

A Revolutionary Ecology?¹

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The low esteem in which Marx is held by many environmentalists has been widely noted. Often, however, the specific criticisms underpinning this attitude reveal less about the shortcomings of Marx's theories than about the ignorance and misunderstandings of his critics. Never is this more true than when it is asserted that Marx simply ignored the ecological foundations of the society he sought to explain. Although such views are often casually expressed by critics who have no real interest in Marx's work, they have on occasion been encouraged by serious scholars and theorists of Marxism. Leszek Kolakowski, for example, in his influential survey of Marxist thought, complains of Marx's "lack of interest in the natural (as opposed to economic) conditions of human existence", and "the absence of corporeal human existence in his vision of the world".² Kolakowski's book was the product of a time in which Western Marxists, reacting against the perceived positivism of official Soviet interpretations, played down Marx's materialism and emphasised its Hegelian heritage. Contemporary readers, less in thrall to Hegelian interpretations and more willing to take Marx's materialist pronouncements at face value, are likely to be struck by the implausibility of Kolakowski's assertion. Nevertheless, the myth of Marx's inattention to ecological matters lives on in many green critiques as well as in the wider consciousness of those who know Marx second-hand or from a few anthologised readings. It is this myth which John Bellamy Foster's impressive new book sets out to dispel.

Marx's Ecology is not the first book to take on this task. As long ago as 1977 H. L. Parsons published *Marx and Engels on Ecology*,³ a thematic collection of ecologically-oriented extracts from Marx and Engels's work, intended to demonstrate its relevance to the then-emerging ecological

consciousness. More recent commentators, among them Ted Benton, Paul Burkett, Reiner Grundmann, James O'Connor and myself, have sought in a more analytical mode to evaluate and/or reconstruct the ecological elements of various aspects of Marx's theory.⁴ Foster's book stands out, however, as the most comprehensive contribution to this debate, judged in terms of its detailed exposition and interpretation of Marx's most important theoretical works. As such it will become an indispensable reference for others working in this field.

Foster's aim is not only to demonstrate Marx's awareness of the ecological realities affecting the societies he sought to describe. As he notes, more sophisticated critics acknowledge the presence of ecologically-aware observations in Marx's writings – for example his extensive discussions of the nutrient cycle in agriculture and its disruption under capitalist relations of production – but view these as isolated fragments, detached from and even contradicted by his more central theoretical commitments. A second part of the book's task, therefore, is to demonstrate that ecological matters form an integral and essential part of Marx's thought. The book's title – *Marx's Ecology* rather than *Marx and Ecology* as originally intended – reflects Foster's increasing conviction of the centrality of ecology to Marx's thinking and the capacity of his thought to contribute insights to our contemporary understanding of ecology. The key to this lies in an understanding of Marx's (and Engels's) materialism; a materialism which, as Foster portrays it, begins with an assertion of the independence of nature from mind, and develops through an understanding of the role that nature and its transformation by humans plays in the existence and development of human societies, into a comprehensive account of the co-evolutionary “metabolism” between humans and nature. The elaboration of Marx and Engels's materialism forms the backbone of Foster's book, and takes the form of a broadly chronological progression taking in their main theoretical works along with correspondence and other materials, and interspersed with accounts of the historical and contemporary philosophical ideas and movements with which they engaged. Thus, Marx and Engels's developing materialism is placed in the context of materialist philosophy from Ancient Greece to the Enlightenment and beyond, the emergence of natural sciences including ecology and Darwinian evolutionary theory, and the efforts of natural theologians in the eighteenth and nineteenth centuries to resist the drawing of materialist and anti-religious conclusions from the successes of natural science.

A prominent feature of Foster's reading of Marx is his insistence that Marx began developing a materialist outlook earlier than is often supposed. In particular, Foster claims that Marx's doctoral thesis on the atomistic materialism of Democritus and Epicurus is to be understood as the beginning of this process rather than, as is often thought, an attempt to subsume their insights within his earlier Hegelian perspective. This, for Foster, is of more than historical interest since the enduring influence of the atomists, and especially Epicurus, upon Marx's thought is a major theme of the book. Marx, Foster argues, concurred with Bacon's judgement that the philosophy of Democritus, Epicurus and

Lucretius was – precisely because of its materialism – superior to that of Plato and Aristotle, and saw Epicureanism as the key to understanding not only Greek philosophy but also that of the European Enlightenment.

