, and (intellectually, and to a degree in practice) effectively demolished all legitimization of monarchy, aristocracy, woman's subordination to man, ecclesiastical authority, and slavery. These were replaced with the principles of universality, equality and democracy (Israel, 2001, p vi).

Conventionally, the Enlightenment is depicted as a projection of French ideas, especially those of Descartes, Bayle, Montesquieu, Voltaire, Diderot, D'Alembert, d'Holbach and Rousseau. Another view casts the Enlightenment as an intellectual reorientation chiefly inspired by English ideas, especially those of Locke and Newton but also Francis Bacon, Bentham, Gibbon, Hume and Adam Smith. Given the importance of the German philosophers Spinoza and Kant and the contribution of some Italian thinkers perhaps a better view is that it was a pan-European movement (Israel, 2001, p v). However, French was the pan-European *lingua franca* of the day, and the French '*philosophes*' provided the distribution mechanism for Enlightenment ideas, aided by the new technology of printing.

The Genevan Jean Jacques Rousseau (1712–1778) made impassioned pleas for due weight be given to feelings and the moral sense (Roberts, 2002, p 694). In 1762 he published *Du Contract Social* (translated as *A Treatise on the Social Contract*) in which every individual is made to surrender his rights totally to the collective 'general will', the sole source of legitimate sovereignty and by definition the common good. His text, with its slogan 'Liberty, Equality, Fraternity', became the bible of the French Revolution and of progressive movements generally. In it he says 'L'homme est né libre, et partout il est dans les fers'—'Man is born free, yet everywhere he is in chains'.

John Locke (1632–1704) taught that the mind at birth was a blank sheet (*tabula rasa*) and that ideas were obtained exclusively from sense experience: moral values arose as the mind experienced pain and pleasure. From this many ideas flowed, for instance, on the content and conduct of education, on society's duty to regulate material conditions (Roberts, 2002, p 687) and on the relativity of knowledge and belief (beliefs depended on the experience of particular individuals). The new prestige of science seemed to promise that the observations of the senses were the way forward to knowledge. There grew in European man a new confidence in the power of the mind and a conviction that human knowledge, rationality, wealth, civilization and control over nature would progress. The Enlightenment drew its strength primarily from the evident advance of production, trade and the economic scientific rationality believed to be inevitably associated with both (Hobsbawm, 1962, p 20).

Agricultural and industrial revolution

Historians of Britain classically apply the term industrial revolution to the period 1750–1850. The steady advance of agriculture and the more dramatic development of manufacturing industry gave rise to an increasingly wealthy, urbanized society geared to progress and change. Britain mainly imported raw materials and exported manufactured goods. The rise in agricultural output and productivity resulted from a better knowledge of husbandry and crop rotation, enclosure of the open medieval fields with their narrow strips, and latterly from technical progress. The result was sufficient food to sustain population growth, disappearance of the traditional peasant, and the availability of surplus labour to meet the growing demands of construction, manufacturing and industry. These improvements in agriculture spread to continental Europe. By 1850 peasants tied to the soil and obligatory labour had disappeared from most of Europe, with Russia being the major exception (Roberts, 2002, p 708).

Within a century and a half or so, societies of peasants and craftsmen turned into societies of machine-tenders and bookkeepers. Human and animal labour was replaced by machines driven by power from other sources. Extractive industries grew. Manufacturing became much more specialized and more productive (for instance, the Lancashire cotton industry). Industrialization implied new sorts of towns, new schools and new forms of higher learning; this resulted very quickly in new patterns of daily existence and living together. The transformation was made possible by the gradual build up of capital in earlier periods, the construction of canals and railways, the accumulation of knowledge (including science), and the development of technology based on years of experience of craftsmen. All these developments were underway during Marx's lifetime.

Trade and empires

Much of the capital required to initiate the self-sustaining growth of the Industrial Revolution had been accumulated by trade and by overseas plantations manned by slaves (Roberts, 2002, p 560). Europe had produced wealth on an unprecedented scale; it dominated the rest of the globe as no previous civilization had ever done. Much of this domination was political, a matter of direct rule; large areas of the world had been peopled by European stock. As for the non-European countries, which were still formally and politically independent of Europe, most of them had in practice to defer to European wishes (Roberts, 2002, pp 697–698).

The growing population of Europe was sustained by emigration, advances in agriculture, and the opening of vast new supplies of food from the USA, Canada, Australia, New Zealand, Argentina and Uruguay. In return these countries had an appetite for the goods being produced in the large new factories in Europe. Commerce and Empire went hand in hand, with the imperial country controlling the trade flows and the ships they were carried in. The key to global

empire was to establish and maintain naval power to protect commercial shipping and to ensure ports were kept open for trade. Not all colonies and countries acquiesced in this, some revolted, notably in America.

Political revolutions

With the exception of Britain, which had its revolution in the 17th century, Europe in the 18th century was ruled by absolute monarchs buttressed by hereditary nobles, the orthodoxy of the church, and other institutions. In the latter part of the century the obvious international success of capitalist British power led most such monarchs (or rather their advisors) to attempt programmes of economic, social, administrative and intellectual modernization. However, despite some monarchs adopting modernist and innovatory stances, they found it impossible to break free from the hierarchy of landed nobles (there were some exceptions to this, Denmark for instance). What did abolish agrarian feudal relations all over Western and Central Europe was the French Revolution (Hobsbawm, 1962, pp 22–24). To prevent a second French Revolution or a general revolution on the French model was the supreme object of all the powers which had just spent more than 20 years defeating the first in the Napoleonic War. Nevertheless, there were waves of revolution in the western world between 1815 and 1848 (Hobsbawm, 1962, pp 109–110). The biggest of these, that of 1848, broke out almost simultaneously in France, the whole of Italy, the German states, most of the Hapsburg Empire and Switzerland. There has never been anything closer to the world-revolution of which the insurrectionaries of the period dreamt than this spontaneous and general conflagration. In the end it was not successful and heralded the gigantic economic leap forward after 1851 (Hobsbawm, 1962, p 112).

The roots of Marx's philosophy

The major intellectual influences on Marx were Enlightenment ideas, German philosophy, the French socialists, and the English and Scottish political economists. Marx synthesized these to develop a new system of thought (Rattansi, 1982, p 49).

Hegel's idealism and Marx's materialism

When Marx was attending university in Germany the ideas of Georg Wilhelm Friedrich Hegel (1770–1831) were dominant. For Hegel, reality consisted in minds or ideas. Marx rejected Hegel's idealism preferring materialism, a system of thought that views the social world as developing from the relationship of humans to the natural world. Materialism examines how individuals, groups, and institutions act and interact with each other in social relationships. Hegel looked on class struggles (between lord and bondsman) in a very abstract manner, while Marx saw classes struggling in the material world (Tucker, 2002, pp 88–89).

The progress of history

Hegel was concerned about the disorganization and fragmentation of personal and social life produced by the division of labour and social differentiation; he wanted to recreate a coherent personal experience by the formation of an integrated community. In his view the true history of humankind is the history of consciousness, spirit, or philosophy. Each historical era is distinctive and human society does progress. For Hegel, it was important for individuals to be in tune with these ideas rather than the reverse. His view of stages and historical progress became an essential aspect of Marx's view of history. However, for Marx progress comes from material and social factors—class struggles, technological change, and human labour—rather than ideas (Rattansi, 1982, p 27; Tucker, 2002, p 57).

Hegel considered Germanic culture a higher and perhaps ultimate synthesis of its predecessors, especially the cultures of Greece and Rome, and the most perfect political framework yet attained by men (Berlin, 1948, p 63). He argued that it was only philosophically educated officials that possessed a developed insight into the unity of the individual human being and the state. In contrast, the Young Hegelians held that all citizens could acquire this, a much more radical view. They claimed that only the 'rational was real'; the 'actual' is often full of inconsistencies, anachronisms and blind unreason. They concluded that radical transformation may be necessary in order to create institutions that are in accord with the dictates of reason (Berlin, 1948, pp 63–64).

The dialectic

For Hegel philosophical, social, and individual change and development emerge from the struggle with ideas (Tucker, 2002, pp 57–58); we develop understanding only through opposites, and knowledge develops through negation and contradiction. Hegel developed the notion of thesis, antithesis, and synthesis, the dialectical process. In contrast, Marx argued that the history of thought, ideas, and ideology were a reflection of developments in the material world. Thus some talk of Marx taking Hegel's dialectic and standing it on its head.

