

ECOLOGY and Historical Materialism



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Ecology and Historical Materialism

This book challenges the widely held view that Marxism is unable to deal adequately with environmental problems. Jonathan Hughes considers the nature of environmental problems and the evaluative perspectives that may be brought to bear on them. He examines Marx's critique of Malthus, his method, and his materialism, interpreting the latter as a recognition of human dependence on nature. Central to the book's argument is an interpretation of the 'development of the productive forces' which takes account of the differing ecological impacts of different productive technologies while remaining consistent with the normative and explanatory roles that this concept plays within Marx's theory. Turning finally to Marx's vision of a society founded on the communist principle 'to each according to his needs', the author concludes that the underlying notion of human need is one whose satisfaction presupposes only a modest and ecologically feasible expansion of productive output.

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For Katie and Laura

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Introduction

This book attempts to defend some of the central theses of Marxism – those that make up the theory of historical materialism – against criticisms that have been levelled at it by environmentalists, and to show that historical materialism, suitably interpreted, can provide an explanatory and normative framework for thinking about and developing political responses to the environmental problems that afflict and threaten contemporary societies. The book may therefore be said to involve a confrontation between Marxism and environmentalism, but like any brief summary this formulation is in need of qualification.

To start with, it is an oversimplification to speak of Marxism as a single theory. It is hardly necessary to comment on the diverse range of interpretations that have been applied to the writings of Marx and his collaborator Engels. The nature of that collaboration has also been the source of much dispute, leading to denials of a unitary standpoint in their joint corpus. And within Marx's own works divisions have been discerned between his earlier and later works. The question therefore arises of which version of Marxism it is that is to be placed in confrontation with environmentalism, and consequently it will be one of the main tasks of this book to consider what interpretations are available and which emerge most favourably from that confrontation.

Similarly, it may be observed that environmentalism has many different strands. The terms 'deep' and 'shallow', deriving from Naess's 1973 article, are often used as a convenient way of drawing a distinction between more and less radical strands, but, as John Barry has recently argued, this dichotomy masks a more complex picture.¹ The deep/shallow categorisation is most often defined in evaluative terms, the title of Deep Ecology being

¹ See Barry 1994.

claimed by those who ascribe intrinsic value to non-human nature, while those who ascribe to it only instrumental value are labelled – usually by others – shallow. But as we shall see, this terminology is also used in ways which owe more to metaphysical than to evaluative considerations; and, as Barry points out, strands of environmental thought may also be categorised according to their differing economic, institutional and political perspectives, which can cut across the deep/shallow divide. I am less concerned, however, about these differences within environmental thought than I am about the parallel differences within Marxism; my aim is not to choose between the various environmental theorists whose writings will be considered but to use their arguments as a way of raising and developing the challenges that environmental problems pose for Marxism.

The confrontation, then, is asymmetrical. My primary aim is to investigate what the existence of environmental problems means for Marxism and what, if anything, Marxism can contribute to the study and resolution of those problems, and I draw upon a range of environmental literature as a means to this end. Expressed in these terms, and in the face of the widely advertised ‘death of Marxism’, this project may appear perverse. ‘Why Marxism?’ it might well be asked. Why not ‘Ecology and . . .’ liberalism, or communitarianism, or post-modernism even? One answer might be: just because its death is so widely proclaimed. This would not be mere perversity; it is important that intellectual fashions be contested and not simply followed, and that ideas currently out of favour not be forgotten or ignored. Even if, as seems likely following the collapse of political systems and movements supposedly based on his theories, Marx is not in future read as religiously as he has been in the past, it remains important that his ideas not be dismissed but continue to be studied, in order that proper debate about their strengths and weaknesses and their place in the canon of political thought can take place.

