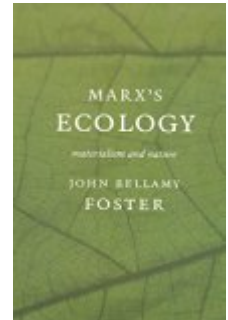


John Bellamy Foster. *Marx's Ecology: Materialism and Nature.* New York: Monthly Review Press, 2000. x + 310 pp. \$48.00, cloth, ISBN 978-1-58367-012-5.



Reviewed by Rolf Peter Sieferle

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Marx's ecology? When I finished my PhD-Thesis on Marx some 25 years ago under the impression of the ongoing environmental discussion I came to the conclusion that Marx would not have much to say for our future problems. As students we had started to read Marx in search of an explanation for imperialism, for capitalist exploitation and for alienation. Then the visions of an imminent environmental crisis and of limits to growth entered the political scene. In this situation the Marxist categories did not help us to understand these new issues. On the contrary, for some of my fellow students Marxism became a great obstacle for comprehension. Some even interpreted the new environmentalism as a kind of capitalist conspiracy, as a distraction from essential social problems.

The Western Marxism of the 1960s and 1970s shared the anti-naturalistic intellectual bias which dominated social and cultural studies since the beginning of the twentieth century. Foster tries to reconstruct a different Marxist tradition which goes back to the origins of mid-nineteenth century social and scientific thought. In his view,

Marx could have been one of the founding fathers of the ecological movement if there had not been two misinterpretations. One came from intellectuals like Lukács, Korsch, Adorno, Horkheimer, or Gramsci who read Marx in the idealistic tradition of Neo-Kantianism or Lebensphilosophie, in strong opposition to positivism and scientism. This Western reading was complemented by a crude mechanistic interpretation of Marx which prevailed in communist Eastern Europe. The "real" Marx disappeared between these two alternatives with the consequence that he remains absent from the environmentalist ancient gallery.

For a start, Foster shows that Marx was a thinker in the tradition of materialistic metaphysics reaching back to Epicurus or Lucretius, but this of course is part of the standard interpretation and needs not be emphasized specifically. Marxist orthodoxy (reaching back to Marx and Engels themselves) used to stress the fundamental opposition between "idealism" and "materialism". "Materialism" as a metaphysical or ontological position insists on the primacy of matter in motion and negates the existence of supernatural agents.

This, however, is just one alternative for thinking about nature and it does not necessarily coincide with any "progressive" or "rational" inclination. The basic problem was how the emergence of order out of chaos can be explained. "Materialism" favours chance, while "idealism" claims the existence of some agent of design. It is, however, not particularly plausible to maintain that highly improbable states of order (like organisms or ecosystems) are the results of mere chance. As long as no self-organizing procedure (like natural selection) can be identified that reduces possibilities materialism stands on shaky grounds.

Thus early modern materialism had great difficulties in explaining the emergence of life out of dead matter. The ancient concept of spontaneous generation (*generatio aequivoca*) lost its plausibility when Malpighi and other virtuosi showed that life was always the result of life. Materialist thinkers of the eighteenth century like Maupertuis had to introduce specific "vital" forces to save their basic proposition. They had to assume some fortuitous constellation, some fulguration which produced life. In this situation it was more elegant and economic to accept the basic argument of natural theology that there was some supernatural design that created order out of chaos. This assumption did not necessarily lead to fruitless theological speculations but could be seen as a mere hypothesis which allowed empirical research. It was only in the context of Darwinian natural selection that materialism could become plausible again because now a mechanism could be identified by which order could produce itself. But this was a matter of the late nineteenth if not of the twentieth century. In the early nineteenth century materialism was a special creed without much explanatory force.

So Marx's decision for a materialistic ontological position was heuristically not very helpful in the first place. But there was an epistemological obstacle for his perception of society's relationship to nature which was much more severe: clas-

sical political economists had perceived "land" (or "the natural agent," as John Stuart Mill called it) as an unsurmountable limit to the economic process. Economic growth or the "progressive state" of the economy would sooner or later reach a stationary state whence a further increase of wealth would not be possible. The polemical point of this argument had already been stressed by Thomas R. Malthus in 1798. The finiteness of available land stood in sharp contrast to the natural (if unchecked) possibility of exponential population growth. It is true for any population that its further (possible) increment is a function of its size and its growth rate (what Malthus called "geometrical ratio"), while its subsistence is based on land of limited scope. For Malthus this had the consequence that any social reform aiming at the redistribution of land would be counterproductive because a growing population would soon be reduced to a state of general destitution. Thus social progress would be self-destructive, and only a stable social stratification could produce a balance between population and limited natural resources.

With Malthus physical nature had entered the scene of political thought as a major theoretical weapon of the conservative, counter-utopian position. Nature in whose name social reform could be demanded in the eighteenth century had changed sides. It had become a strong ally of the social and political status quo. The "facts" on which classical political economists insisted, those "professors of the dismal science" (Thomas Carlyle), demonstrated the existence of a harsh equilibrium of nature which could not be surmounted by acts of volition.