On labour

For Hegel, labour is a central feature of human existence through which man comes to know and understand his world; it is a liberating activity (Rattansi, 1982, p 29). Marx adopts a similar approach; labour is essential to humanity in defining humanity (as opposed to non-human animals), and in developing society. In looking at class relationships, the use of labour and the products of labour are crucial. Human potential (and human nature) is the purposeful and creative activity that transforms nature into useful objects and provides the means by which humanity can achieve freedom. The problem with capitalism is that much of this potential is denied to workers and turned against them.

Feuerbach and alienation

The writings of Ludwig Feuerbach (1804–1872) became influential on Marx and the other young Hegelians in 1841 when *The Essence of Christianity* was published. Hegel saw the real as emanating from the divine. In contrast, Feuerbach argues that the divine is an illusory product of the real: thought proceeds from being, not being from thought. This means that God is a projection of the inward nature of humans; religion is a projection of human wishes and a form of alienation (Tucker, 2002, p 89). Feuerbach said that religion must be replaced by humanism. What both Hegel and Feuerbach had in common was the perception of alienation as fundamentally a false consciousness, a lament, whose cure was a correct interpretation of the world. To Marx, however, alienation becomes intelligible as soon as the reverse supposition is adopted: that the alienated consciousness tells the truth in its laments, not in its consolations. For Marx, religious misery is both an expression of actual misery and an attempt to flee from it into a world of imagination: it is the ‘opium of the people’. The way out of alienation was not a new philosophical interpretation of life, but a new form of earthly existence, a new society in which the material conditions for a fulfilling human life would no longer be lacking. In his *Theses on Feuerbach No. 11* (1845) Marx says: ‘The philosophers have only interpreted the world in various ways; our task is to change it.’ Marx used the alienation of Feuerbach along with the historical, dialectical and political approach of Hegel, to begin to analyse society, the state and politics.

French socialists

The French Revolution caused a number of intellectuals to feel dissatisfied with the capitalist system and to look for ways of ending it. Saint-Simon (1760–1825), the father of French socialism, based his position on his study of the rise of modern society from the feudal system of the Middle Ages. He was an ardent enthusiast for the philosophy of progress. Comte (1798–1857), who was influenced by Saint-Simon, is generally considered to be the founder of sociology. His positivism sought to expound the laws of social evolution, to describe the organization of human knowledge and to establish a true science of society. Proudhon (1809–1865) was a philosopher and social critic whose book, *What is Property* (1840), influenced many 19th century socialists, anarchists and communists. The answer he suggested is that property is theft. He did not oppose all forms of property. Rather, he believed that small producers and farmers bound together by free contracts were the best. Proudhon became the founder of French anarchism. His theories so exasperated Marx that he set out his own position with greater precision in the *Poverty of Philosophy* (Marx, 1847). Fourier (1772–1837) believed that all evils were due to restraints imposed by society, and that once these were removed men could work together in a spirit of cooperation. Louis Blanc (1811–1882), the historian of the French Revolution, was a more practical thinker: he held that the

evils of society were due to competition, and that the remedy was the control of industry by the state. However unrealistic their treatment of the future, the ‘utopian socialists’ had made important contributions to socialism; their analysis provided Marx with much valuable material; he borrowed a number of their ideas while dissociating himself from the specific remedies which they recommended.

Marx’s economics

Most of Marx’s economic theories can be found in *A Contribution to the Critique of Political Economy* (Marx, 1859) and *Das Kapital* (Marx, 1867). Marx’s economic system derives from that of the classical school of British economists, which can be taken to start with the publication in 1776 of Adam Smith’s *Wealth of Nations*. The British school had adopted the theory of value first outlined by John Locke (1632–1704). This held that, at any rate on a first approximation, all actual prices were determined by the value of the commodity measured in terms of the number of labour hours required to produce it. Marx observed that the employer, by virtue of his superior economic power, was able to make agreements with his workers which were not determined by the number of hours they worked. He concluded that what the employer buys and pays for is not labour hours but labour power, the number of labour hours required by a worker to enable him to support life and reproduce his kind. Marx contended that society had become divided into two classes, one of which obtained control over the means of production, while the other possessed only its labour power. The capitalist buys this labour power and sets it to work on the various means of production (raw materials, machinery and the like). For his efforts the labourer is paid sufficient to maintain him leaving a ‘surplus value’ which is ‘stolen’ from him, as in Marx’s view only labourers produce value. The surplus value is unpaid labour. From the theory of surplus value Marx identified what he thought was a fatal flaw in capitalism: capitalists will be forced to install labour saving machines and the rate of profit will tend to fall. Capitalism thus contained the seeds of its own destruction; the system was bound to break down. Capitalism could not be reformed and must be destroyed. But this was impossible without a revolution. He also identified those who had the incentive to overthrow the current system, the exploited labourers, the working class, the proletariat all of whom face subsistence wages or unemployment (Carew Hunt, 1950, p 88). Marx ends the first volume of *Das Kapital*:

‘Along with the constantly diminishing number of the magnates of capital, who usurp and monopolize all advantages of this process of transformation, grows the mass of misery, oppression, slavery, degradation, exploitation; but with this too grows the revolt of the working class, a class always increasing in numbers, and disciplined, united, organized by the very mechanism of the process of capitalist production itself. The monopoly of capital becomes a fetter upon the mode of production, which has sprung up and flourished along with,

and under it. Centralization of the means of production and socialization of labour at last reach a point where they become incompatible with their capital integument [skin, husk, rind]. This integument is burst asunder. The knell of capitalist private property sounds. The expropriators are expropriated' (McLellan, 1995a, pp 379–380).

Marx's political theories

Many of Marx's political attitudes and theories can be found in *The Communist Manifesto* (Marx and Engels, 1848; McLellan, 1992), which despite the joint authorship was drafted exclusively by Marx (McLellan, 1992, p xii), *The Eighteenth Brumaire of Louis Napoleon* (Marx, 1852), which analyses in detail the political upheavals in France from 1848 to 1851, and *A Contribution to the Critique of Political Economy* (Marx, 1859). For Marx the ultimate tendency of history is the drive of the human species to develop its 'essential human powers', its powers of production. Under capitalism these powers and the complex network of human cooperation through which they are exercised, had for the first time grown far enough to put within reach of human beings the collective, rational control of the social form of their own production. His main contribution to political thinking was his theories about the phased progress of society from a feudal monarchical state to a socialist society in which there would be such abundance that each would contribute according to his ability and fairly take according to his needs. Moreover, he believed that with the ending of all exploitation and of all class conflict, the state would no longer be necessary, and would 'wither away' (Shapiro in the preface to Carew Hunt, 1950, p 11).

Despite Marx's early advocacy of revolution he later seemed to change his position. In April 1870 Marx declared that England was 'the most important country for revolution'. After the collapse of the Paris Commune of 1871 these views seemed unrealistic and in September 1872 he said publicly that he did not deny that there were countries such as England and the United States 'where the workers will be able to achieve their aim by peaceful means' though he added 'this was not true of all countries'. Marx's followers became divided between two schools, each of which appealed to his authority: the moderates who believed in peaceful transformation and the extremists who held that the existing order must be swept away. The communists belong to the second of these schools (Carew Hunt, 1950, p 100).

Both Marx and Engels were somewhat reticent as to what organization would replace the bourgeois state. Historically, political theory has adopted widely different views as to the state's authority and the degree of obedience to which it is entitled. However, there has been a general recognition that it exists, or should exist, to promote the welfare of its citizens and that the development of civilization has led it closer to achieving this aim. Marxist theory denies this. *The Communist Manifesto* declares that the state is 'the executive

committee of the bourgeoisie'. Engels in his *Anti-Dühring* (Engels, 1877) maintains that the state is not a natural institution and it is simply the product of the class struggle. This gives rise to a problem: how are activities like law and order, the postal service and education to be run after the revolution? In the *Anti-Dühring* Engels says 'the government of persons is replaced by the administration of things'. How one is possible without the other he doesn't tell us (Carew Hunt, 1950, pp 94–95).