This rationale is important but not sufficient, since what I am engaged in is not just a study in the history of ideas but an attempt to relate Marxism to a particular set of contemporary problems. Clearly I am assuming that there are at least *prima facie* grounds for regarding Marxism not only as worthy of study generally, but as a useful framework for the investigation of ecological problems. To see why, consider the fact that, like Marxism, environmentalism is said by some to have had its day. The scare stories of the 1970s and 80s have proved false, and whatever legitimate concerns the environmentalists had have been incorporated into the political mainstream. Or so it is said. But while it is true that expressions of concern about environmental problems have permeated mainstream politics, sapping

support for green parties, and that the focus of environmental activism has shifted from political parties to pressure groups which are themselves seen as increasingly integrated into the establishment, there remains a widespread feeling that not enough is being done, and that environmental issues need to become more central to policy-making as the green parties have urged. The feeling that government and corporate expressions of environmental concern are, if not mere window-dressing, then at best peripheral tinkering, subordinated to established political or economic commitments, is evidenced by the willingness of many people to trust the scientific opinions of pressure groups rather than the experts employed by government or business, and by the emergence of new, more confrontational campaigning groups.

One reason, then, for investigating Marxism in relation to ecological problems, is that it may help us to diagnose the weaknesses of green politics and the inadequacy of mainstream responses to ecological problems. Marxists have, for example, criticised the attempts of many ecologists to transcend class divisions and to appeal equally to all humanity. Of course, the existence of ecological problems *is* potentially a threat to everybody, but not to the same extent or with the same degree of immediacy; money can, to a certain extent, buy protection or an escape route.² Relatedly, much of green political discourse may, in standard Marxist parlance, be termed utopian for its promulgation of models of a better society constructed and promoted without sufficient attention to the mechanism and agency that are to bring it into existence. And, for Marxism, these same structures of interests that can explain the weakness of ecologism can also explain the inadequacy of the mainstream responses. So perhaps the critical perspective of Marxism can restore the radical edge of ecological politics. It will be argued, however, by environmentalists and others that Marxism is unsuited to this task. This is argued on empirical grounds, by reference to the environmental record of former socialist countries, and it is also argued on theoretical grounds. It is argued that whatever the strengths of a Marxist critique of ecological politics and of the treatment of ecological issues within mainstream politics, Marxist theory is poorly placed to offer an

² See, for example, Hall 1972b. See also Marx's comment on Utopian Socialism quoted in chapter 1 below, text to note 26. Some greens (e.g. Porritt 1985, p. 116) do acknowledge the differential impact of environmental problems upon different classes, but typically these class differences are downplayed, and do not translate into thoughts about agency or strategy. As Marx writes of the Utopian Socialists: 'They are conscious of caring chiefly for the interests of the working class, as being the most suffering class. Only from the point of view of being the most suffering class does the proletariat exist for them.' (*Manifesto of the Communist Party*, p. 60.)

alternative, since the theory itself has implications – notably those arising from Marx's vision of an abundant future and his commitment to the development of the productive forces – which are in tension with environmentalist beliefs and values. A central task of this book, then, will be to examine such arguments and to suggest that in fact Marx's thinking in these and other areas can be interpreted in ways which are compatible with a recognition of environmental constraints and which offer promising insights into the dynamics of the interaction between humans and nature.

A further qualification of my original formulation should be noted at this point: the confrontation between Marxism and ecologism is not entirely a hostile one. There are, as we shall see, important aspects of Marx's theory – in particular his view of the way in which human societies are dependent upon and moulded by natural conditions, and his concern for a wider range of values than those expressed in the market values of commodities – which mirror the concerns of many green theorists, and this provides another reason why we may reasonably hope that an investigation of Marxism's ecological implications will be a fruitful exercise.

