

MARXISM AND THE DIALECTICAL METHOD

A critique of G.A. Cohen

Sean Sayers

The dialectical method, Marx Insisted, was at the basis of his account of society. In 1858, in a letter to Engels, he wrote:

In the *method* of treatment the fact that by mere accident I again glanced through Hegel's *Logic* has been of great service to me... If there should ever be the time for such work again, I would greatly like to make accessible to the ordinary human intelligence, in two or three printer's sheets, what is *rational* in the method which Hegel discovered.¹

But he never did find the time for this work. As a result, Marx's dialectical method and the ways in which it draws on Hegel's philosophy remain among the most controversial and least well understood aspects of Marx's work. My purpose in this paper is to explain some of the basic presuppositions of this method and to bring out their significance for Marx's theories. I shall do so by focusing critically on G.A. Cohen's account of Marxism in *Karl Marx's Theory of History: A Defence*.² In this important and influential work, Cohen contrives to give an account of Marxism in entirely non-dialectical – indeed, in anti-dialectical – terms. By criticising Cohen's views I will seek to show that the dialectical method is the necessary basis for an adequate theory of history and an indispensable part of Marx's thought.

The major purpose of Cohen's book is to develop and defend a particular interpretation of historical materialism, the Marxist theory of historical development. Cohen claims that his account is an 'old-fashioned' and a 'traditional' one (p.x); and, indeed, in certain respects it is. For, in contrast to the tendency of much recent Marxist writing, Cohen strongly emphasises the materialistic and deterministic character of Marx's theory of history. He insists that the development of the productive forces is the primary motive force for historical change, and portrays Marxism as a form of technological determinism. However, there are various different forms of materialism, not all of them Marx's. In particular, it has been a standard part of 'traditional' Marxist philosophy to criticise mechanical forms of materialism and to insist that a dialectical form of materialism is needed in order to comprehend the complexity and richness of concrete historical processes. Cohen manages to ignore this aspect of the traditional picture almost entirely, and what little discussion he devotes to dialectic is hostile and dismissive.

The basis of this hostility is not far to seek. It is revealed by another major purpose of Cohen's book. For, as well as presenting an interpretation of historical materialism, he is attempting to vindicate the analytical method in philosophy; and although he does not say it in so many words, it is apparent that he regards this as irreconcilable with the dialectical aspects of Marx's work. Cohen is right about this, I shall argue: dialectical philosophy does, indeed, involve methods and assumptions which are ultimately incompatible with those of the analytic approach. However, against Cohen I will argue that dialectic is the necessary basis for a satisfactory theory of history and an indispensable part of Marx's thought. Cohen's use of the analytic method and his rejection of dialectic leads him to give a systematically distorted account of Marx's theory of history, which is neither faithful to Marx's own thought, nor adequate for an understanding of the concrete reality of history. This is what I shall try to show.

The Analytic vs. The Dialectical Method

What, then is Cohen's analytical method? Unfortunately, Cohen himself never spells this out, although it is an important part of his purpose to defend and vindicate it. First, it should be noted that a philosophy can be described as 'analytical' in two distinct senses. One may mean by this term simply that the philosophy is part of the twentieth-century tradition of analytical philosophy. Cohen's work is certainly 'analytical' in this sense, and this is immediately apparent from its outward style: the use of formal logical notation, abstract symbols, numbered sentences, and so forth. Cohen himself talks of 'the standards of clarity and rigour which distinguish twentieth-century analytical philosophy' (p.ix). However, these virtues are not peculiar to twentieth-century analytical philosophy; indeed, they are not even particularly characteristic of it. Anyone who has read a representative selection of work in this tradition will be well aware that, all too often, it is needlessly obscure in style, cloudy in thought and not noticeably more rigorous in argument than the work of any other major school of philosophy. Clarity and rigour are the virtues of *good* philosophy, of *good* thought in all fields; they are no monopoly of analytical philosophy. Cohen's work has these virtues to a high degree; but that is because it is good philosophy, not because it is in the analytical tradition.

Twentieth-century analytical philosophy has been a diverse tradition and it is not easy to make generalisations about it. However, that is not my purpose here, since Cohen's philosophy is also 'analytical' in a further and deeper sense. It is analytical not merely in its style and form, but in its very presuppositions and content. And it is analytical in a very traditional sense. For, like the philosophers of the seventeenth and eighteenth centuries, Cohen relies on the method of *analysis*. He insists upon analysing the whole that he is considering into its component parts. He insists upon separating and isolating the different elements and aspects of the given concrete totality, and considering and defining these in isolation. The effect of this method is to produce a fragmented and atomised picture of reality.

Underlying this method, as Cohen makes clear, is what could be called a logic of external relations.³ For, according to Cohen, things are what they are, and have their essential nature in themselves, quite independently of the relations in which they stand. In general, things – or 'terms' in Cohen's language – are not affected by their relations or context. In other words, relations are external to, and independent of, the things or terms related: 'the terms bound by relations do not belong to the structure these relations constitute' (p.35). One is reminded of Locke's view that relation is 'not contained in the real existence of things, but (is) something extraneous and superinduced'.⁴

Things are what they are; they have their being purely in themselves and quite independently of the context of their relations. 'Everything is what it is and not another thing' – Bishop Butler's slogan⁵ admirable sums up the logic of this sort of analytical approach.

This logic is rejected by dialectical philosophy. Dialectic insists that in order to understand the concrete nature of things it is vital to see them in the context of their interconnections with other things within a wider whole. For dialectic, concrete and particular things are always and essentially related, connected to and interacting with other things within a larger totality. This context of relations is internal and essential to the nature of things, not external and accidental. By contrast, the analytical approach, with its logic of external relations, has the effect of removing things from their context and producing an abstract account of them. It has the effect of fragmenting the world into a disconnected series of atomic particulars and, thereby, producing a mechanical account of reality. To substantiate and illustrate these points let us now turn to Marx's theory of history and Cohen's account of it.

Forces and Relations of Production

Cohen's account of Marxism is very closely based on Marx's 1859 'Preface'. In part, this reads as follows:

In the social production of their life, men enter into definite relations that are indispensable and independent of their will, relations of production which correspond to a definite stage of development of their material productive forces. The sum total of these relations of production constitutes the economic structure of society, the real basis, on which arises a legal and political superstructure, and to which correspond definite forms of social consciousness. The mode of production of material life conditions the social, political and intellectual life processes in general. It is not the consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness.⁶

An important and valuable part of Cohen's work consists in the careful and detailed accounts he gives of the various theoretical terms that Marx here uses. However, although Cohen's analyses of the meanings of particular terms are often very helpful and instructive, the general picture that emerges of Marx's theory is more questionable.