In the *Critique of the Gotha Programme* (Marx, 1875) Marx lays down that between the abolition of the bourgeois state (which must first be allowed to develop fully for the internal contradictions to appear) and the establishment of a communist society there lies a transition stage which he calls the 'dictatorship of the proletariat'. During this phase, the state will continue as an organ of coercion, but with the difference that the coercion will be exercised by the proletarian majority against the bourgeois minority. Hence it will constitute a free society, and certain features of the older order, including inequalities of pay, will continue. Marx concludes:

'In the higher phase of communist society after the enslaving subordination of individuals under division of labour, and therewith, the antithesis between mental and physical labour, has vanished; after labour has become not merely a means to live, but has become itself the primary necessity of life; after the productive forces have also increased with the all-round development of the individual, and all the springs of cooperative wealth flow more abundantly—only then can the narrow horizon of bourgeois right be fully left behind, and society inscribe on its banners 'From each according to his ability, to each according to his needs' (Marx, 1875).

Marxist ethics

Marx's socialism is not based on a subjective moral demand but on a theory of history (Bottomore, 1991, p 178). *The Communist Manifesto* is a declaration of war against capitalist society, in which the workers are to overthrow by violence and achieve socialism. Marxists hold that anything is permissible in achieving this aim. This ethic derives logically from the general philosophical position based on Hegel which Marx adopted. The Hegelian dialectic denied the existence of any eternal and immutable principles upon which a system of ethics or of anything else could be founded, since ideas themselves were in a continual state of change. While Kant had taught that we do reach solid rock in the moral consciousness, his famous 'categorical imperatives', Hegel could not accept such an ethic as final; he was concerned with a grand historical process, directed by reason and operating through the dialectic, under which civilizations rose and fell. To justify this process he had to show that there was a higher and dynamic ethic upon which the judgements of 'world history' rested. He held that Kant's imperatives were vapid when they were not actually dangerous; and that many of the moral injunctions of Christianity were inapplicable to a

bourgeois society (requiring a nation to turn the other cheek, for instance), and would speedily bring about the ruin of any state that attempted to apply them. Marx held that there was no such thing as ‘human nature’ in the abstract, and that men’s ideas of what is good and bad were determined by the economic structure of the social organism of which they formed a part. Like Hegel he was not concerned with the morality of individuals but with that of groups, but in his case the group was a class rather than a nation. Marx teaches that the ethical system of any community, like its religion and laws, is simply a part of the superstructure created by the conditions of production, and always reflects the interest of the dominant class. As long as the class system persists, no useful purpose is to be served by discussing such ‘class morality’. When that system has been destroyed it will be possible to put ethics on a sound basis. (Carew Hunt, 1950, pp 110–112).

Carew Hunt (1950, p 112) observes: ‘The *Communist Manifesto* is the most powerful indictment of the capitalist order ever written, but it contains no word of “right” or “justice”, and no appeal to any “moral law”. Nor does Marx use of “exploitation” in *Das Kapital* directly imply an ethical condemnation; it is not, at least ostensibly, the expression of a moral judgement, but rather a description of social relations.’ In fact Marx criticized the French utopian socialists, particularly Proudhon, for their obsession with ‘justice’. The capitalist system was doomed to disappear for reasons which lay within its very nature and which had nothing to do with metaphysical abstractions.

Subsequent developments

Diffusion of Marxism as political ideology

After the failure of the Paris Commune in 1871 the prospects for revolution looked bleak. The initiative of the French workers was broken for at least a generation. However, new hope dawned unexpectedly when *Das Kapital* was published in Russia. Long after Marx’s death the disasters which befell Russia in the Russo-Japanese War led to the revolution of 1905; but the revolution failed. In October 1917 the Bolsheviks finally managed to seize power. Marxism was adopted as the ideology of the new republic. Between the wars throughout Europe and beyond, the communists were active, taking Russia as the model. However it was not until after the Second World War that most of Eastern Europe came under Russian control and adopted communism. Two economic systems developed, a capitalist one based on the market and a communist one in which political authority was the decisive economic factor. Trade between the two systems continued but on a cramped basis (Roberts, 2002). In Asia, after a long struggle, in 1949 the People’s Republic of China was established as a one-party communist state. America’s alarm at communism’s spread in South East Asia led to the Korean (1950–1953) and Vietnamese (1964–1975) wars. In the West, the seizure of power in Cuba in 1959 by Castro and the election of the Allende regime (1970–1973) in Chile alarmed the

USA but most of Central and South America remained under right wing dictatorships. In Africa, Marxism had only limited success.

In the 1970s and 1980s large parts of the world were under the sway of Marxist inspired communism: the Cold War was at its height and the outcome at its most uncertain. The two economic systems appeared to offer the world alternative models for economic growth. In 1989–1990, the establishment of a non-communist government in Poland and popular uprising elsewhere in Eastern Europe, followed by reasonably free elections, saw the almost total eclipse of communism there. Subsequently, with the unification of Germany, the introduction of democracy in East European states, the breakup of the Soviet Union and experiments in democracy in Russia itself, communism is no longer a major political force in Europe. China and some countries in South East Asia (and Cuba) remain communist but China is now gradually evolving into a capitalist economic power. Although the demise of communism as a political doctrine and economic system has been dramatic and Marxism as a revolutionary ideology is generally dormant, Marxism as an intellectual framework has flourished in the social science (particularly sociology) departments of universities in the West.

Developments in Marxist thinking

After 1917 the mainstream of Marxist thinking lay in Russia, the first country to apply Marxist doctrines: the dominant figures were first Lenin (1870–1924) and subsequently Stalin (1879–1953). Later the thinking of Mao Tse-tung (1893–1976) became important after the Peoples Republic of China had been established. Lenin revitalized Marxism’s theory of revolution by stressing the centrality of the party in leading the class struggle (Bottomore, 1991, pp 308–310). Stalinist ideology underpinned the drive for industrialization, and collectivization and the ruthlessness with which it was carried out. (Bottomore, 1991, pp 516–517). Mao Tse-tung attributed to the peasants a role, and a degree of initiative, greater than is commonly regarded as orthodox. He took it as an urgent practical task of Marxist analysis to determine where the class cleavages should be drawn both in China and the world. He concluded that the vagabonds and other such elements could be transformed into the proletarian vanguard with suitable education and participation in revolutionary practice. Such ideas led to the ‘Great Leap’ and the ‘Cultural Revolution’ in 1966–1967 (Bottomore, 1991, p 334).

In the 1920s a philosophical and political Marxism originating in Central and Western Europe challenged Soviet Marxism. Subsequently labelled ‘Western Marxism’, it shifted the emphasis of Marxism from political economy and state to culture, philosophy and art. The Western Marxists, never more than a loose collection of individuals and currents, included Gramsci, Lukács and Korsch (Bottomore, 1991, p 581). Louis Althusser (1918–1990) was the most influential Western Marxist philosopher in the 1960s and 1970s. He produced

a novel form of Marxism by attempting to integrate into it the then dominant ideas of structuralism. The principal feature of structuralism is that it takes as its object of investigation a 'system', that is, the reciprocal relations among a set of facts, rather than particular facts considered in isolation. Structuralism has given fresh expression to the longstanding tension between two poles of Marxist thought, which is conceived at one extreme as a rigorous science of society, at the other as a humanist doctrine for the practical organization of society. It stands in sharp opposition to the versions of Marxist theory expounded by Lukács, Gramsci and the Frankfurt School which stressed the role of human consciousness and action in social life, and adopted a conception of history in which the idea of progress is implicit.

The Frankfurt School

The Frankfurt School was initially a centre for the study of Marxist theory; nonetheless, the work of its principle figures always had a somewhat ambiguous relationship with mainstream Western Marxism. The School originated in a specific concern with the failure of Central European revolutions after the First World War and the rise of National Socialism in Germany. The ideas of its leading thinkers were further shaped by the consolidation of the Stalinist regime in the USSR and later Eastern Europe, and by the emergence in the Western capitalist societies after the Second World War (most prominently in the USA) of an apparent political consensus and pacification of major social conflicts on the basis of exceptional economic growth and more widely diffused prosperity. The development of a distinct 'critical theory' of society by Max Horkheimer (1895–1973) and Theodor Adorno (1903–1969), and its reworking by later theorists, constituted a thread of ideas and concepts which gave the Frankfurt School an important role in the expansion of modern sociology. Its particular concerns were the dominance of society by science and technology, the impact this had on the individual, and role of culture in shaping and controlling the thoughts of the masses. Their criticism of the state of affairs existing in the 1950s and 1960s directed attention to important and neglected aspects of the postwar development of Western societies. Herbert Marcuse (1898–1979) espoused the idea that diverse social movements—among students, ethnic minorities, and in the Third World—constituted the elements of a new 'revolutionary subject' of history. In the later 1960s the ideas of the Frankfurt School evoked a strong response among middle class youth, especially in the universities (Bottomore, 2002, pp 46 and 72).