Of course, mine is not the only treatment of these issues. Many of the others are discussed in the following chapters, where the points of agreement and differences of interpretation will emerge. However, there is a variety of levels at which the confrontation (if that is the word) between Marxism and ecologism can be studied, and it is worth saying something further about the place occupied by this book. This study is located at the more theoretical end of the spectrum, addressing philosophical questions of value and forms of explanation, and the most general questions of human nature and of humans' relation to nature, which I take in some sense to be foundational for more concrete and applied forms of investigation, for example detailed investigations of particular economic and political arrangements, political movements and so on, such as those published in the journal *Capitalism, Nature, Socialism*. The focus on normative and explanatory issues in the interpretation of Marx raises the question of how the present account stands in relation to the Analytical Marxism of theorists such as G. A. Cohen, Jon Elster, John Roemer and Erik Olin Wright. If by 'Analytical Marxism' is meant a style of investigation which examines and seeks to clarify problematic concepts and claims in Marx and to interpret or reconstruct his theory in a way which is philosophically defensible, then this is something to which any theoretical defence of Marx must aspire. At a more substantive level the present work expresses some reservations about the methodological individualism (at least in the strong form supported by Elster) that is often said to characterise Analytical

Marxism. As we shall see, however, differences exist within Analytical Marxism itself (notably between Elster and Cohen) over the nature and significance of this doctrine. More generally, the present work owes much to the reconstructive efforts of Analytical Marxism, and in particular to Cohen, whose functional interpretation of historical materialism forms the starting-point for my own account.

The book is structured as follows. The first chapter lays the groundwork, or more precisely it determines the scope and approach of what is to follow, by considering how ecological or environmental problems should be conceived. I discuss the ways in which such problems may be distinguished from others faced by society, and I consider the normative criteria according to which they are judged to be problems, rejecting the 'ecocentric' perspective associated with Deep Ecology and arguing for a form of anthropocentrism, albeit a broader and more nuanced form than is often encountered in the literature.

In chapter 2 I examine one of the key concepts of green politics and environmental literature generally: the concept of natural limits, and, in particular, limits to population and economic growth. This concept is Malthusian in its origins, and it is sometimes argued that Marx and Engels's critique of Malthus constitutes a refusal to accept the existence of environmental limits. I argue against this view, however, and draw upon their critique to suggest the need for a more rounded approach; an approach which recognises that environmental limits are not purely natural, and acknowledges the role that social and technological factors play in their formation.

The task of the remaining chapters is to consider whether Marx's theory of historical materialism is consistent with the recognition of environmental limits, thus understood. Chapter 3 prepares for this by examining the methodological precepts which guide Marx in the construction of his theories, precepts which have been criticised as inadequate for the investigation of ecological phenomena but which in fact anticipate much that is contained in the environmentalists' own methodological speculations. Chapter 4 argues that a recognition of human dependence upon nature is central to Marx's historical materialism; thus he has every reason to accept the reality of environmental limits and to allow for them in his theory of social development. It is often said, however, that this is contradicted by Marx's commitment to the development of the productive forces. Chapter 5 – arguably the core chapter of the book – challenges this contention, offering an interpretation of the development of the productive forces, consistent with the role that it plays within Marx's theory, which – far from

implying the transgression of environmental limits – allows that the avoidance or amelioration of ecological problems may serve as a criterion for that development. Since the factors that actually shape technological development may differ according to the intentional structures produced by prevailing relations of production it follows that this ideal of an ecologically benign development of the productive forces may serve as the basis for an ecological critique of existing society and a motivation for change. One of the reasons for Marx's commitment to the development of the productive forces is that such development is necessary in order to achieve the satisfaction of human needs that Marx sees as a condition for the establishment of a communist society, and in chapter 6 I continue and (I hope) conclude the argument by examining Marx's account of human needs, and its ecological implications.

1 Ecological problems: definition and evaluation

In order that we may investigate the ability of Marxism to deal with ecological problems – the extent to which Marxist explanations and predictions are affected by the existence of such problems and the potential of the theory to explain and offer responses to them – we need to have some idea of what these ecological problems are. Without that we will be unable to identify what is required of the theory or to assess the accounts of ecological problems given by Marx and Engels. In this first chapter I will therefore consider the following two questions, which are central to the enterprise of defining ecological problems.