For example, Cohen's discussion of the notion of the productive forces is full, useful and important. The productive forces of a society are composed mainly of the means of production (i.e. instruments of production and raw materials) and labour power (i.e. 'the productive faculties of producing agents: strength, skill, knowledge, inventiveness etc.' (p.32)). The relations of production are the economic relations of society. The set of economic relations prevailing in a particular society constitutes its economic structure, its economic basis. So far so good. However, Cohen insists that forces of production and relations of production be regarded as entirely distinct and separate from each other. The productive forces are one thing, the relations of production another: 'productive forces are not part of the economic structure' (p.28); 'production relations alone and not productive forces constitute the economic structure' (p.29).

The separation of the different elements and aspects of society is certainly an essential part of any scientific account of it. Analysis – the distinction of different things – is without doubt an indispensable feature of all understanding and all knowledge. Dialectic does not deny this. Indeed, dialectic goes further and insists that analysis should not be regarded as a merely intellectual and mental process, as a purely conceptual and logical activity, the work of thought alone. For in the concrete historical process itself, different aspects and features separate *themselves*. The division and conflict between forces and relations of production, for example, is a real historical distinction, a part of the process of actual economic development; and only subsequently does it come to be grasped and reflected accurately in economic thought. Nothing is cloudier and less helpful than the attempt to merge all distinctions together and insist that, in reality, 'all is one'. 'As though', in Marx's words, 'this separation had forced its way from the textbook into real life and not, on the contrary, from real life into the textbooks'.⁷

Dialectic does not deny the reality of distinctions, nor the need for them in thought. But it does insist that in concrete reality different and opposed things are also in unity. It rejects the exclusive, rigid, absolute, either/or distinctions of analytical thought. In particular, forces of production and relations of production are different and conflicting aspects of a *single process*: the productive activity of people in society. these different aspects exist in unity. their unity as

well as their difference must be recognised if their nature is to be properly understood.

Thus productive forces are productive forces only in the context of certain relations of production. A machine, for example, requires people to build, operate and maintain it – only given these is it a productive force. A machine is a productive force only in the context of certain relations of production in which it is employable productively. No doubt it is possible to remove a machine entirely from its surrounding social relations and consider it purely abstractly and in isolation. This is what Cohen does in his account of productive forces. But then one is no longer considering it *as* a productive force, but *merely* in its abstract material aspect, as a physical object. A machine is regarded in this way by the physicist or the engineer. This is perfectly valid and legitimate, if your interest is confined to its material properties, since a machine is indeed a physical object – a certain configuration of metal and other materials – and remains so, whatever the social context in which it is placed. The historian, however, is interested in the machine not merely as a physical object, but as an instrument of social production, as a productive force. And a machine becomes a *productive force* only in certain contexts, only in certain relations of production. These relations are essential – that is to say, internal and not merely external - to its being as a productive force.⁸

Similar remarks apply to labour-power, the only major constituent of the productive forces. Labour-power – ‘the productive faculties of producing agents’ (p.32) – cannot be understood if it is abstracted and isolated from the social relations in which it is exercised. Man is an essentially social creature, and his powers and capacities are essentially social. In particular, to consider labour power in its abstract and isolated individual form is to blind oneself to one of the most significant means for its development: social cooperation. Cooperative production – that is, socially coordinated, as opposed to mere individual, production – not only increases the labour power of the individual in a variety of ways, but also brings a ‘new power’ into being: ‘the social productive power of labour or the productive power of social labour’.⁹ As Marx says, ‘not only have we here an increase in the productive power of the individual, by means of cooperation, but the creation of a new power, namely the collective power of the masses.’¹⁰

This new collective power is something more than the sum of its parts. An observation by Napoleon, cited by Engels, well illustrates this. The French cavalry were poor riders, but well organised and disciplined; the Mamelukes, on the other hand, were excellent horsemen, but undisciplined. The result, according to Napoleon, was that

Two Mamelukes were undoubtedly more than a match for three Frenchmen; 100 Mamelukes were equal to 100 Frenchmen; 300 Frenchmen could generally beat 300 Mamelukes, and 1000 Frenchmen defeated 1500 Mamelukes.¹¹

Labour-power cannot be defined in isolation from social relations, since social cooperation itself is a powerful productive force. Modern labour, in particular, is essentially social labour. In engaging in it, man develops his powers and capacities as *social* powers and capacities, for ‘when the labourer cooperates systematically with others he strips off the fetters of his individuality, and develops the capabilities of his species’.¹² So, here too, the conclusion is that productive forces and relations of production cannot be entirely separated and abstracted from each other. The productive forces are what they are only in the context of the appropriate relations of production. These relations are thus internal and essential to them, not purely external and distinct.

Nature and Society

Cohen supports his account of the forces and relations of production with a very interesting discussion of the distinction between nature and society. According to Cohen, 'The... distinction between forces and relations of production is, in Marx, one of a set of contrasts between nature and society.... The matter or content of society is nature, whose form is the social form' (p.98).

Cohen's account of these contrasts is among the most valuable and illuminating parts of his book. However, here again, there is the same analytic tendency to make absolute and rigid distinctions between these opposites where a recognition of their essential relations and unity is also needed. Cohen, in fact, sees that in concrete circumstances society and nature always exist in unity. However, his method and logic preclude him from incorporating this insight into his theory; and he insists that these aspects are logically or 'conceptually' distinct and must, in thought, be held apart.

Viewed physically, production appears stripped of its social form.... Production in its asocial aspect is 'material production', this being the *content* ... of production. And that content may be described in illuminating abstraction from the form with which it is integrated.... So if we look through the social form we discern something conceptually separate from it: ... material production.

(pp.98-9)

It is certainly vital to make a distinction between the material and the social. Moreover, Cohen is right to stress that Marxism, as a form of materialism, sees the material level as basic and as the primary determinant of historical development. But Cohen makes it an either/or matter. Society and nature, form and content, are portrayed as exclusive opposites, with the social form made entirely external to and logically independent of the material content. The dialectical view, by contrast, is that these opposites, as well as being different and opposed, interact and interpenetrate; and it rejects any rigid antitheses here, 'as though', in Marx's words, 'these were two separate "things" and man did not always have before him an historical nature and a natural history.'¹³

At times Cohen himself sees this. For example, he says,

The material description captures a society's underlying *nature*. In this sense of 'nature', nature is of course a product of history, changing in and as a result of social forms. Humanity in social organisation thrusts itself against its environment, altering it and its own human nature, for it develops its own powers and needs in the course of the encounter.