Critical theory holds that positivism is an inadequate and misleading approach which cannot attain a true conception of social life; that by attending to what exists positivism sanctions the present social order, obstructs any radical change, and leads to political quietism; positivism is intimately connected with, and a major factor in, sustaining a new form of

domination, namely 'technocratic domination'. Thus Marx's class-driven determinism gives way to a technocratic determinism. While it was accepted as true that any position which is manifestly irreconcilable with definite scientific views must be considered false, a given situation could be best understood by engaging in constructive thought to bring together the conceptions of various disciplines and weave them into the right pattern. Horkheimer argues that this positive connection with science does not mean that the language of science is the true and proper form of knowledge; it is naïve and bigoted to think and speak only in the language of science. This stance stood in opposition to the claim by the positivism of the day, the logical-positivism of the Vienna Circle, that science is *the* knowledge and *the* theory. In the *Dialectic of the Enlightenment* Horkheimer and Adorno finally severed the connection with orthodox Marxism, recasting the relationship between man and nature and reinterpreting the Enlightenment's 'triumph of reason' in a negative light (Jay, 1973, pp 253–280).

The despairing outlook of the Frankfurt School in its last phase derives, in a formal sense, from an analysis of modern Western society, but it should also be seen against a wider background of a current of social thought (especially prominent in Germany) which, from the end of the 19th century, expressed not only opposition to positivism as a theory of science, but a general hostility to science and technology as such in terms of their social and cultural consequences. Thus Hughes in his study of European thought (Hughes, 1958, pp 37–38) observes that the revolt against positivism was associated with a questioning of the cult of material progress, and a protest against the 'mechanization of life', which found one kind of expression in neo-romanticism, the *Lebensphilosophie*, and the reassertion of spiritual values, another in Weber's gloomy reflections on the rationalization and 'disenchantment' of the world (Bottomore, 2002, pp 38).

According to Bottomore, the absence of any serious and detailed analysis of the capitalist economy, of the class structure, and of the development of political parties and movements makes the Frankfurt School studies of modern society now seem narrow and inadequate (2002, pp 40–41). Specifically the Frankfurt School placed little emphasis on historical and economic analysis. (p 81). The alienation of these philosophers, located in a strange society (the USA) in the grip of consumerism, found echoes in the minds of students and academics raging against the crassness and unfairness of the society they observed around them. Although the Frankfurt School ultimately abandoned many of the essential tenets of Marxist theory (the revolutionary potential of the working class, class struggle as the motor of history, the economic substructure as the centre of any social analysis) in favour of philosophy, it did help to maintain the integrity of Marx's libertarian impulse at a time when Stalinism was rampant (Jay, 1973, p 295).

It is now conventional to speak of a second generation of the Frankfurt School with Habermas as one of the most

notable members (Jay, 1973, p xv). Habermas's overriding concern has been to discover some connection between philosophy and sociology, where philosophy can provide a normative grounding of a critical theory. This philosophy is not a 'first philosophy'; its statements, like those of science, are hypothetical and subject in some indirect way to empirical confirmation (Bottomore, 2002, p 80). However, Habermas's ideas have been criticized for the lack of empirical studies to support them.

Habermas's aim has been to reformulate the project of modernity in terms of 'universal pragmatics', a theory that retains the commitment to values of truth, critique, and rational consensus, but which pins its faith on establishing an 'ideal speech situation', a public sphere of uncoerced participant debate wherein those values might achieve their fullest expression. Only thus can enlightenment make good its emancipatory claims without falling prey to the objections mounted by the wholesale pragmatists who carry this linguistic (discourse) turn to the point of equating truth with what is currently and contingently 'good in the way of belief'.

Following in the footsteps of Marx, Habermas looked at the tendency for crises (couched in terms of economic, rationality, legitimization and motivation crises developing out of the natural emergence of class structure in capitalist societies) to develop in advanced capitalist societies. He concludes that, as a result of state intervention and the decline of class conflict, class compromise has become part of the structure of advanced capitalism and class consciousness is fragmented. As a result it is difficult to anticipate how 'the logic of capital' can be utilized as the key to the logic of social evolution. Habermas turns therefore to the process of democratization or in other words what he refers to as communicative action. Thus he reconstructs Marx's historical materialism in terms of 'labour' and 'interaction' (or communicative action) placing particular emphasis on power (coercion). Commentators differ sharply in their views of how far this project stands up to the sceptical assaults launched upon it. However, Habermas is among the most influential of 20th century philosophers and his role as a critic in the wider political/ethical sphere (for instance, in the debate about right-wing revisionist accounts of the Holocaust) is widely respected.

Criticisms of Marxism

Marx's economic analysis is central to his whole system. It is not surprising that the main intellectual targets for attack have been Marx's theories of value, of the source of profit, and of the falling rate of profit. In brief, the neo-classical economists argue (i) that Marx's theory of value is incomplete and is unnecessary as an explanation of prices—it is an irrelevant detour according to Samuelson; (ii) that attributing all profit to surplus value created by labour ignores the time value of money and the continuing role of innovation and entrepreneurship; and (iii) that the falling rate of profit theory on the introduction of new techniques is both theoretically

and empirically wrong. It is in fact difficult to do justice to Marx's economic theories as they changed over time. They have been the subject of much analysis, revision and debate (Rattansi, 1982).

Marxism's theories of historical materialism provided predictions of revolutions as the contradictions of capitalism give rise to class conflict. They also predicted that the material facts of the productive process determine that society would move through progressive stages of development. Events have contradicted these predictions leading critics to question every aspect of the analysis. Are the economic factors the only ones to be considered? Is the polarizing of society into two opposing classes (bourgeoisie and proletariat) inevitable? Does capitalism have to be fully developed before a revolution is possible? Are predictions about something as complex as human society possible? Can such attempts ever be 'scientific'?

In predicting and advocating revolution Marx underestimated the ability of capitalist states to absorb and adapt to the demands of the working class. In the developed economies the workers did not unite in revolution but they did unite in trade unions and other movements, which became political forces within increasingly democratic political processes. Workers gained rights of association and the right to strike. Employment laws gradually improved conditions in the workplace. Other social movements resulted in progress towards fairer democratic states with welfare provisions. The voting franchise was expanded over time, eventually to include women on equal terms. Taxes became more progressive and inheritance and wealth taxes chipped away at accumulated wealth. Monopolies came under attack. Growth in education encouraged social mobility as did the growth in middle class occupations. For instance, joint stock companies employed salaried managers who in turn used accountants and lawyers. Mass production advanced hand in hand with mass consumption allowing workers to share in some of the benefits of economic growth—enough at least to blunt the hunger for revolution. Ultimately, provisions for the unemployed, sick, disabled, retired and needy were introduced.

Marx's arguments that revolution and bloodshed were inevitable disturbed many who might otherwise have been sympathetic; Marxism, for instance, rejects the Greco-Roman-Christian tradition which insists on the primacy of the individual conscience. Marxists respond that, when the bourgeois interests of trade and empire were under threat, few qualms about shedding working class blood had been demonstrated. Whatever the merits of the argument, many found the ideas and activities of the revolutionaries abhorrent.

Marx's vision of a post-revolutionary society was at best vague. It was open to those leading the building of the new societies to develop their own interpretation in the face of the practical issues they faced, particularly with regard to holding onto and exercising power. The reality of Lenin's and Stalin's Russia and later Mao's China have provided plenty of

evidence for the critics to claim that the hopes of Marx and his followers were ill-founded and utopian. Marxism in practice has often been brutal, offering little freedom for workers and generating new ruling elites.