- (i) What distinguishes that subset of problems faced by society that are referred to as ecological problems?
- (ii) What are the values or moral perspectives that lead to these phenomena being regarded as problems?

There is a difficulty involved in attempting to define a phenomenon prior to putting it in a theoretical context, since part of the function of a theory is to provide us with a set of terms with which to characterise the phenomena which the theory addresses. As Hegel put it: 'A preliminary attempt to make matters plain would only be unphilosophical, and consist of a tissue of assumptions, assertions, and inferential pros and cons, i.e. of a dogmatism without cogency, as against which there would be an equal right of counter-dogmatism.'¹ The point is that it is only in the context of a theory which attempts to understand an issue that we can decide whether a particular way of structuring or defining that issue is a good one. Without such a theory, Hegel maintains, we can have no good reason for preferring one definition to another and are therefore vulnerable to the charge of dogmatism. It is evident, however, that some sort of preliminary definition is

¹ Hegel 1975, p. 14.

required, in order to determine the scope of enquiry, and that to proceed without it would also be to open oneself to the charge of dogmatism, since a definition of ecological problems generated from within a particular theory (e.g. Marxism) will inevitably exclude from consideration any problems to which that theory's conceptual scheme renders it blind. I will consider some specific claims about Marxism's supposed blindness to certain aspects of ecological problems in the subsequent chapters. For now, however, the task is to give a preliminary account of what those problems are. In order to avoid the charge of dogmatism, and in particular the charge that my responses to the above questions exclude aspects or examples of ecological problems that are awkward for Marxism, I will draw upon a range of environmental literature and attempt to address the questions by considering intuitions that are widely shared and arguments that are accessible to all participants in the debate and not just adherents of a particular perspective. Thus, while I will at times relate this account to Marxism, I will not be presenting a specifically Marxist account of ecological problems.

1.1 What are ecological problems?

It is sometimes held that the term 'ecology' is properly used to refer to a branch of biology – that which deals with the relations between organisms and their environments – and that it is somehow debased when it is used in connection with environmental campaigns, green parties, and so on. This thought leads some writers to avoid the term 'ecological problem' in relation to the objects of such campaigns, and to write instead of 'environmental problems'. Others – John Passmore, for example – do refer to 'ecological problems', but qualify this as a loose or extended usage of the term.² Others again use the term 'ecology' to signify an outlook that is 'deeper' or more radical or fundamentalist in its view of the relation between humans and their environment than mere 'environmentalism'.³

It is true that the application of the term 'ecology' to humans takes it beyond the exclusive realm of biology, since (as we shall see) the relation between humans and their environment is importantly mediated by social and technological factors whose study is beyond the scope of that science, and it is true also that the terms 'ecological' and 'environmental' carry dif-

² Passmore 1974, p. 43.

³ This is apparent, for example, in the name of the so-called Deep Ecology movement, and also in Andrew Dobson's (1990, p. 13) distinction between 'ecologism' and 'environmentalism'.

ferent associations, the former tending to place more emphasis than the latter on the holistic or systemic aspect of the organism–environment relation. However, these facts do not force us to conclude either that the human–environment relation falls outside the proper realm of ecology, or that there is any difference in the core meanings of the terms ‘ecological’ and ‘environmental’ as applied to human problems. I will therefore use the terms ‘ecological problem’ and ‘environmental problem’ interchangeably in recognition of the fact that, since humans are organisms, their relation to their environment falls properly within the subject-matter of ecology as stated above. This usage is increasingly reflected in the practice of academic ecology which, according to one of its practitioners, ‘has grown from a division of biological science to a major interdisciplinary science that links together the biological, physical, and social sciences’.⁴ It follows that any debasement that the term ‘ecology’ does undergo in connection with its use in relation to ‘ecological problems’ arises not from its extension to humans and beyond pure biology, but from the particular content that is ascribed to the human–environment relation in its name.