Foster also credits Epicurus with influencing the development of Marx’s materialism in a “non-mechanical” direction, leading eventually to his break with Feuerbach. As Epicurus’s translator Cyril Bailey noted, Marx’s doctoral thesis challenged the conventional wisdom that Epicurus “adopted the Atomism of Democritus wholesale, changing it here and there for the worse” (p.52). Instead, Marx held Epicurus’s philosophy to be superior to that of Democritus, mainly because he rejected strict determinism in order to leave room for free will. As Foster puts it: “For Democritus, necessity is everything, but Epicurus also recognizes chance, contingency, and the possibility of freedom” (p.54). Thus, although Marx remained critical of the “contemplative” nature of Epicurean materialism, its lack of a practical or transformative orientation towards the world, he saw in its rejection of determinism the basis for a “practical materialism” that would embrace such a perspective. (The indeterminism in Epicurus’s system consists in the uncaused “swerve” of atoms from their trajectories; why a world containing such chance events should be thought more conducive to free will than a wholly deterministic world is a question that Foster does not address.)

The materialism that Marx drew from Epicurus consisted above all in a rejection of teleological views of nature. In subsequent chapters Foster describes the increasingly practical orientation of Marx’s materialism, and the further materialist theses that he came to endorse without ever abandoning this basic commitment. Marx’s early journalistic work beginning with his famous article on the law on wood thefts, and the influence of Feuerbach, led him in the *Economic and Philosophical Manuscripts* to confront the practical relation between humans and nature and the way in which the severing of this relation (alienation from nature) served as a precondition for the alienation of labour, so beginning his lifelong engagement with Political Economy.

The two central chapters describe in great detail the development of Malthus’s population theory against a background of eighteenth and nineteenth century natural theology, and the critique of it made by Marx and Engels in the course of developing their materialist conception of history. Foster suggests a parallel between Marx and Engels’s critique of Malthus and Darwin’s critique of Malthus’s fellow natural theologian William Paley. This, however, seems a little contrived, since the most significant element of Malthus’s thought – certainly the part which most exercised Marx and Engels – was not the theological view that overpopulation and consequent starvation is part of God’s design (for the punishment of indiscretion or as a stimulus to virtue), but the separable view that, given the way the world is, there is nothing that can be done to reduce it in any significant way. The important task as Marx and Engels saw it, reflecting their increasingly historical perspective, was to refute the arguments for the latter claim (which in keeping with the principles of natural theology purported to

be empirically based), showing that the existence of starving masses (the “surplus population”) was in fact inevitable only within the existing economic structure.

The materialist view of history which underpins Marx and Engels’s response to Malthus was developed in works such as *The German Ideology*, *The Poverty of Philosophy* and *The Communist Manifesto*. The last of these in particular has been a target for green criticism, focusing on the panegyric to capitalism and industry that occupies the beginning of Section I. Foster rightly counters that this passage must be read in the context of the critique which it precedes, and that slogans such as “Subjection of Nature’s forces to man” (p.138) are compatible with a concern for ecological sustainability (though not with a determination to preserve nature in its pristine form, if indeed such a thing is possible). There is, however, an oddity in Foster’s response to the specific charge of “Prometheanism” levelled against the *Manifesto* by many green critics. Foster responds to this charge by quoting Sartre’s aphorism, that “an ‘anti-Marxist’ argument is only the apparent rejuvenation of a pre-Marxist idea” (p.135). What he appears to mean (see also p.10) is that Marx is criticised as if he held the views that he criticises in others. In this case, “the criticism of Marx as Promethean ... seems to have emerged in a very roundabout way from Marx’s own critique of Proudhon in this respect” (p.135). But this looks wrong. As Foster himself shows, Marx’s attack on Proudhon in *The Poverty of Philosophy* was aimed not at his Promethean symbolism as such, but at the mysticism and ahistorical notion of progress to which he attached it. This is no answer to the green criticisms, since Marx himself admired the character of Prometheus as a symbol of the striving of humans to increase their mastery over nature,⁵ and it is this, rather than the content attached to it by Proudhon, which is the target of those criticisms. The particular significance of the Promethean story for environmentalists is that Prometheus was punished by the gods (nature) for transgressing the boundaries of human power. The appropriate response to this is not to point out that Marx himself was critical of a different use of the “Promethean” tag, but rather to argue that since (as Foster shows) Marx was aware of the environmental risks posed by the growth of technological power, his admiration for Prometheus should be understood as relating to his aims, rather than the recklessness with which he pursued them.