In sociology the two other founding fathers of the modern discipline, Max Weber (1864–1920) and Emile Durkheim (1858–1917), elaborated their own ideas to some extent in conscious opposition to the Marxist theory of society. Whereas Marx interpreted the development of capitalism in terms of ‘alienation’, Weber developed the concept of ‘rationalization’. He also qualified the Marxist view of the paramount importance of class with a more nuanced view involving ‘status groups’ (people can achieve status within particular groups). Weber’s general criticism of historical materialism was that it constituted only one possible perspective on history. In particular, he argued that people were also affected by the ideas they used to interpret their economic conditions. For Weber the rationalization of modern states and capitalist organizations in the form of bureaucracies (central organizations) provides the basis for efficiency and productivity: it promotes principled reasoning so that people can discuss and debate issues in terms of rational principles. This is necessary for democracy to function but it tends to overwhelm substantive values in the name of pragmatism: it destroys people’s capacities to believe in the exalted moral values associated with religion. For Weber, the rise of rationalism in the West is tied to the emergence of capitalism, the Protestant ethic, bureaucracy, and science (Tucker, 2002).

Durkheim placed less emphasis on economic conditions. For him the crisis of modern society was a moral one. How can people in modern societies lead a meaningful life? His famous studies of the increase in the suicide rate that accompanied industrialization demonstrated that they were struggling to do so. A new morality has to be found based on science, rationality, and a democratic community. This crisis derives from a lack of social cohesion: a stable set of meanings and values is a prerequisite for a people’s healthy existence. People must be integrated into groups in order to feel fulfilled. Ideals such as freedom and equality have an existence beyond particular individuals; they originate in society and inform individual actions and belief. Thus Durkheim emphasizes what holds society together whereas Marx’s emphasizes the forces that blow it apart. He defends civil liberties and moral individualism. He recognizes that a good democracy is dependent on an activist and participatory citizenry. In his view of society there is more room for individual variation and reflection; the state and the market have to coordinate complexly differentiated functions in modernity (Tucker, 2002).

During this period there were also criticisms of Marx’s theory within Marxism by Eduard Bernstein (1850–1932), an associate of Engels. One of his main contentions was that a polarization of classes was not taking place because of the rising levels of living and growth of the middle class. This line of thinking has developed more recently into debates about new classes and class structures and to the study of the role

of non-class groups such as ethnic groups and the women’s movement (Giddens and Held, 1982; Bottomore, 1991).

These criticisms and different perspectives have been met by the Marxists theoreticians with counter arguments. Despite political setbacks and historical developments Marxists continued to believe that the Marxist conceptions of human nature, the role of classes in social change, revolution as a vehicle for change, and the structure of socialist society are major components of a very distinctive and powerful theory of society (Bottomore, 1991, p 126). More recently, there have been attempts to rethink many aspects of Marxism through the medium of rational choice theory incorporating concepts from game theory and contemporary economics. Combined with analytical philosophy the result is a highly rigorous discussion. This has come to be known as analytical Marxism. Marxists have also attempted to come to terms with the rise of new social movements, particularly those inspired by an ecological or feminist perspective (McLellan, 1995b, p 527).

Marxists have been eclectic in their attitude to philosophy and have usually tried to articulate their ideas through whatever happened to be the current dominant philosophy. The revival of interest in Hegel between the wars, coupled with the influence of Freud, was decisive for the formulations in the Frankfurt School; the postwar vogue for existentialism led to all sorts of New Left variations on Marxism-with-a-human-face, of which Sartre’s later work is only the most prominent example; the subsequent prestige of structuralism in the 1960s and 1970s led to the arcanelly theoretical Althusser and his disciples; while the ‘rational choice’ Marxism of more recent years is evidently an effort to come to terms with some of the dominant concepts of the Reagan–Thatcher years (McLellan, 1995b, p 527).

Western Marxism has become more theoretical and more philosophical with the decreasing prospect of success for Marxist practical activity. The migration of Marxism into the universities has necessarily undercut the unity of theory and practice so central to the outlook of Marx himself. Marx looked forward to a society which would abolish the division between mental and manual work—which he saw as the cause of all philosophical mystification. Such a society would be intelligible to its members, since the social relationships in it would be transparent, and would not require mediation. The borrowings from bourgeois philosophy have, however, been extremely fruitful, particularly in the realm of social theory. Here as elsewhere, Marxism has proved at its strongest as a critique of philosophy rather than in adumbrating a possible alternative (McLellan, 1995b, pp 527–528).

Marxism and OR in the UK

OR has developed and become established in both centrally planned and capitalistic countries. Marxism is all pervasive in the former and largely absent in the latter (in the US, for instance). During the second half of the 20th century the UK

provides an intermediate case as it struggled to establish a middle road of welfare capitalism (or perhaps more accurately it veered from one model to the other as governments of different hues came and went). There has been a strand of left-leaning (often Marxist) thinking within OR in the UK for most of its history. This strand has never been dominant but it has at times been influential.

Between the wars many UK scientists were sympathetic to Marxism and some were members of the UK Communist Party. It was from these scientists that the founders of OR were drawn. They held out high hopes for the application of OR to the planning of a more equitable economy (Rosenhead, 1989). After the Second World War society in the UK was at least partly re-structured along neo-Marxist lines: health and education were brought into the public arena, the social benefit system was made much more comprehensive and some of the larger industries were nationalized. As the post-war scarcities receded, the need for allocative mechanisms for distribution reduced and more reliance was again placed on the market. There was a reaction against planning (and government OR) and there was more generally a change in intellectual climate associated with the Cold War. Certain ideas and policies, including the centralized state planning, became tarred with the brush of totalitarianism. Planning was associated with science; within government, science and OR had a left-wing image (Rosenhead, 1989, p 24).

Rosenhead argues that OR offered, in principle, an alternative to the rule of market forces. This presented a challenge: if decisions about matching demand and supply, about resource allocation, can be taken by explicit calculations (as they were in the wartime emergency), the market is called into question. Such questioning, according to Rosenhead, was overcome not by superiority of logic but by superior political and bureaucratic force (Rosenhead, 1987, 1989, p 25). Be that as it may, Rosenhead had to admit that even those who share in the desire to see a society whose dynamic is not provided by private capital accumulation might balk at the prospect of operationalizing the use of social need rather than sectional profit as the criterion in decision-making (Rosenhead, 1989, p 25).

In time, OR did manage to establish itself in government, albeit in a less exalted role. The fashion for planning in government returned for a time with the election of a Labour Government in 1964. But it was in Chile in 1971 that the British operational researcher, Stafford Beer, was presented with the opportunity to apply his ideas on planning and operating the industrial economy of a nation. Chile at the time was headed by Salvador Allende, a Marxist who had been democratically elected in 1970. The project received high-level support within the Chilean government but it came to an untimely end with the assassination of Allende and the overthrow of his government (Beer, 1981).

The idea in Chile was to regulate the social economy in real time using the principles of Beer's viable system model (VSM). This involved setting up a communications network

to gather data (indices) at the plant level, analysing this data at various levels of recursion (to alert plant managers to issues arising), and simulating the whole to anticipate future problems (bottlenecks etc). In order to define the relevant measures OR teams were formed to analyse every sector of the social economy down to plant level; their task was to generate quantitative flow charts within each factory that would highlight all important activities (Beer, 1981, p 253). Initially this approach was applied to industry and, despite the severe limitations of the technology available and the large number of people who needed to understand and appreciate the principles involved, considerable progress was made in a short period of time. Even though only partially established, the system proved to be crucial in managing the economy during various crises and upheavals.

President Allende, who was personally involved in the project, insisted that the approach should be decentralizing, worker-participative, and anti-bureaucratic (Beer, 1981, p 257). In effect, the existing regulation of the economy by capitalistic/market activity was to be replaced by a system based on Marxist principles using an OR approach (as opposed to a centrally planned approach favoured by East European communism). The Chilean project, the intensions of which went beyond trade and industry, was extremely ambitious. However, it did demonstrate the potential use of the VSM model in a Marxist-led economy. Together with other uses of the VSM in non-Marxist economies (Espejo and Harnden, 1989), the experience in Chile demonstrated the potential for using an OR approach in different social and political environments. It also went some way towards establishing a mechanism for running an economy without reliance on market/capitalist forces as Rosenhead had advocated. Beer subsequently undertook cognate commissions for the Presidential Offices of Mexico, Uruguay and Venezuela, answering directly to the President in the latter two cases (Rosenhead, 2003, p 1232).