(p.96)

But at other times (and these are the more characteristic ones), he ignores this interaction and describes history as a process of 'adjustment to nature' (p.285), as though nature were a purely external and immutable constraint to which society had to conform.

This is not a satisfactory way in which to interpret Marxism. Nature and society are not purely external to each other; on the contrary, they interpenetrate and mutually transform each other. Society not only adapts itself to nature, but also, and on an ever-increasing scale, society adapts and transforms nature to its needs. The rigid, analytic separation of the natural from the social tends to blind Cohen to these facts. Like Feuerbach, he tends not to see 'how the sensuous world around him is, not a thing given direct from all eternity, remaining ever the same, but the product of industry and the state of society'.¹⁴

These problems come out clearly in Cohen's attempt to assimilate Marx's theory to that of the Sophists. He writes,

Social arrangements cannot alter physical necessities, but social arrangements can be altered. When they are confused with the necessities they arrange, they appear to partake of the immutability of the latter. The Sophist's distinction between nature and convention is the foundation of all social criticism and Marx's distinction is a development of it.
(p.107)

Physical necessities – if by that is meant the laws of nature – cannot be altered. That is true. But nature can be altered by human activity – it is not 'immutable'. The development of human productive power enables man to control nature and to overcome the constraints of his environment; not by transcending or abolishing the laws of nature, but by using them. Freedom, in the Marxist view, is based upon 'the recognition of necessity'.¹⁵

For Marx, social revolution is not just a matter of changing the social form on the basis of an unaltered and unalterable nature. The Sophists indeed said: nature is fixed, but human conventions and social forms are alterable. But Marx is profounder than this. He maintains that social forms are not merely 'conventional' and not changeable just at will. Definite material conditions of production impose definite social forms, and it is through the development of material conditions that social relations change. Man, through labour, alters nature in accordance with his needs and is, in the process, altered by it. There is an interaction here.

Labour is ... a process in which both man and nature participate.... He opposes himself to nature as one of her own forces ... in order to appropriate nature's productions in a form adapted to his own wants. By thus acting on the external world and changing it, he at the same time changes his own nature.¹⁶

Marx's social criticism, therefore, has an entirely different basis from that of the Sophists. For Marx, socialism is not an alternative form of society, an ideal which it is possible to realise because social forms are merely conventional and alterable. Socialism, for Marx, is the outcome of a real and present social movement, which is the product of the material forces at work in present, capitalist society. The social criticism he talks of is a material and a practical one.

Communism is for us not a *state of affairs* which is to be established, an *ideal* to which reality will have to adjust itself. We call communism the *real* movement which abolishes the present state of things. The conditions of this movement result from the premises now in existence.¹⁷

Relations and Properties

At the basis of Cohen's account of Marxism, as I have emphasized, is the philosophical theory of external relations. It is now time to focus attention upon this theory and to criticise it. According to Cohen, society is made up of people and productive forces. These are the 'terms' of society, the substantial entities – the material elements – related by social relations to make up society: 'persons and productive forces are the only terms bound by production relations' (p.31). These relations, Cohen insists, are external to, separate and distinct from, the terms

related: 'the terms bound by relations do not belong to the structure those relations constitute' (p.25).

Cohen discusses these views with reference to the following passages from Marx.

A negro is a negro. He only becomes a slave in certain relations. A cotton-spinning jenny is a machine for spinning cotton. It becomes capital only in certain relations. Torn from these relationships it is no more capital than gold itself is money.¹⁸

But Marx also writes,

To be a slave or to be a citizen are social determinations, the relationship of man A to man B.¹⁹

And also,

Capital is not a thing, but rather a definite social production relation, belonging to a definite historical formation of society, which is manifested in a thing.²⁰

Commenting on these passages, Cohen writes,

Marx describes capital, slaves, etc., in two divergent ways. On the one hand, he insists that capital is a relation and not, like a machine, a thing; on the other hand, he allows that it may be a thing, for example a machine placed in certain relations.... The two forms of speech are incompatible.

(pp.89-90)

He then goes on to argue that it is incorrect to talk of capital, or a slave, as a relation. Capital, he insists, is a particular sort of thing (a machine, say) placed in certain social relations; and, likewise, a slave is a different sort of thing (a person) in certain relations.

To make this point, Cohen appeals to the notion of a 'relational property'.

A husband is a man related by marriage to a woman: he is not also a relationship of marriage. Being a husband is a property of that man, one he has in virtue of that relationship, and commonly styled a *relational property*. Being capital and being a slave are, similarly, relational properties of means of production and men. More specifically they are social relational properties, whereas being means of production and being a man are not. the latter are possessed independently of the social form. Remove the social form in thought experiment and those properties persist.

(p.90)

Cohen here want to distinguish 'relational' from other properties. The idea is that some properties – those material properties which make a man a man and a machine a machine – are more basic and essential (i.e. internal) than the 'relational' properties. The social relations, the social form, that these things assume (slave, capital) are, by contrast, inessential and external.

This whole picture needs questioning. Productive forces are productive forces only in the context of the necessary relations of production – in the absence of these they are mere useless objects. A spinning jenny, therefore, is a machine for spinning cotton only given certain relations

of production. Transferred to a stone age society it would be a mere physical object of no productive use. Likewise, a stone axe has no place in our society as a productive force but only as a museum exhibit. If, by 'thought experiment', the social form is removed from capital, what is left is not a productive force but a mere physical object. Similar arguments apply to the other example discussed by Cohen.

People are essentially social animals. Their social relations are not external and inessential to their nature as human beings. This was certainly Marx's view:

The further back we trace the course of history, the more does the individual ... appear to be dependent and to belong to a larger whole.... Man is a *zoon politikon* (social animal) in the most literal sense: he is not only a social animal, but an animal that can be individuated only within society.²¹

If, by 'thought experiment', a human being were entirely removed and abstracted from all his social relationships, he would be unlikely to survive the first few days of infancy; but, even if he did so, he would emerge as a mere animal of the human species, without any individuality or other distinctively human characteristics.