Foster’s account of the emerging materialist view of history also introduces two themes which become crucially interlinked in his discussion of Marx’s later works: the influence of developments in the natural sciences on Marx’s thinking, and the way in which the division of town and country serves for Marx and Engels as an organising principle of their historical theory alongside and linked to the more familiar idea of a succession of property forms and their associated class divisions. The natural sciences influenced Marx’s “ecological” views in various ways. The historicisation of natural sciences such as geology and geography fed into his critiques of the ahistorical and sentimental views of nature in Feuerbach and the True Socialists. Later, Marx drew upon Justus von Leibig’s investigations of soil fertility, taking his findings as refutation of Malthusian pessimism about the prospects for increasing agricultural productivity. However, by the 1860s artificial fertilisers had

achieved only limited results, and Leibig himself had become pessimistic about their capacity to prevent the depletion of soil fertility endemic in contemporary agriculture. In *Capital* Marx incorporated this reassessment into what Foster terms his *theory of metabolic rift*: the view that capitalist agriculture and industry combine to disrupt the “metabolism” between humans and nature, impoverishing both the worker and the soil. The importation of guano from Peru was cited by Marx as evidence that agriculture had ceased to be self-sustaining, and this was blamed partly on the application of industrial methods to agriculture, partly on the effects of market forces and fluctuations, but also in large part on the increasing division between town and country. This division made impossible the return of excrement and other wastes to the land as fertiliser, which Leibig now advocated, leading to declining agricultural yields together with pollution of cities and waterways. Although Marx’s explicit references to a metabolic rift relate to what he saw as the unsustainability of capitalist agriculture, Foster considers himself justified in attributing to him a broader concept of *ecological sustainability* on the basis of his and Engels’s consideration elsewhere of ecological problems such as deforestation and the depletion of coal reserves, and Marx’s concern for the interests of future generations.

It might be argued that in positing a *theory* of metabolic rift Foster is attributing to Marx a more fully worked-out ecological view than is actually present in the texts. Nevertheless, he succeeds in extracting a coherent and empirically grounded view, congruent with other parts of Marx’s theory, from the materials available. He shows that the concept of a human-nature “metabolism” is closely tied to Marx’s conception of the labour process, his earlier view of the interdependence of humans and nature (in the *Economic and Philosophical Manuscripts*), and his vision of a future communist society (in which, Marx writes, the associated producers will “govern the human metabolism with nature in a rational way” (p.159)).

A more problematic link is the one that Foster makes between the concept of metabolic rift and that of alienation (or estrangement) from nature. Initially, drawing on Marx’s use of the concept in his descriptions of capitalist agriculture, Foster takes “metabolic rift” to refer to the breaking of the circular flow of nutrients necessary to maintain soil fertility. More generally this concept can be extended to cover any disruption of the “material exchange” necessary for a sustainable relation between humans and nature; thus, “[t]o insist that large-scale capitalist society created such a metabolic rift between human beings and the soil was to argue that the nature-imposed conditions of sustainability had been violated” (p.163). However, Foster also writes that “the concept of metabolism provided Marx with a concrete way of expressing the notion of ... alienation from nature” (p.158), and that he “employed the concept of a ‘rift’ in the metabolic relation between human beings and the earth to capture the material estrangement of human beings within capitalist society from the natural conditions which formed the basis for their existence” (p.163). Herein lies an ambiguity. On the one hand “alienation from nature” may refer to the separation of individuals from the natural resources

necessary to reproduce their conditions of life, such as resulted from the Enclosure Acts. It is this notion of alienation from nature that Foster relies on when he writes, following Marx, of alienation from nature as a precondition for the alienation of labour. However, there is no necessary connection between this and the idea of metabolic rift in the sense which implies ecological unsustainability, since having a sustainable relation to the environment does not in principle depend on owning it or directly working on it. On the other hand “alienation from nature” may be defined in terms of ecological unsustainability, such that a *society* is alienated from nature when it lacks a sustainable metabolism with it. In this case, however, there is no necessary connection between alienation from nature and the separation of workers from the land. Thus, when Foster writes of alienation from the earth as a “*sine qua non* of the capitalist system” (p.174) as if to suggest that ecological problems are in principle unavoidable for capitalism, the implied argument rests on an equivocation.