Meanwhile the social sciences in general and sociology in particular were developing alternative ways of conceptualizing society in reaction to the prevailing wisdom of positivism. 1968 was a year of left-wing protest across Europe. In the UK protest took the form of campus sit-ins and anti-Vietnam war demonstrations. The 'existentialist Marxism' of Jean-Paul Sartre (1905–1980), his activism, and his role as a critical travelling companion of communism inspired many students. Herbert Marcuse (1898–1979) of the Frankfurt School also supported activism, providing a philosophy of human instincts based on Freudian psychology; these instincts, which are suppressed under capitalism, when liberated can be the basis for a life of sensuous playfulness, peace and beauty. Marxism thus became part of the intellectual and activist excitement of university campuses in the 1960s and 1970s. This had its impact on a new generation of UK OR scientists.

In the early 1980s OR came under critical scrutiny based on Marxism in a paper by Rosenhead and Thurnhurst (1982). The paper provides a textbook example of Marxist analysis:

OR is described as 'part of the forces of production (the resources and knowledge at the disposition of society to make use of nature) which under capitalism are the means by which the work-force is more efficiently exploited; and it is part of the ideological superstructure, the dominant system of ideas which dictate that the workers must accept the conditions of their exploitation' (Rosenhead and Thurnhurst, 1982, p 115). In similar vein they continue: 'management sciences have been concerned as much to maintain centralized control over these burgeoning enterprises as to devise methods of squeezing more surplus value out of the labour power of the workers. . . . Profit considerations dominate and benefits to the work-force result only if they are a means to this end' (Rosenhead and Thurnhurst, 1982, pp 115–117). In a section on OR in the service of the state, OR is described as having a role in most state activities including *inter alia* providing 'the parsimonious social welfare safety net with its function of defusing resentments of the under-privileged and of the reserve army of the unemployed; and running the apparatus of coercion which maintains 'order' and would attempt to restore it 'if things got out of hand' (Rosenhead and Thurnhurst, 1982, pp 117–118).

In a section on OR as ideology, the subjection of decisions to expert 'scientific' or 'rational' analysis is criticized; rather, decisions should be treated as political (exercises of power) to be negotiated or bargained over. By presenting the problems of management as *the* problems, OR assumes away the fundamental conflict between management and labour and all subsequent conflicts such as that between management and the consumer (Rosenhead and Thurnhurst, 1982, pp 118–120). The paper suggests that 'OR and systems analysis offer systematic methods for the increasingly difficult task of keeping capitalism manageable. . . [and] helps to justify the more and more effective exclusion of the mass of people from power.' The authors looked forward to a non-exploitative society in which some OR activity will be necessary, even life-enhancing. Finally, the authors conclude: 'Only by participating in the struggle of labour against capital can operational researchers hope to advance the day when management science as we know it will perish with management as we know it.' Rosenhead was able to give effect to some of his ideas when as President of the UK OR Society he supported initiatives on community OR and OR in developing countries (Rosenhead, 1986).

Thus whereas some of the pioneers saw OR as a possible vehicle for implementing Marxist policies, Rosenhead and Thurnhurst used Marxism to support critical thinking about OR. Meanwhile some critics of the methods of OR, including the new, 'soft', reformist OR approaches, were turning to social science perspectives, including Marxism, to identify limitations and ideological biases. Thomas and Lockett (1979) compare a Marxist approach with that of soft systems methodologies. They argued that in fact systems methodologies take a liberal pluralist view which accepts existing structures of authority and power.

In 1981 Dando and Bennett suggested that a Kuhnian revolution was underway in OR identifying three sets of rival proposals, which they labeled *official*, *reformist* (eg Ackoffian) and *revolutionary*. They suggested that the debate in OR differs from that in the natural sciences because it is not just about the best means of understanding the empirical world; it is also about the type of world to be constructed through the framework of assumptions adopted (Dando and Bennett, 1981, p 91). However, they note that there are many practitioners who are rather unconcerned about the whole debate and it may well be that most people in OR are still happily doing 'normal science' within the old positivist paradigm. (Dando and Bennett, 1981, p 101). In conclusion they agreed with the 'revolutionaries' that society is riven by conflict, domination, power and exploitation, and had considerable sympathy with the claim that the reformist approach fails to tackle these issues adequately. However, they concluded that, in the current debate, proponents of the *reformist* stance would probably win for the time being (Dando and Bennett, 1981, pp 101–102).

In 1980 Mingers compared critical theory and Checkland's soft systems methodology (Mingers, 1980). In 1982 Jackson took Thomas and Lockett's criticism of 'soft' approaches further. His main criticism was that these approaches were essentially regulative, that is they tend to support rather than challenge existing power structures, institutions and social elites. Ideas, Jackson maintained, are not produced in a social or historical vacuum; they arise and gain plausibility, within particular relations of power. Only an approach based on a 'critical' sociology can provide access to the 'real' nature of social organization (Jackson, 1982). Mingers (1984) agreed. Jackson (1985) believed he had found such a sociology in the work of Habermas, who at that time was favoured by social science departments in the US and UK. An account of Habermas' ideas and how they might be utilized in practice can be found in Ulrich (1983). Over the following years Jackson and Flood developed a new approach to OR and systems interventions, attempting to articulate an approach that would embrace revolutionary rather than reformist intent: 'We have followed Habermas in seeking to promote the three human interests in control, communication and emancipation' (Flood and Jackson, 1991, p 242).

Whatever the merits or otherwise of this particular approach, the important thing for the purposes of this paper is that the research programme included the possibility of embedding emancipatory/revolutionary/Marxist approaches in a framework consistent with Habermas's neo-Marxist approach. Further, the choice of method to be adopted was to be orchestrated by a 'critical' approach which examines both problem context and the methodologies on the basis of being 'sociologically aware' and of adopting a commitment to the promotion of 'human well-being and emancipation':

'Hard, cybernetic and soft systems approaches tend to be ideologically conservative. We are happy if our approach turns out to be a socially conscious and self-reflective

approach, distinguished by an openly declared emancipatory interest in an equal distribution of power and chances to satisfy personal needs, and in liberating people from dominance by other people and forces they do not control' (Flood and Jackson, 1991, p 244).

During the 1990s a number of academics worked on the issues raised by the development of an overtly 'critical' approach. A summary of the views of several of those prominent in this effort can be found in Mingers and Gill (1997) and a review of the field can be found in Jackson (2000). On the whole these efforts have failed to migrate into OR practice possibly because the ideological and methodological propositions are not kept separate. It seems to be easier to criticize current practice than to formulate a viable alternative. As noted above Marx's ideas have been similarly criticized.

Marxism and OR today

Western Marxist sociologists continue to emphasize the dominance of capital (more particularly in the form of large corporations and multinationals) and the major importance of the traditional labour movement as an agency of social transformation. They have had to take account of the substantial changes in capitalist society during the 20th century; on one side through the centralization and concentration of capital and the growth of state intervention in the economy, and on the other, through the (partly related) changes in class structure, involving particularly the social situation and consciousness of the working class and the growth of the middle class. There are many differences of view among Marxists about the interpretation of these processes of change within capitalism, but at the same time much common ground in the recognition of the crucial importance of the relation between capital and labour, and its political expression in diverse forms of class struggle, conflict between parties, and actions of social movements (Bottomore, 2002, p 40).

Despite the fact that Marx's economically based theory of inevitable rational progress with the proletariat as the embodiment of good must be rejected, much can be taken from Marx's intellectual endeavours. His idea that theory is closely related to practice, and that intellectual and social power cannot be separated from class remains convincing; for instance, it makes sense to understand political discussion about policies in terms of which class (or group) benefits. While his contention that fundamental economic reality is responsible for the 'superstructure' of surface appearances overstates the case, his ideas about alienation as a problem of capitalism still resonate with much contemporary experience (Tucker, 2002, pp 110–113).

As described above Marxism has influenced the development of OR in various ways: after the war some practitioners advocated running the UK economy (using OR techniques) on socialist lines; in the 1970s and 1980s it was used by some academics as a lens through which to view OR's role in society; subsequently there have been attempts to include it

in methodological frameworks in terms of an (emancipatory) ethical position and a view of society. Few today would advocate attempting to run the UK economy on socialist lines, the historic compromise of welfare capitalism being the preferred model. However, a Marxist view of OR's role in society is still relevant and the question of how to use Marxism within OR practice has yet to be resolved.