The upshot of this discussion is, again, that concrete things exist in relations; and the essential point that dialectic makes is that these relations are not merely external, but internal to the things related. The notion of a 'relational property' to which Cohen appeals is no help to his case, it only confuses the issue. Nonetheless, a word should be said about it since it was introduced by G.E. Moore²² to combat the Hegelian philosophy of internal relations and has since become a standard part of the orthodoxy of analytical philosophy.

Relational properties are supposed to be those properties which a thing has simply by virtue of the relations in which it stands to other things; and such properties are contrasted with the non-relational properties, which are supposed to be intrinsic to a thing, regardless of its relations. The assumption underlying this distinction is our old friend, the doctrine of external relations: the view that relations are extrinsic and external to things. According to this theory, as we have seen, things are what they are and have the essential properties that they have, intrinsically and quite independently of their relations to other things. Thus, the properties which things have in virtue only of their relations are supposed to be merely accidental and inessential properties. A man is a person in himself and essentially; only accidentally does he occupy a particular social role and relate to others.

At first sight, this distinction looks simple and clear-cut, but these matters are by no means as straightforward as the advocates of the notion of relational properties suggest. The problem is that *all* properties are relational; all the properties which things have exist by virtue of their relations. As Hegel says, properties are 'the determinate relations of the thing to another thing; property exists only as a mode of relationship between them'.²⁵ He gives the following illustration:

By properties of herbs, for instance, we understand determinations which not only are *proper* to something, but are the means whereby this something in its relations with other somethings *maintains* itself in its own peculiar way, counter-acting the alien influences posited in it and making its determinations *effective* in the other.²⁴

The language Hegel uses here is doubtless strange and unfamiliar, but the idea that he is expressing is surely a clear and a profoundly important one. A thing reveals the particular

properties it has only through its relations to other things; indeed, only through its opposition to a negation of them, its 'counteracting' them. As Spinoza said, '*omnis determinatio est negatio*' (all determination is negation). Only by reflecting light in a certain way does a thing manifest colour; only in and through its mechanical interactions with other bodies does an object manifest mass; only through its relations to other things in space does a thing show its shape, and so on and so forth. In short, all properties are 'relational', and the concept of a 'relational property' gets us nowhere.

But this is not the end of the matter. The problem still remains of whether there is a useful distinction to be drawn between the intrinsic and essential properties and relations of things, their internal relations, on the one hand, and their extrinsic, external and inessential properties and relations, on the other. The strong Hegelian view is that *all* relations are internal. However, it is not my purpose to defend such a position here. All that I am arguing is that the opposite extreme – Cohen's position – that all relations are external and extrinsic to the nature of things, is incoherent and unsatisfactory. Some, at least, of the relations of a thing must be internal. And, in particular, historical materialism maintains that their social relations are internal and essential features of the nature of both people and productive forces.

Things and relations are not purely external to each other, not absolutely distinct and separate. These are not either/or exclusive categories. In concrete reality these opposites pass into each other, they exist in unity. This sort of language no doubt has a mysterious sound to it and may well appear 'cloudy' and 'evasive' as Cohen charges, but it is not so. On the contrary, it embodies the crucially important idea of dialectic that concrete things must be understood in the context of their relations and in a dynamic fashion. For *how* opposites can be united is intelligible only when we see that the relations between them are not fixed and stationary, but that opposites interpenetrate and pass into each other. To see here an abstract, isolated, individual person or thing, there a disembodied structure of social relations, in the analytic manner, is no way in which to understand society. In concrete social reality it is rather the case that people are active. They enter into social relations, they interact with other people and things according to more or less set patterns, they are active in their social roles; and, in so being, they produce and reproduce their social relations. Conversely, too, their social relations enter into them, and give shape and form and structure to their activities and thoughts and intentions. There is a constant process of interaction and interpenetrations between a person and his social relations; and hence unity as well as conflict between these opposites.

The same is true of the interaction of the forces and relations of production. These opposites also interact, interpenetrate and pass into each other.

The concentration of the instruments of production and the division of labour are ... inseparable one from the other.... As the concentration of instruments develops, the division develops also, and *vice-versa*.... Every big mechanical invention is followed by a greater division of labour, and each increase in the division of labour gives rise in turn to new mechanical inventions.²⁵

The general point is this: relations do not remain external to terms. there is no absolute division or opposition between things and relations. Things do not remain merely 'in themselves', shut up, closed off and isolated from other things. Things enter into their relations, act and interact with other things, manifest their properties. And, conversely, its relations and properties enter into the thing and are *its* properties. This is what Hegel is saying when he writes,

The inadequacy of the standpoint at which this philosophy stops short consists essentially in holding fast to the abstract *thing-in-itself* as an *ultimate* determination, and in opposing to the thing-in-itself ... the determinateness and manifoldness of the properties; whereas in fact the thing-in-itself essentially possesses this external reflection within itself and determines itself to be a thing with its own determinations, a thing endowed with properties.²⁶

Causality and Necessary Connection

I have been arguing that terms and relations, productive forces and relations of production, the material and the social aspects of society, must not be regarded as entirely distinct and separate from each other. In concrete conditions these are contradictory opposites which interpenetrate and exist in unity. In response, no doubt, the objection will be made that I am misrepresenting the analytical approach and being unfair to Cohen in my criticisms. Analysis, it will be said, is a tool of *thought*; and it is the peculiar power and privilege of thought to be able to abstract and to separate in theory things which in reality are inseparably united. Indeed, Cohen defends his method in just these terms.

Given a certain level of development of the productive forces ... a certain set of production relations, or social form, is appropriate.... But we may always abstract from the social form and display the current state of the relation between man and nature, and the material relations between men underlying their social relations.... The relationship between man and nature is 'mediated' by the social form: it does not occur outside it. The development of nature, described in socio-neutral terms, is therefore an abstraction. But it is a theoretically important abstraction.

(pp.97-8)

Elsewhere, Cohen describes such abstractions as 'illuminating' ones. And indeed they are, so long as it is remembered that they *are* abstractions, and that in concrete reality matter and form, nature and man, are also essentially related.

The analytic approach, however, and its underlying either/or logic, requires that each term is isolated from its opposite, and that an impassable logical gulf is created between them. This method produces 'abstractions' to be sure, but not 'illuminating' ones.