The fact that ecological or environmental problems are not wholly a matter for natural science highlights a difficulty apparent in attempts to define these problems as distinct from others faced by society. As might be expected from the account of the subject-matter of ecology given above, such definitions typically depend upon a distinction between man or society on the one hand, and the environment or nature on the other. Passmore, for example, states that ‘a problem is “ecological” if it arises as a practical consequence of man’s dealings with nature’.⁵ This distinction, however, lacks a clear and unambiguous sense. Reliance on an unexamined notion of nature is likely to prove particularly problematic in considering how Marx and Engels did or could respond to ecological problems, given their insistence that humanity is a part of nature and that nature is transformed or ‘humanised’ by human activity.⁶ More generally, the vagueness of ‘nature’ is problematic in defining ecological problems, since these problems occur typically (though not necessarily) in situations where the environment *has* been transformed by human activity.

This vagueness in the notion of an ecological problem has sometimes been exploited in order to play down the ecological challenge to Marxism

⁴ Odum 1975, p. 4.

⁵ Passmore 1974, p. 43. Passmore’s definition is also adopted by Robin Attfield (1991, p. 1) and, provisionally, by Reiner Grundmann (1991b, p. 23).

⁶ E.g. Part of nature: *Economic and Philosophical Manuscripts*, pp. 67, 136; *The German Ideology*, pp. 42, 48. Transformation of nature: *The German Ideology*, p. 62; *Capital*, vol. I, pp. 283–4; *Dialectics of Nature*, p. 172.

by denying the novelty of ecological problems and asserting a continuity between these and the sorts of problems that were addressed by classical Marxism. For example, Hans-Magnus Enzensberger argues that the problems to which twentieth-century environmental movements address themselves are essentially no different from the effects of nineteenth-century industrialisation, which 'made whole towns and areas of the countryside uninhabitable' as well as endangering life in the factories and pits:

There was an infernal noise; the air people breathed was polluted with explosive and poisonous gases as well as with carcinogenous [*sic*] matter and particles which were highly contaminated with bacteria. The smell was unimaginable. In the labour process contagious poisons of all kinds were used. The diet was bad. Food was adulterated. Safety measures were non-existent or were ignored. The overcrowding in the working-class quarters was notorious. The situation over drinking water and drainage was terrifying. There was in general no organized method for disposing of refuse.⁷

What is different now, Enzensberger suggests, and what has led to the emergence of the environmental movement, is not the intrinsic nature of the problems but their universalisation: the fact that they now impinge upon middle-class interests. Enzensberger's view is thus at odds with the view of many greens that environmental problems *are* qualitatively different from (other) social problems in such a way as to create the need for a new political ideology with distinctive proposals for restructuring the whole of political, social and economic life.⁸ Gus Hall, also writing from a Marxist perspective, acknowledges that the environmental crisis is 'not just another problem, but a qualitatively different one', requiring 'a radically new approach'; but nevertheless, like Enzensberger, he compares environmental problems with what he labels 'the oldest and most brutal of capitalism's crimes', the deaths resulting from workplace conditions which have 'been going on in the factories and mines for over a hundred years'.⁹

Many of the problems described by Enzensberger can plausibly be classed as ecological or environmental problems. Other writers, however, have drawn the boundary even more widely. Joe Weston, for example, includes street violence, alienating labour, poor and overcrowded housing, inner city decay and pollution, unemployment, loss of community and access to services, and dangerous roads as environmental issues.¹⁰ The fourth item on this list, and perhaps the third, may reasonably be counted as environmental problems, but while the other items may be causes or

⁷ Enzensberger 1974, pp. 9–10.

⁸ Dobson 1990, p. 3.

⁹ Hall 1972a, pp. 68, 34.

¹⁰ Cited in Pepper 1993, p. 437.

effects of environmental problems, to count all of them as being themselves environmental problems, as Weston does, is to discard normal usage in a way which deprives the concept of its specificity.