A Marxist perspective on OR in the UK today

OR in the UK is an activity largely engaged in improving the efficacy, efficiency and effectiveness of the industrial, commercial and governmental institutions of an advanced capitalist society. Those that make this observation usually mean it as a criticism, but to most of those so engaged this is a worthwhile occupation. With the collapse of the Soviet and Eastern European communist regimes, Marxists no longer have an attractive, feasible alternative to point to. Most citizens in the UK have settled for a welfare-capitalist state of some flavour or other. The aim of such a state is to support a society that exhibits political liberty, freedom of thought and social justice; it provides security, education, health and a welfare safety net; it manages the economy to fund these services and provide work: there is animosity to 'fat cats' and 'benefit scroungers' in equal measure.

Any Marxist or left-leaning analysis of UK society today would *inter alia* draw attention to the exploitation of the less-developed world particularly through trade arrangements which are biased in favour of rich countries; to the power of the multinationals; to the continued disparities between the rich and the poor within the UK; to the failures in public services and the welfare support systems; to disparities in the life-chances for different social groups; to the controlling of wages through outsourcing and immigrant labour; to the restrictive trade union legislation; to prejudices based on race, religion, gender and age; to miscarriages of justice; and perhaps to the exploitation of animals for commercial profit. In short, evidence of exploitation and social unfairness still abound. Would these conditions support a revolution? According to Marx, revolution is born out of alienation. Alienation in the UK today would seem to be more associated with minorities, youth and unemployment than with a major class grouping. With about 70% of housing owned by their occupants and 70% of households owning at least one car, the chance of an alienated proletariat rising up in sufficient numbers to seize control of the state seems remote. Most citizens want to improve their own position rather than overthrow society. They want government to make sure the economy does indeed provide education and, training, job opportunities, health services and welfare support. Few are convinced that a utopian state can be realized through revolution.

A Marxist evaluation of OR practice in the UK today would still position it as part of the technological infrastructure of capitalism. OR practice is undoubtedly more aware of and sensitive to social issues but it prefers to be part of the attempt

to find better and fairer ways of managing the welfare-capital system than to change it in some radical way. If the majority of the population at large tacitly support the current system, albeit finding plenty about it to criticize, OR workers, who by definition have satisfactorily navigated the education system and are able to formally or informally claim professional status (with the rewards that go with such a status), are very unlikely to want to embrace any approach to OR yoked in some way to a Marxist ideology of revolution. Concerns about inequalities in the world remains largely in the personal rather than professional domain for practitioners. Consciences are perhaps salved by the knowledge that the 'community OR' and 'OR in developing countries' movements in the UK continue to flourish. *Pro bono* consultancy is another avenue for social conscience increasingly taken up by professions (law and accountancy, for instance); the extent of such activity in OR is unknown. However, as we have seen Marx's legacy today lies in social science, his pioneering of the development of social theory. What is the role of social theory in OR today and what reliance should be placed on Marxist social theory?

Marxism in OR practice

The desire to develop methods to support OR interventions arose out of the crisis of confidence in OR in the 1970s. This had something to do with a new discipline reaching maturity, something to do with a more widespread reaction against applying a scientific approach to social questions, something to do with the fact that OR projects tended to fail for organizational rather than technical reasons, and something to do with a desire to challenge establishment thinking. The problem was fuelled by some of the attitudes of the leading OR advocates of the day who believed that OR could bring an objective view to bear on an issue, that a team of bright young OR analysts could tackle any problem, that OR should seek to be influential in the corridors of power. It is to the credit of those involved that to address the problems they turned outwards to other disciplines, to the social sciences (Lawrence, 1966; Jackson *et al.*, 1989). If they were looking for certainties, there were none to be found. However, 'soft OR' became established and added both to the repertoire of OR methods and to the general understanding of the nature of intervention.

The Total Systems Intervention (TSI) research programme (Flood and Jackson, 1991; Jackson, 2000), aimed at developing an all embracing social science-based methodology, has generated interesting debates. However, by placing a neo-Marxist view of society at the centre of the programme's proposition, it would seem that the opportunity for a productive partnership between theory and OR practice was largely foreclosed: a survey of OR practitioners by Munro and Mingers (2004) found that none had used TSI and over three-quarters of the respondents did not even know about it. Like Marxist thinking more generally, from an OR perspective TSI is now largely an academic activity remote from OR practice.

For the time being, therefore, OR practice could well lose sight of Marxism, and for all practical purposes it already has. *JORS* papers over the past five years (2002–2006) contain about 200 case-orientated papers. Of these most (over 90%) could be classified (using Dando and Bennett, 1981) as belonging to the 'official' paradigm. In other words, the authors had set out to analyse and improve the efficiency and effectiveness according to some generally understood purpose of some activity or other. Another 8% or so of the papers related to activities carried out in a 'reformist' paradigm, generally a soft OR approach involving problem structuring methods. Only two papers (1%) could be considered candidates for the 'revolutionary' category. One, a paper by Walsh and Hostick (2005), describes the involvement of the public and patients in improving health services in the UK. Broader participation is UK Government policy so that the project can hardly be categorized as 'revolutionary' in the Dando and Bennett sense. The second paper by Córdoba and Midgley (2006) describes the development of an IS strategy for Javeriana, a Jesuit University in Colombia. In this project not only were a variety of people involved (including students, business people in the community and citizens more generally) but participants were actively encouraged to identify concerns beyond the issue of education and the University. However, the paper says that 'senior management of Javeriana. . . would have the authority to approve or veto any new initiatives arising. . .' (Córdoba and Midgley, 2006, p 1071). On the face of it, despite the emphasis on inclusion and debate, this does not sound like a challenge to the *status quo*, to the existing power structure. Nevertheless, perhaps it can be conceived of as such: it is a moot point. No doubt some activities in the 'revolutionary' paradigm have been reported elsewhere but the conclusion from this examination of *JORS* is clear: there is little evidence of UK OR practice adopting a 'revolutionary' paradigm, let alone a Marxist approach.

Marxism is important to OR today primarily because of its role in the development of social theory within social science in general and sociology in particular. For practitioners wanting to engage in social issues it is best to be aware, if no more, of the concerns of modern sociology. It is within sociology that Marxism can be seen in its proper context today. How much does the OR practitioner need to become involved in such things? To address this question I will use the distinction between three archetypes of OR practice: 'smart bits', 'helpful ways' and 'things that matter' (Ormerod, 1997).

'Smart bits' is used to denote the quantitative modelling and algorithmic activities of OR (forecasting, scheduling and what. . . if modelling, for instance). The technical task is the centre of attention as illustrated in Figure 1(a) and the consultant role is as expert technician. An efficient, effective technical solution is sought. A rational approach to decision making is supported. The technical activity is embedded in a fit-for-purpose intervention process. Those engaged primarily in developing 'smart bits' will need to understand

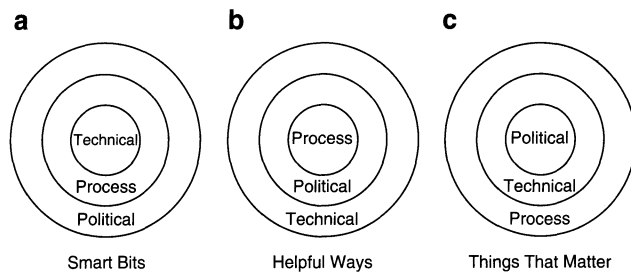


Figure 1 Archetypes of OR intervention: (a) smart bits, (b) helpful ways, (c) things that matter.

how to get things done in a particular client environment; typically common sense and experience should suffice. The political and social context may provide factors that need to be taken into account. It is important that consultants engaged in 'smart bits' interventions maintain an objective and professional stance. There are three issues that a Marxist perspective would suggest should be addressed:

1. Does the client organization exhibit attitudes and behaviours that one objects to (paying particular attention to what is today referred to as 'Corporate Responsibility')?
2. How will proper account be taken of the interests of those affected by the intervention but who are not involved in it? Whose views are going to be taken as authoritative (for expertise and decision-making)? (Ulrich, 2003).
3. Can class (or group) and class interests help explain the phenomenon under investigation? For instance, the growth of the middle classes has been used as a predictor of growth in energy consumption.