According to Cohen, there is no 'logical' connection between terms and relations, form and content, the material and the social levels: the relations between them are purely external and contingent; they are 'conceptually separate' (p.99). He illustrates this by saying,

We may envisage a complete material description of a society – a socio-neutral description – from which we cannot deduce its social form. It will provide extensive information, detailing the material abilities and needs of persons, the resources and facilities available to them, their scientific knowledge. But ownership patterns, distribution of rights and duties, social roles will go unremarked.

(p.94)

Here we are being presented with the atomised and fragmented picture of the world which is the necessary outcome of the analytic method. there is no necessary connection between the material

aspects of society and its social forms. This Hume's picture of the world: 'All events seem entirely loose and separate. One event follows another, but we never can observe any tie between them: they seem conjoined, but never connected'.²⁷ According to this logic, there are no necessary connections between events. Any event could follow any other; it is 'logically possible' for any sort of society to be associated with any sort of material means of production.

Marx's idea was different: 'The hand-mill gives you society with the feudal lord: the steam mill, society with the industrial capitalist'.²⁸ The necessary connection between a society's productive forces and its social relations was one of Marx's great discoveries. It may seem possible to have any sort of society – a socialist society even – based upon the hand-mill. Indeed, a large and influential body of romantic and utopian thinking is based upon just this idea. According to Marx, however, this is not possible. It is not, that is to say, a *real, historical* possibility.

A scientific understanding of events involves a knowledge of the laws and necessities governing them. Hence it involves a knowledge of the *real* and *concrete* possibilities inherent in a situation, as opposed to the merely apparent and abstract, or 'logical', possibilities. Cohen, like other philosophers in the analytic tradition, devotes considerable time and ingenuity to exploring various unreal but 'logically possible' cases.²⁹ However, to say that something is 'logically possible' means only that it is not self-contradictory; and, as Hegel says,

Every content can be brought under this form, since nothing is required except to separate it from the relations in which it stands. Hence any content, however absurd and non-sensical, can be viewed as possible.³⁰

For this reason, questions of 'logical possibility' should be of no interest to philosophers, historians, or anyone else concerned with the real world. The proper subject-matter of philosophy, as Hegel says, is actuality; and Marx would surely have agreed, at least with the spirit of this.³¹

As one comes to understand reality scientifically, one comes to grasp the real connections between apparently unrelated events. A knowledge of the concrete nature of things involves a knowledge of the laws governing them: their necessary processes of development and their connections with other things.

Usually we regard things as unaffected by each other.... Everything is thus put outside of every other. But the aim of philosophy [and science, n.b.] is to banish indifference and to ascertain the necessity of things. By that means the other is seen to stand over and against *its* other.³²

Conversely,

The less education a man has, or, in other words, the less he knows of the specific connections of the objects to which he directs his observation, the greater is his tendency to launch out into all sorts of empty possibilities.³³

As I have been arguing, the analytic picture of the world and the logic of external relations have precisely the effect that Hegel here describes. This philosophical method separates things from their relations. It portrays things as 'loose and separate', merely contingently and externally related. This Hume's picture of the world; and, as Hume himself was well aware, it leads to a

total scepticism about science. For, on this account, there can be no valid basis for scientific theories of the lawlike and necessary behaviour of things. In other words, this philosophy provides a logical framework which undermines scientific knowledge. It is therefore incapable of illuminating Marx's theory of history, which claims to be a scientific theory.

This fragmented, Human picture of the world is the underlying basis of a great deal of contemporary analytical philosophy. It is the underlying basis of Cohen's account of Marxism, as I have shown. Cohen, of course, knows perfectly well that there is a connection between the material productive forces and social relations, and that it is the purpose of Marx's theory of history to describe this connection. Cohen himself does not believe that there could be a socialist society based upon hand production. Nevertheless, he insists that the connection between the forces and relations of production is not a *logical* or 'deductive' one. Rather, he maintains, the reaction is a purely contingent, external and Human causal one. Cohen, in other words, accepts Hume's premises: he accepts Hume's fragmented picture of the world; but he is unwilling to accept Hume's sceptical conclusion: 'Though we cannot *deduce* social relationships from a material description, we can *infer* them more or less confidently, by dint of general or theoretical knowledge' (p.95).

Given Cohen's premises, however, this is just what *cannot* be done. Starting, as Cohen does, from the analytical picture of the world as composed of discrete and unconnected, 'loose and separate' particulars, it is not possible to infer anything beyond the immediately given. If ever a philosophical result has been demonstrated conclusively, it is surely this one, by Hume's celebrated arguments. Uncritical and unsupported talk of 'inferences' will not do here. Hume, by contrast, spells out the sceptical implications of the analytical view with uncompromising clarity:

It is evident that Adam, with all his science, would never have been able to *demonstrate* that the course of nature must continue uniformly the same.... Nay I will go further and assert that he could not so much as prove by any *probable* arguments that the future must be conformable to the past.³⁴

Marxism claims to give an account of the laws of historical development. It maintains that there is a necessary connection, an internal relation, between the development of the productive forces and changes in the relations of production and in the political and ideological superstructure. This theory cannot be understood in terms of a logic which has the effect of fragmenting social and historical processes into isolated parts and denying the connections between them.

The Mechanistic Outlook

So far I have been concerned with the philosophical and logical assumptions which are at the basis of the analytical approach. Now let us look at the effect of this method when it is applied. This effect is simply stated. The analytical approach produces a mechanistic picture of the world. The reasons for this are not hard to see.

Analysis involves dissecting and decomposing a given whole into its constituent parts. Underlying this approach, as we have seen, is the doctrine of external relations. The assumption is that the whole is merely a collection of externally related parts, which are not essentially affected by their relations to each other in the whole. Thus in the analytic division of the thing into its component parts, the parts, it is claimed, are not altered: nothing is lost; clarity and

precision are gained: 'In thus dismembering the thing, it is understood, we disintegrate and take to pieces the attributes which have coalesced, and add nothing but our own act of disintegration.'³⁵

These methods and assumptions seem particularly satisfactory and appropriate in the case of mechanical objects and systems. For mechanical action is external action; and a mechanical system appears, at least initially, to be a mere assemblage of parts, indifferent to each other and in purely external relation. 'In its superficial form', as Hegel says, 'the mechanical nexus consists in the parts being independent of each other and of the whole'.³⁶ A clock, for example, appears to be a mechanism in which the parts are related to and act upon each other purely externally. Analysis of the clock, taking it to pieces, does not affect the parts: they are self-subsistent objects, indifferent to their relations to each other and to the system as a whole.