Malthus, Ricardo and other political economists of the early nineteenth century provided a severe nuisance for social reformers and socialists in England and on the continent. Especially "parson" Malthus was the object of hatred, and large parts of Marx's work on political economy must be understood as a rejection of his theory.

Marx, however, could not merely switch to an idealistic optimism as young Friedrich Engels did who wrote in 1844: "The productive forces possessed by mankind are immense. The productivity of soil can be increased without any limits (ins Unendliche) by the application of capital, labour and science." Marx had to realise that the logical consequences of this proposition would be absurd: One day it would be possible to feed all mankind from grain grown in a single flowerpot. So there must be some limits to human population growth, and overpopulation remained a spectre which haunted socialists well to the end of the nineteenth century.

As a materialist Marx had to cope with the insight that the core of Malthus's argument was right: that there were natural limits to the economic process and that these limits must somehow become sensible to humans. Malthus wrote under the impression of natural limits to agrarian production which became incorporated into political economy as the law of diminishing returns since the early nineteenth century. Marx, however, lived in a different situation. Foster demonstrates that he could use arguments provided by the new emergent science of soil chemistry, especially by Justus Liebig. In contrast to older theories of soil (and rent) it became clear that the productivity of soil was not an inherent, unchangeable quality but could be influenced by human activities in both directions: soil could be degraded and improved, so differences in soil productivity were not merely a result of natural conditions but were elements of a historical process. Land and soil were removed from the realm of nature and became productive factors made by man and labour.

This had far-reaching consequences. Classical political economy was in its core a science of agricultural production within the scope of the traditional solar energy regime, reflecting its features and limits. Marx stood on the threshold where this regime was transformed into something new,

and one element of this transformation was a fundamental change of agriculture: it was dynamized and denaturalized. Soil was not longer perceived as an element of an eternal flow but it was seen as a stock which could be consumed and exhausted. On the other hand, it became thinkable that it was refilled from other stocks, be it guano, be it mineral fertilizer processed with the help of fossil fuels.

The strength of Foster's book lies in the reconstruction of Marx's struggle with these new issues which he analyzed as society's metabolism. Marx did not only read Liebig and other soil scientist but dealt with physiology and geology, too. The concept of social metabolism helped him to understand one major issue which was widely discussed in the second half of the nineteenth century: Population growth and urbanization broke up the old cycles of soil chemistry. Mineral matter incorporated in food was exported to cities. Sanitation resulted in dumping these soil nutrients into rivers. So rivers were polluted and soil was degraded as a result of the same process. In Marx's view, one solution might have been to decentralize urban dwellings, to reverse the separation between town and country.

Marx's philosophy of history is based on one central proposition: that planning as a direct rule of reason is superior to more "objective", heterogeneous or spontaneous forms of coordination (like "the market"). In the last resort, Marx remained optimistic and he was not forced to give up his anti-malthusian cornucopian view. The problems of social metabolism could be solved when the relationship between society and nature was rationally planned by one unified subject, the revolutionary proletariat. Then three processes could converge simultaneously: population growth, growth of per capita consumption, and stabilizing of resource use. In Marx's view, capitalism can not square this cycle (or only temporarily), because this social formation is not explicitly oriented toward a rational whole. The associated producers of the future, however, will man-

age this herculean task, so not only the springs of wealth will flow, but nature will be stabilized, too.

However, social-metabolic Marx as reconstructed by Foster did not have much influence on later socialist thought. Marx could not be the father of ecology, because he had no sons or daughters. Foster cites some passages by Bebel and Kautsky which deal with the problems of soil exhaustion and river pollution, but we must not forget that these were widely discussed issues in late nineteenth century Germany which could not be ignored by prominent Social Democratic politicians. Foster demonstrates that "dialectical naturalism" can be found in writings by Nikolai Bucharin and Christopher Caudwell, too. He could also have mentioned the work of Karl August Wittfogel who tried to reconcile economic and environmental materialism but did not find much favour with Marxists when he applied the concept of an "Asiatic Mode of Production" to the Stalinist Soviet Union.

Marx's ecology came to a dead end in the course of the twentieth century. When environmental issues claimed public concern since the late 1960s the Marxist tradition provided no help at all. Reading Marx did not sharpen the attention to these problems. Marxists were not more but even less ready to deal with ecological problems than other people. Marx's dialectical naturalism was of no use for the development of present models of social metabolism. His critique of political economy played no role for ecological economists who tried to incorporate contemporary energetic theories which Marx and his successors had completely ignored. It was only after the political success of "green" movements that Marxists began to be interested in environmental issues. Here they saw some "real movement" which they tried to influence but this remained a mere matter of political power (at least in Germany) and had nothing to do with Marxism (Joschka Fischer or Juergen Trittin positively are not Marxists any more if they ever were).

So why should we deal with Marx's ecology? I think that this is (not more or less than) a very interesting subject for the history of ideas. Marx's thought has totally amalgamated with social thought in general, and when we understand something about Marx we understand something about ourselves. But we should not forget that he was a figure of the nineteenth century. He spoke to the people of his time, not to us. We should not expect from him answers to our questions. Marx should be consequently historized, and the best passages in Foster's book are those where he puts Marx into the intellectual and scientific context of his time. We should let him stand there.

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