My account of Foster’s arguments, concentrating as it does on problem areas, inevitably misses much that is of importance and fails to convey either the breadth or detail of scholarship that informs his account. I will nevertheless finish by raising some further problems of more general scope. Foster presents his book as both an exercise in the history of ideas and an attempt “to develop a revolutionary ecological view ... that links social transformation with the transformation of the human relation with nature” (p.1). These are not incompatible objectives but it seems to me that Foster achieves the first rather better than the second.

One reason for this is to do with the relevance and focus of his discussion. Consider, for example, his account of Marx’s relation to the Greek atomists. According to Foster, the core of the Greek materialism, which Marx endorsed, and saw reaffirmed in Enlightenment materialism and confirmed by Darwinism, was an anti-teleological view of nature: a “refusal to argue from final causes and a removal of ‘God and Mind from the structure of things’” (p.52). The relevance of this to contemporary ecological problems is that the expulsion of teleology from our understanding of nature was necessary for the development of the natural sciences including ecology, and that the understanding derived from these sciences is necessary for the solution of ecological problems. This, however, is chiefly of historical interest since the struggle for a non-teleological science has largely been won. (Although some scientists are religious, any teleological beliefs are usually at the periphery of their explanatory picture, accounting perhaps for the existence of the universe or the regularity of nature, but having little if any impact on their accounts of material phenomena.) Foster might reply that the continuing need to combat teleological perspectives is demonstrated by the persistence of creationism and other fundamentalist views, as well as the spiritualist forms of environmentalism mentioned earlier, but it is doubtful whether the discussion of Epicurus has any significant role to play in this contemporary argument.

Similarly, Foster’s final chapter, on Darwinism and its relation to Marxism, reads as an interesting and insightful reflection on the interlocking histories of the two movements, but more

detached from the practical aims of the book than the discussion of the “metabolic rift” that precedes it. Clearly evolutionary biology and ecology are fundamentally related. Moreover, Foster’s perceptive account of the deep connections between Darwin’s theory of biological evolution and Marx’s theory of historical evolution gives concrete content to the idea of humanity as a part of nature. However, Foster’s focus is as much on the role of Darwinism as a contribution to the struggle against teleological conceptions of nature, contrasting Darwin’s own ambivalence about the anti-religious implications of his theory with the more outspoken materialism of followers such as Thomas Huxley and John Tyndall, and, as suggested above, the sort of attenuated religious belief that Darwin and others have judged compatible with his evolutionary theory (p.224) is likely to have little impact on the scientific understanding of ecological problems.

A second reason why Foster’s book is more successful as history of ideas than as revolutionary ecology is that the latter requires a more critical engagement with Marx than the book offers. In order to use Marx’s theory as the foundation for a contemporary ecological perspective it is necessary not only to show that Marx addressed ecological issues, and did so in ways that were informed by and consistent with his core theoretical views, but also to consider the adequacy of the diagnoses and solutions that he offers.

This limitation is seen most clearly in relation to the division between town and country, which, as we have seen, is viewed by Marx and Engels as a cause of both social and ecological problems. Their solution, put forward in the *Communist Manifesto* and elsewhere, is to reduce and even abolish this polarisation by distributing population and industry more evenly across the country. Foster appears to take for granted that this is an appropriate solution, citing it without further argument as evidence of Marx and Engels’s ecological credentials (pp.137, 163, 175). This, however is to ignore the suggestion of increasing numbers of environmentalists and urban planners that the so-called “compact city”, with high population densities and short travelling distances, can offer both a convivial social environment and reduced ecological impacts. Nor, with modern communication technologies, is there reason to think that the rural isolation or “idiocy” that Marx so despised can be overcome only by urbanising the countryside. Moreover, if this *is* the solution to the problem then it is not obvious that it is a solution that requires the overthrow of capitalism, as Foster appears to suggest (p.169). The concentration of population in urban centres may have been necessary for the genesis of capitalism, creating “free” labour in the places where it was needed, but it doesn’t follow that it remains necessary for capitalism today.

More generally, Foster does not give any detailed consideration to ecological critiques of Marx’s vision of communism. He refers to William Morris’s *News from Nowhere* as evidence for “the close connection between Marx’s vision of communism and ecological sustainability” (p.175), but even if we allow (as many would not) that this fictional work faithfully reproduces Marx’s vision, it can demonstrate only that communism is *envisaged* as ecologically sustainable, not that it would

actually be so. The problem is that ecological sustainability may in practice conflict with other elements of Marx's vision. Elsewhere Foster refers to claims that Marx's vision of communism rests on an unsustainable assumption of material abundance, but his response makes no reference either to Marx's own use of this term or to the literature surrounding it. Admittedly, the sketchiness of Marx's description of communism makes analysis of its ecological implications difficult, but I would suggest that the principle "to each according to his needs", together with Marx's many suggestive remarks about what the (expanding) needs of unalienated people would be, gives us some basis for assessment.