However, although this account may appear satisfactory for purely mechanical systems, it is clearly not adequate to describe higher and more complex material forms. In a living organism, a plant or an animal, there are also differentiated parts and organs; but these parts are not in merely external relation to each other or to the organism as a whole. The different parts or organs of an organism are internally and essentially related to the whole.

The single members of the body are what they are only by and in relation to their unity. A hand, e.g., when hewn off from the body is, as Aristotle observed, a hand in name only, not in fact.³⁷

The severed hand ceases to be a living organ – it dies and putrefies.³⁸ In other words, its relation to the living organism is internal and essential to its nature as a living thing.

It may seem that the advent of transplant surgery has refuted these ideas, but I do not think it does so. There are important differences between such surgery and the process of dismantling and re-assembling a clock. A bodily organ, unlike a mechanical part, is not a self-subsistent entity. Artificial means must be used to preserve it during the time when it is severed from the body. Moreover, the parts of the body cannot simply be re-assembled after surgery: the organ must be grafted on to its new body, and steps taken to ensure that the graft is not 'rejected' and that the living whole of the organism re-establishes itself. Essentially similar processes occur in plant grafting. In talking in this way of 'organic wholes' and 'vital unity' it may seem that I am appealing to idealistic and mystical notions; but there is no basis in what I have been saying for such criticisms. The point I am making is a simple one and does not in any way transcend a purely materialistic understanding of biology. I am merely insisting on the fact that living organisms cannot adequately be understood as systems of self-subsistent and merely externally related parts. That is to say, biological phenomena cannot be successfully comprehended in purely mechanical terms. This point is made by Hegel with great clarity as follows.

The limbs and organs ... of an organic body are not merely parts of it: it is only in their unity that they are what they are, and they are unquestionably affected by that unity, as they also in turn affect it. These limbs and organs become mere parts only when they pass under the hands of the anatomist, whose occupation, be it remembered, is not with the living body but with the corpse. Not that such analysis is illegitimate: we only mean that the external and mechanical relation of whole and parts is not sufficient for us, if we want to study organic life in its truth. And if this be so of inorganic life, it is the case to a much greater extent when we apply this relation to the mind and the formations of the spiritual world.³⁹

As Hegel says, the analytical approach and the associated mechanical worldview is a wholly unsatisfactory basis for understanding social and historical phenomena. it

labours under a delusion, if it supposes that, while analysing the objects, it leaves them as they were: it really transforms the concrete into an abstract. And as a consequence of this change the living thing is killed: life can exist only in the concrete and one. Not that we can do without this division, if it is our intention to comprehend.... The error lies in forgetting that this is only one half of the process, and that the main point is the reunion of what has been parted.⁴⁰

The analytic method is closely associated with the mechanistic world-view, as I have stressed. It thus seems to have a legitimate sphere of application to mechanical objects. The problems appear to arise only when it is applied beyond this sphere. But this is not in fact so. The dialectical idea that things are essentially and internally related applies, in some respects, even to inorganic things. It is particularly important to emphasise this fact in order to avoid the creation of a dualistic divide between the organic and inorganic worlds, and in order to avoid any temptation to posit a 'life force' in living things which transcends the material world.

Even in the realm of purely inorganic, physical phenomena, the mechanical view is an abstract and metaphysical one. It portrays physical objects in an idealised fashion, as unaffected by their relations. Mechanics, as Wittgenstein says, 'describes the movements of the mechanism on the assumption that its parts are completely rigid'.⁴¹ But real mechanical objects are not like this: 'Do we forget the possibility of their bending, breaking off, melting, and so on? Yes; in *many* cases we don't think of that at all'.⁴² The pieces and parts of a real clock, for instance, do not remain indifferent, but gradually 'wear in' to one another; and eventually wear out altogether, as with all machinery. But such facts play no part in mechanics, which views things in an abstract and idealised form.

Of course, the mechanical outlook has played an extremely important role in the development of the scientific understanding of nature, and it is not my intention to reject such methods and assumptions altogether. The error comes when such methods and assumptions are made into a universal philosophy and emphasised in an exclusive and one-sided fashion. Their abstract character is forgotten and they are employed as though they along formed an adequate basis for understanding reality. The result is an abstract and metaphysical view of the world.

Historical and Dialectical Materialism

We have reached the conclusion that society is not a mechanism: it is not like a clock, in which separate and self-subsistent parts act externally on each other. society is an organic whole, in which the different parts and aspects exist as such only in relation to each other and in relation to the whole. I shall finish off by briefly pointing to some of the implications of this account for Marx's theory of history. In doing so, I shall at last be emerging from out of the undergrowth of abstract logical and philosophical argument into what, for most Marxists at least, will be more familiar terrain.

In his account, Cohen places strong emphasis on Marx's materialism. He rightly argues that Marx gives primacy to the development of the productive forces in his theory of history. However, Cohen's analytic method leads him to stress the role of technological development in a one-sided and exclusive fashion. The development of the productive forces is made into the

sole active force in historical development. Marxism is reduced to a form of technological determinism. Historical change is portrayed as a linear causal process. Movement always comes from 'below', as it were, from the material level; and it is transmitted 'upwards' in a causal and mechanical fashion. 'The productive forces,' writes Cohen, 'strongly determine the character of the economic structure while forming no part of it' (p.31). The economic structure in turn determines the character of the political superstructure. Economic relations and political forms are the mere effects, the mere outcome of a particular level of development of the productive forces. The relations of production and the superstructure are thus regarded as inactive results, with no independent life or internal dynamic of their own.

This is a mechanical interpretation of the historical process. For it is characteristic of the mechanical outlook, as we have seen, to regard causal action as purely external: motion and change always come to things from outside. Mechanical things are thus inert and passive: they have no internal activity of their own, but can only transmit motion which comes to them from elsewhere. As Locke puts it,

A body at rest affords us no idea of any active power to move; and when it is set in motion itself, that motion is rather a passion than an action in it ... we observe it only to transfer but not produce motion.⁴³

A distinctive feature of Cohen's interpretation of Marxism is his insistence that it is a sort of functionalism. 'History,' he writes, 'is, fundamentally, the growth of human productive power and forms of society rise and fall according as they enable or impede that growth' (p.x). According to Cohen, Marx gives a functional explanation of the character of the relations of production and of the superstructure. These are explained in terms of the fact that they are conducive to the development of production: 'Economic structures are as they are because, being so, they enable human productive power to expand ... superstructures are as they are because, being so, they consolidate economic structures' (p.xi).