Given that a boundary narrower than Weston's is needed, the problem remains of how it is to be drawn. An individual exists within a whole series of overlapping and nested environments – home, workplace, street, town, country, etc. – each of which has both physical and social components. In a sense, therefore, problems arising in relation to any of these environments could (following Weston) be classed as environmental problems. However, we are concerned with the sense in which 'environmental problem' is equivalent to 'ecological problem', and it is clear (from the discussion of this equivalence above) that ecology is concerned with the relation of the organism to its *physical* environment. Further, as Odum notes, ecology is primarily concerned with levels of organisation beyond that of individual organisms, i.e. with populations and (biotic) communities.¹¹ Perhaps, then, rather than looking at the individual's relation to his or her environment, which in its broadest sense will include the social environment made up of other human beings and their activities, we should define ecological problems as those concerning the relation between society as a whole and *its* environment – the non-human world, or 'nature'. This brings us back to Passmore's suggestion that ecological problems be defined as those which arise from human dealings with nature. Whatever its faults, this definition does capture the intuition that street crime and the disintegration of communities, for example, are not in themselves ecological problems, and that the workplace conditions referred to by Enzensberger and others fall into a grey area at the boundary of the concept. The workplace is an area in which humans encounter and use materials drawn from non-human nature, yet not all of the problems arising from that encounter fit easily into the concept of an ecological problem: pollution of the atmosphere and waterways, for example, intuitively fits the concept better than the dangers posed by unguarded machinery. This difference, however, appears congruent with Passmore's definition, in that the problems of pollution are essentially concerned with aspects of the natural environment (the air or water or whatever it is that is polluted) in a way in which the dangers of unguarded machinery are not.

The problem with Passmore's definition, as stated above, is the vagueness or ambiguity of the term 'nature'. If by this we mean 'untouched

¹¹ Odum 1975, p. 4. In ecological terms, 'population' designates a group of individuals of a single kind of organism, while 'community' (or 'biotic community') designates all of the populations of a given area (*ibid.*).

nature', excluding objects that have been transformed by human activity, then we will exclude many if not all of the problems generally regarded as ecological. For, as Engels pointed out, 'there is damned little left of "nature" as it was in Germany at the time when the Germanic peoples immigrated into it. The earth's surface, climate, vegetation, fauna and the human beings themselves have continually changed, and all this owing to human activity . . .'.¹² The disappearance of 'untouched nature' has also been the subject of more recent discussion, most prominently by McKibben in *The Death of Nature*. Many conservationists acknowledge, however, that the environments they seek to conserve are in varying degrees products of human intervention, and this may be rendered consistent with Passmore's definition if we allow that nature may include elements that have been altered by humans. Here, though, there is a danger of including too much, since everything is 'natural' at least in being comprised of materials that originate in nature and are subject to its laws. Thus if we stretch the concept of nature too much we will be unable to exclude any of the problems facing society from the realm of the ecological. One writer unwittingly illustrates the absurdity of such an account by arguing that, since humans are a part of nature, 'man's works (yes, including H-bombs and gas chambers) are as natural as those of bower birds and beavers'.¹³ I say that this account of nature is absurd because, like Weston's list of environmental problems, it is so broad as to deprive the concept under consideration of any specificity. What it indicates, however, is that short of 'untouched nature' there is no clear boundary between what is natural and what is not. Naturalness appears to be a matter of degree, and the concept of ecological problems, if it is defined in terms of nature, will be correspondingly vague.

As a characterisation, in broad terms, of what is generally understood by the phrase 'environmental problem', Passmore's definition is useful. No-one would dispute that environmental problems are to be understood as involving the relation between humans and nature. What must be emphasised however, and is illustrated by the preceding paragraphs, is that such a definition does not provide for a rigorous distinction between environmental and other problems faced by society. The particular characteristics of environmental problems and the implications of such problems for political theory cannot be derived from a formal definition of environmental problems or an abstract distinction between the concepts of 'humanity' and 'nature', but must be based upon a theoretical account of the actual relation between human beings and their natural and man-made environment.

¹² *Dialectics of Nature*, p. 172.

¹³ Watson 1983, p. 252