'Helpful ways' is used to denote general problem solving and intervention process activities (cognitive mapping, multi-criteria decision analysis and scenario planning, for instance). The intervention process is the centre of attention as illustrated in Figure 1(b) and the consultant acts as a facilitator. A consensus seeking approach to decision making is supported. A better process is sought. The key consultant role is facilitation of the process which engages participants. The participants will bring to bear their own perspectives on political and social issues. Analytical methods will only be drawn on if appropriate. It is important that consultants engaged in 'helpful ways' interventions do not favour any particular policies or view of society. They must be seen to be neutral. There are four issues to be addressed from a Marxist perspective:

1. Are the client's attitudes and behaviours acceptable? For instance, a consultant may balk at working for a company that 'exploits' third-world sources of supply based on low pay and poor working conditions.
2. How can the process involve those who will be affected by any decisions that are likely to be taken or influenced?

How can the client be persuaded that this is the right thing to do?

3. Can a Marxist perspective be one of those considered in processes that involve, for instance, metaphors, scenarios, viewpoints?
4. How can the decision process (or decision criteria) take into account all those affected by the decision?

'Things that matter' is used to denote activities that address important social issues such as health, housing or transport policy, issues that affect citizens (policy analysis, policy advocacy, and information dissemination, for instance). The political process is at the centre of attention as illustrated in Figure 1(c) and the consultant acts as a planner. A negotiating and bargaining approach to decision making is supported. 'Good' political outcomes (policies, procedures and resource allocations) are sought. The key consultant role is influencing the political process. In order to exert influence (while lacking an executive role) consultants engaged in 'things that matter' must gain the trust of relevant groups and individuals. There are four issues to be addressed from a Marxist perspective:

1. What are the beliefs, attitudes and interests of the various actors in the political arena? Can a client be found whose aims can be supported?
2. How are the interests of the various parties promoted, defended and embedded in institutions, policies and administrative procedures?
3. What sort of contribution to the political process can be made to help advance the interests of the (in some relevant sense) disadvantaged: how can the ingrained power imbalances be mitigated? For some suggestions see Forester (1989).
4. What telling and persuasive arguments can be developed to support the client's position; what telling and persuasive arguments can be developed to undermine the position of opponents?

The validity of these questions is, of course, not dependent on the adoption of a Marxist ideology or even Marxist social theory: once posited they stand in their own merits, merits that can be decided upon by the practitioner. Do all OR consultants need therefore to familiarize themselves with sophisticated sociological views of society? For those engaged primarily in developing 'smart bits,' it is enough to understand how to get things done in a particular client environment. Typically common sense and experience should suffice; a module on organizational behaviour such as those included in undergraduate business studies courses and some MSc courses in OR might help to gain some insight into how individuals, groups and organizations behave. For those engaged in 'helpful ways' common sense, experience, organisational behaviour courses, the accounts of the originators of some of the methods and perhaps a course on facilitation

should suffice; Ulrich's CSH, which does not presuppose a Marxist or neo-Marxist theory of society, could be usefully employed to help with the question of who to include in the participatory process (Ulrich, 1983). For those engaged in 'things that matter', at the very least, a literature search should be conducted across academic disciplines (for instance, sociology, economics, politics) to access the latest ideas and disputes in the relevant domain (for instance, health, education, defence, the justice system, social welfare, trade union legislation, international trade). The papers, journals and the internet are useful for this purpose. All or any of the particular positions within sociology and other disciplines may be relevant.

Finally, a word of warning for those who might want to embrace a radical philosophy for OR. Most OR practitioners would like to think of themselves as reflective, critical, challengers of the *status quo*, and innovative radical thinkers. However, the followers of Marx, the Frankfurt School and Habermas attach special meanings to these expressions. For them the important subject matter is power and they contend that reflection and criticism should be theoretically based. Radicalism is equated with challenging the power of management and people in authority who represent the *status quo*. However, Popper has pointed out that 'we can free ourselves from the *taboos* of a tradition; and we can do that not only by rejecting it, but also by *critically* accepting it' (Popper, 1963, p 122). In similar vein one can examine power imbalances in favour of one group or another and can conclude that these are legitimate in terms of the society we live in or not. In some circumstances one might conclude that people in positions of power should be less dominant; in others they might need more power, for instance, managers responding to customers, or teachers in the classroom, or police at a football match, or consultants in a hospital, or troop commanders in the field. It seems unlikely that theory provides simple answers to these questions and it is probably unwise for practitioners to assume any exist.

A wider perspective

In the UK there are still plenty of residual issues concerning class, wealth distribution, power and the structure of society, that remain to be addressed. However, these issues are much more urgent in many developing, ex-colonial, ex-communist, and communist countries: Marxist ideas would seem to be much more directly relevant in these countries. As capitalism becomes ever more dominant, corporations more powerful, the gap between rich and poor wider and environmental questions more urgent, it may be that the true crisis of capital predicted by Marx is yet to come. Population growth, ease of travel and therefore migration, historically driven resentments and religious fervour are all adding fuel to the potential fire. Whether politics and material wealth can, as in the past, prevent general conflagration by mitigating these tensions and providing opportunities and hope is a moot point. Marxism

provides a perspective on such issues but not a definitive view, nor a sound basis for prediction.

Conclusions

Marx has had a profound impact on the historical development of the world. His ideas have launched political upheavals and changed the way we think about society and its development. Marxism consists of three elements:

1. A dialectical philosophy borrowed from Hegel but transformed into dialectical materialism, from which in turn historical materialism derives.
2. A system of political economy, of which the dynamic part is the labour theory of value, the theory of surplus value and the conclusions drawn from them.
3. A theory of the State and revolution (Carew Hunt, 1950).

At the centre of Marx's thinking is his criticism of capitalism: capitalists appropriate the benefits of industry leaving the labouring classes in misery. Marx's solution was 'From each according to his abilities, to each according to his needs'. His preoccupation with the analysis of the economic structure in relation to other parts of social structure, with the formation of social classes and the theory of ideology, represented a coherent attempt to act both as an explanation of history and as a guide to political and social action. The idea that the mode of economic production and distribution of any society is an important determinant of that society's social, political and actual structure has had a profound influence on the writing of economic and social history.

Marx's predictions have proved less scientific than he hoped and where communist regimes have been installed in the name of Marxism, the results have failed to meet the aspirations of citizens. In Western democracies (welfare capitalist states) there is today little or no desire for revolution to install the socialist state dreamt of by Marx and his followers; the movement is in the other direction as communist regimes are overthrown in favour of social democratic capitalism. However, as a contribution to intellectual thought Marxism retains some of its potency.

In the UK OR has developed steadily through periods of left- and right-leaning governments and more generally OR has been used in countries with both capitalist and communist regimes; OR cannot be identified with any particular ideological stance. However, Marxist ideas have had a significant impact on the development of OR in the UK. Despite attempts to introduce approaches that included some Marxist elements during the 1980s and 1990s, OR practitioners have not taken up the methods offered. Marxism remains important to OR as part of the maturing academic discipline of sociology (and, of course, politics). To be effective within the organization of their client, most OR practitioners do not need to develop a full understanding of sociology. However, when addressing important social issues they may want to access current

sociological and political thinking and there they will undoubtedly find the influence of Marx.

The paper has indicated how the sort of thinking Marx encouraged can be included in practical interventions. Nevertheless, no approach can be justified by the theories of a philosopher, however eminent. Practitioners have to make up their own minds as to whether the questions suggested are relevant to the task in hand and the right ones to ask in their particular circumstances.

Engels sums up Marx's contribution to the world of ideas as follows:

'In the final analysis his real interest lay with his science, which he has studied and reflected on for twenty-five years with unrivalled conscientiousness, a conscientiousness which has prevented him from presenting his findings to the public in a systematic form until they satisfy him as to their form and content, until he was convinced that he had left no book unread, no objections unconsidered, and that he had examined every point from all its aspects. Original thinkers are very rare in this age of epigones; if, however, a man is not only an original thinker but also disposes over learning unequalled in his subject, then he deserves to be doubly acknowledged' (Engels, 1869).

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