It is true, as Cohen stresses, that this functionalist account involves the idea of an 'interaction' between the forces and relations of production in the historical process. Not only do the productive forces determine the relations of production, but also the relations condition the forces: 'First, they promote the development of the forces.... Second, they help to determine the particular path development takes.... Finally, the relations influence the rate of productivity development' (p.165).

At first, it may appear that these views do not accord with the idea, which I have just attributed to Cohen, of history as a linear causal process; but there is no contradiction here. Mechanical things do both interact and also transmit motion in a linear fashion. For example, I strike a billiard ball with a cue and this ball hits another and sets it in motion. In the process, the motion of the first ball is changed. Each ball acts on the other – an interaction occurs. But it is an interaction between passive and merely inertial objects, that are not in themselves active, but which merely transmit the motion imparted by my shot. For this reason such mechanical systems are said to be 'lifeless'.

The same principles are at work in Cohen's account of history. Despite the interaction of forces and relations, the sole dynamic element in history, according to Cohen, is the development of the productive forces.

The master thesis of historical materialism puts the growth of human productive powers at the centre of the historical process, and it is to this extra-social development that

society itself is constrained to adjust.

(p.285)

Economic relations and political forms are merely 'functional' to the prevailing level of technological development: in themselves they are inactive and inert. social processes are thus lifeless, without any independent development or internal activity of their own. The dynamic of history comes from outside of history; and, without this external push, the social mechanism would grind to a halt. It is for this reason that Cohen needs to posit a *trans-historical* tendency for the productive forces to develop: his so-called 'development thesis' (Chapter 6). To explain this trans-historical tendency, he appeals to an equally trans-historical human nature. People are 'somewhat rational' and have 'compelling needs' (p.152), and both these features of our nature, it is suggested, are pre-social, biological endowments. It is these purely biological needs which are the ultimate motive principle of history, the active force which is transmitted through the system – the mainspring, as it were, that keeps the historical mechanism in motion.

Thus far, Cohen. We are a long way from Marx. Indeed, all this is barely recognisable as Marxism, for Marx's account is the direct opposite. First of all, Marx does not attempt to deduce history from human nature; on the contrary, he argues that human nature and human needs are the product of history. Needs lead to production, but also production leads to the creation of 'new needs'.⁴⁴ There is a dialectical interaction here, in which neither term is inert or passive, and in the course of which social productive activity and human nature are both transformed. However, 'the essential point to emphasise', says Marx,

is that ... production and consumption ... appear as moments of a single process in which production is the actual point of departure and accordingly the predominant moment. Consumption, as a pressing necessity, as a need, is itself an internal moment of productive activity.⁴⁵

In other words, in so far as the development of production can be understood in terms of meeting needs – as, indeed, it can, in that production is completed in consumption – it is not abstract, trans-historical needs which are in question, but needs which have developed historically in a particular form of society.

Furthermore, Marx does not see society as a lifeless structure, merely functional to external developments. Historical materialism is the opposite of this mechanistic theory: it gives a dialectical account of historical development. Social processes have their own internal dynamic, their own inner contradictions. The different aspects of society – forces and relations of production, base and superstructure – are aspects of a single whole, internally and organically related, in dialectical interaction and conflict. It is these interactions, these conflicts, these contradictions – which are internal to society – that lead to historical change. In the process, none of these aspects is inert or passive: the forces and relations of production and also the superstructure are all transformed and developed. 'The conclusion we arrive at, says Marx, 'is that production, distribution, exchange and consumption ... all constitute members of a single whole, differences within a single unity.... Interaction takes place among the various moments. Such is the case with every organic unity'.⁴⁶

This is the dialectical account of history given by Marx, and it differs entirely from Cohen's mechanical interpretation. The differences are clearly spelled out by Engels in the well known series of letters that he wrote towards the end of his life. In them he insists that the economic system and the superstructure are not simply the immediate and direct products of the

prevailing form of production. Although their character is certainly conditioned predominantly by the development of the productive forces, it cannot be reduced to this factor alone. On the contrary, the economic system, for example, acquires its own distinctive character and its own inner dynamic. Through the division of labour, trade and commerce become areas of activity increasingly independent of production. They acquire, in short, a degree of 'relative autonomy'.

Where there is division of labour on a social scale, there the different labour processes become independent of each other. In the last instance production is the decisive factor. But as soon as trade in products becomes independent of production proper, it follows a movement of its own, which, while it is governed as a whole by production, still in particular respects and within this general dependence follows laws of its own:... this movement has phases of its own and in turn reacts on the movement of production.⁴⁷

The same is true, even more clearly, of political and legal institutions and of art, religion and philosophy. None is purely 'functional' to the development of production. Each of these spheres, while in general being determined by the development of production and by economic forces, has its own relatively autonomous process of development, its own relative independence. Each affects the other and the material base.

Political, juridical, philosophical, religious, literary, artistic, etc., development is based on economic development. But all of these react upon one another and also upon the economic basis. It is not that the economic condition is the *cause* and *alone active*, while everything else is only a passive effect. There is, rather, interaction on the basis of economic necessity, which *ultimately* always asserts itself.⁴⁸

Here we have the concept of a 'relatively autonomous' sphere, distinct from other areas of social activity, yet essentially related to these and interacting with them within the social totality. This idea is by now a familiar one. It is the idea of an organic part of an organic whole. This notion is an essential part of Marx's theory, and indispensable for a genuine understanding of society and history. But Cohen has no comprehension of the dialectical basis of Marx's thought. When he comes to discuss these ideas he can only caricature them. He talks, for instance, of 'that zig-zag "dialectic" between forces and relations, with priority on neither side, which is widely favoured' (p.138). This sort of thing doesn't deserve a response, except to emphasise that Marx, when he talks of the 'interaction' and 'contradiction' between forces and relations, does not regard these moments as having equal weight. On the contrary, like Engels, he makes clear throughout his work that he regards production and the development of the productive forces as the most powerful and as the ultimately decisive forces.