Also warranting a more critical approach than Foster provides, given his practical aims, is Marx's theory of revolution. Foster acknowledges that ecological problems do not feature among the factors that Marx and Engels identify as motivating the overthrow of capitalism, and suggests that this is because these problems were not sufficiently developed in their day to play that role (p.140). One question which arises here is whether, given Marx's insistence that the shape of a future society cannot be determined independently of the process that brings it into existence, there is reason to expect a society brought into existence for reasons other than ecological ones to be ecologically sustainable. This looks especially problematic given Marx's view that social structures are overthrown when productive forces develop to the point at which they are fettered by the existing relations of production. If capitalism is to be overthrown in order to allow further growth of the productive forces, then we need a careful appraisal of what that growth consists in before pronouncing on the sustainability of the ensuing society. If, on the other hand, it is to be argued that ecological problems can now be included among the conditions motivating revolutionary action, it needs to be considered how this can be fitted in to Marx's account of fettering, and whether in general this account can be developed to account for the non-fulfilment of Marx's revolutionary expectations and to answer objections raised by commentators such as Cohen and Brenner.⁶

Other elements of Marx's theory which Foster seems too quick to embrace include his reticence about writing blueprints for the future and his hostility to evaluative discourse, both of which might need to be rethought in order to provide people with rational grounds for overthrowing capitalism. Foster's somewhat dismissive response to environmentalist criticisms of Marx's values – that "the question is not one of anthropocentrism vs. ecocentrism ... but rather one of *coevolution*" – appears to commit a kind of category mistake; and his quick recourse to a quotation from Marx – that in contrast to views which "descend from heaven to earth" it is necessary to "ascend from earth to heaven" – gives an impression, whether justified or not, of empty sloganeering (p.11). It appears not to occur to Foster that Marx's advocacy of a "practical" (rather than "contemplative") materialism, his critique of existing society, and his concern for the "chain of human generations" all presuppose commitments to certain values, which if made explicit could properly be counterposed to those of the environmentalists.

Finally I will mention that the index omitted a number of terms that I expected to find, and that the short title referencing without separate bibliography made the tracing of references more difficult than it might have been. These are trivial points in themselves but unfortunate in a book that is in other ways such a good source of reference.

Although this review has focused on some of the difficulties in Foster's argument in the hope of stimulating further thought and debate, this should not obscure the fact that *Marx's Ecology* is an important and fertile contribution to its field. It is a book which has deepened my own grasp of the ecological dimensions of Marx's thought and will be welcomed by those interested in this and the other areas upon which it touches.

Notes

¹ John Bellamy Foster's *Marx's Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000), x+310 pages, ISBN 1-58367-012-2 (paper), 1-48367-011-4 (cloth). Bracketed references within the text are to this work.

² Leszek Kolakowski, *Main Currents of Marxism*, vol. 1 (Oxford: Clarendon Press, 1978), pp. 412-3.

³ H. L. Parsons, *Marx and Engels of Ecology* (Westport, Connecticut: Greenwood Press, 1977).

⁴ See for example Ted Benton, "Marxism and Natural Limits", *New Left Review*, no. 178 (1989); Paul Burkett, *Marx and Nature* (Basingstoke: Macmillan, 1999); Reiner Grundmann, *Marxism and Ecology* (Oxford: Clarendon Press, 1991); James O'Connor, "Capitalism, Nature, Socialism: A Theoretical Introduction", *Capitalism, Nature, Socialism*, vol. 1, no. 1 (1988); Jonathan Hughes, *Ecology and Historical Materialism* (Cambridge University Press, 2000).

⁵ Marx may also have admired Prometheus as a symbol of rebellion against oppressive power, represented in his case by the gods. This, however, is not the focus of green criticisms and is not considered by Foster.

⁶ G. A. Cohen, *History Labour and Freedom* (Oxford: Clarendon Press, 1988), ch. 6; Robert Brenner, 'The Social Basis of Economic Development', in John E. Roemer (ed.), *Analytical Marxism* (Cambridge University Press, 1986), pp. 46-8, n. 13.