In short, he is a materialist. But never a mechanical materialist after the manner of Cohen. Marx's materialist theory of history is quite distinct from the abstract and metaphysical views propounded by Cohen. It cannot adequately be understood using a purely analytical approach. This is what I have been arguing. As Engels says,

What these gentlemen all lack is dialectics. They always see only here cause, there effect. that this is a hollow abstraction ... that there is everything is relative and nothing absolute – this they never begin to see. Hegel has never existed for them.⁴⁹

Notes

First published in *Radical Philosophy* 36 (Spring, 1984). pp. 4-13

1. Marx to Engels, 14 January 1858: Marx and Engels, *Selected Correspondence*, Foreign Languages Publishing House, Moscow, n.d. p. 121.
2. G.A. Cohen, *Karl Marx's Theory of History: A Defence*, Clarendon Press, Oxford, 1978. Otherwise unattributed page references in this article refer to this work.
3. A.C. Ewing, *Idealism: A Critical Survey*, Methuen, London, 1934. Chapter 4 gives a clear account of the idea of 'external' and 'internal' relations in the Hegelian tradition. For an application of these ideas to Marxism, see B. Ollman, *Alienation*, Cambridge University Press, Cambridge, 1971.
4. Locke, *Essay Concerning Human Understanding*, 11.25.8.
5. This saying was used by G.E. Moore as the motto of his *Principia Ethica* (1903), and thereby achieved modern currency as one of the slogans of the analytic movement.
6. Marx, 'Preface' (1859) to *A Contribution to a Critique of Political Economy*, in *Preface and Introduction to A Contribution to a Critique of Political Economy*, Foreign Languages Press, Peking, 1976, p.3.
7. 'Introduction' (1987), *ibid.*, p.17.
8. Cohen's attempt to portray productive forces as mere material entities denies this. However, he tacitly recognises the point I am here making in the definition he offers of 'productive forces'. 'To qualify as a productive force', says Cohen, 'a facility must be capable of use by a producing agent in such a way that production occurs (partly) as a result of its use, and it is someone's purpose that the facility so contributes to production' (p.32). The first clause of this definition is consistent with Cohen's general views. That a thing is capable of productive use refers solely to its material features. However, the second clause, with its talk of people's purposes, clearly brings in a reference to the way in which people relate to the productive forces, and hence a reference to relations to production. This is further evidence that the productive forces cannot be defined independently of the relations of production. (I am indebted to Prof Howard Smokler for pointing this out to me.)
9. Marx, *Capital*, Vol.I, Foreign Languages Publishing House, Moscow, 1961, p. 329.
10. *Ibid.*, p.326.
11. Engels, *Anti-Dühring*, Foreign Languages Publishing House, Moscow, 1962, 1962, pp.176-7.
12. Marx, *Capital*, Vol.1, p.329.
13. Marx and Engels, *The German Ideology, Part I*, ed. C.J. Arthur, International Publishers, NY, 1978, pp.62-3.
14. *Ibid.*, p.62.
15. See, for example, Engels, *Anti-Dühring*, Part 1, Ch.XI; C. Caudwell, 'On Liberty', in *Studies in a Dying Culture*, Bodley Head, London, 1938.
16. Marx, *Capital*, Vol.1, p.177.
17. Marx and Engels, *The German Ideology*, pp.56-7.
18. Marx, 'Wage Labour and Capital', *Selected Works in One Volume*, Lawrence & Wishart, London, 1970, p.79.
19. Marx, *Grundrisse*, Penguin Books, Harmondsworth, 1973, p.265.
20. Marx, *Capital*, Vol.III, Foreign Languages Publishing House, Moscow,

21. Marx, 'Introduction' (1857), pp.99-100.
22. G.E. Moore, 'External and Internal Relations', *Philosophical Studies*, Routledge & Kegan Paul, London, 1922, pp.281ff.
23. Hegel, *Science of Logic*, trans. A.V. Miller, Allen & Unwin Ltd., London, 1969, p.487.
24. *Ibid.*, p.114.
25. Marx, *The Poverty of Philosophy*, Progress Publishers, Moscow, 1955, p.121.
26. Hege, *Science of Logic*, p.490.
27. Hume, *Enquiry Concerning Human Understanding*, Boobs-Merrill, Indianapolis, 1955, p.85.
28. Marx, *The Poverty of Philosophy*, p.95.
29. See, for example, Chapter 3, Section 2.
30. Hegel, *Logic (Encyclopaedia of the Philosophical Sciences, Part I)*, trans. W. Wallace, Clarendon Press, Oxford, 3rd edn, 1975, Section 143z, p.203.
31. 'Actuality' is a technical term in Hegel's philosophy with distinctly idealistic overtones. See S. Sayers, 'The Actual and the Rational', in D. Lamb (ed.), *Hegel and Modern Philosophy*, Croom Helm, London, 1987.
32. Hegel, *Logic*, Section 119z, pp.173-4. My bracket.
33. *Ibid.*, Section 143z, pp.203-4.
34. Hume, 'An Abstract of A *Treatise of Human Nature*', in *Enquiry Concerning Human Nature*, p.188.
35. Hegel, *Logic*, Section 38z, p.62.
36. *Ibid.*, Section 136, p.192.
37. *Ibid.*, Section 216z, p.280. The reference is to Aristotle, *Politics*, 1253a, 19ff. See also, Hegel, *Philosophy of Right*, trans. T.M. Knox, Clarendon Press Oxford, 1952, Section 270 (add.), p.283.
38. Hegel, *Philosophy of Nature (Encyclopaedia of the Philosophical Sciences, Part II)*, trans. A.V. Miller, Clarendon Press, Oxford, 1970, Section 148z, p.18.
39. Hegel, *Logic*, Section 135z, pp.191-2.
40. *Ibid.*, Section 38z, p.63.
41. Wittgenstein, *Remarks on the Foundations of Mathematics*, Basil Blackwell, Oxford, 1st edn, 1964, Section 1-120, p.37.
42. *Ibid.*, Section 1-122, p.37.
43. Locke, *Essay*, II.21.4. Cf. Berkeley, *Principles of Human Knowledge*, Section 25: 'The things which we perceive ... are visibly inactive; there is nothing of power or agency included in them.'
44. Marx and Engels, *The German Ideology*, p.49.
45. Marx, 'Introduction' (1857), p.23.
46. *Ibid.*, pp.29-30.
47. Engels to C. Schmidt, 27 October 1890, *Selected Works*, p.684.
48. Engels to W. Borgius (H. Starckenburg), 25 January 1894, *Selected Works*, p.694.
49. Engels to C. Schmidt, 27 October 1890, *Selected Works*, p.689.