

Thinking ^{#65} through the Environment

A Reader

Edited by

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at The Open University



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succeed in significantly reducing fossil fuel demand. Indeed, the best argument for it is that it would provide a source of public revenue that could be reinvested in efficiency schemes, and used to compensate the lower income groups who would be hardest hit by the tax. . . .

But we must not reject financial incentives or market mechanisms out of hand. Clearly, some such incentives can work. Charging returnable deposits on bottles, for example, is a long-established mechanism for ensuring maximum reuse, and one that drinks manufacturers would do well to revive and extend. Perhaps there is a lesson here, that the simplest mechanisms are those which are most likely to get results.

[...]

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6.2

Carolyn Merchant

Emancipation and ecology

... [M]any people are searching for ways to resolve the contradiction between production and ecology. Calling themselves variously social ecologists, socialist ecologists, green Marxists, and red greens, they ground their approach in an ecologically sensitive form of Marxism. Social ecologists focus on the relations of production and the hegemony of the state in reproducing those relations. Their ethic is basically homocentric, inasmuch as social justice is a primary goal, but it is an ethic informed and modified by ecological and dialectical science. ... [This] informs and draws on the actions of left greens, social and socialist ecofeminists, and many activists in the Third World sustainable development movement ...

Marx and Engels on ecology

For most people, Marxism is synonymous with the rigidity and oppression of the bureaucratic states of the Soviet Union, Eastern Europe, and China. Moreover, Marx's prediction

that capitalism would generate economic and social crises that would lead to socialist revolutions in capitalist countries, led by the working classes, has not been borne out. Marx's emphasis on the lawlike characteristics of a society's economy placed less stress on the role of social movements, politics, culture, and consciousness in transforming society than on the overthrow of the mode of production. Since the 1960s, however, Marxist theorists have emphasized the processes by which people are socialized through gender, race, and class and the ways in which social movements can identify and alter those patterns. Many groups, including the New Left, democratic socialists, socialist feminists, and racial and religious minorities, have found insights in the writings of Marx and Engels that promote goals of liberation, freedom, and economic equality. The same is true of ecological Marxists, who emphasize, not the control and domination of nature, but rather the ways in which ecological theories and green social movements can help to transform people's consciousness and practices toward nonhuman nature.¹

Although Marx and Engels certainly argued that the domination of nature through science and technology would relieve humankind of the "tyranny" imposed by nature in procuring the necessities of life (food, clothing, shelter, and fuel), they were also acutely conscious of the "ecological" connections between humans and nonhuman nature. Like many critics today, they reacted against the mechanistic worldview of the seventeenth century. This mechanical materialism assumed that matter was made up of inert atoms and that all change was externally caused. Perception is explained as the result of corpuscles of light hitting an object such as a table or pencil, entering the eye, and being recorded as an impression on the brain. The individual is the passive receptor of information, just as the worker is the passive receptor of the capitalist's decision to offer minimal wages. Any worldview that casts the laborer as a powerless recipient of the ideas of a controlling elite is not healthy for her or him.

Similarly, the alternative view, prevalent in Marx's time, that the world was fundamentally spirit or idea, working itself out through history – the view of German philosopher Georg Hegel – was equally problematical. This worldview likewise rendered laborers powerless to change their destinies. What both the mechanists and the Hegelians had left out of their philosophies were social relations. People are born into a given type of society at a given time in history. Their place in that society is the perspective from which they view the world. Those in control of the society – the elite – will use the worldview to justify and maintain their hegemony. But laborers, artisans, minorities, and the poor have a choice of ways in which to view the world. They do not have to accept the mechanistic philosophy that renders them passive receptors of knowledge. More compatible with their social needs is a worldview that makes change, rather than *stasis*, central.

[...]

Seeing the world as fundamentally process and change, however, has implications not only for society, but also for nature. Marx, in his *Economic and Philosophical Manuscripts of 1844*, recognized the interdependence of humans and nature, an idea now central to the ecological vision. People, he asserted, were active natural beings who were corporeal and sensuous and who, like animals and plants, were limited and conditioned by things outside themselves. They were both different from these objects and yet dependent on them. "The sun is the object of the plant – an indispensable object to it, confirming its life – just as the plant is the object of the sun, being an expression of the life-awakening power of the sun." Like today's ecologists, Marx recognized the essential linkages between the materials that

make up the human body and nonhuman nature. "Nature is man's inorganic body," he wrote. "Man lives on nature – means that nature is his body, with which he must remain in continuous interchange if he is not to die. That man's physical and spiritual life is linked to nature means simply that nature is linked to itself, for man is a part of nature."²

Humans, however, differed from other animals in the way in which they obtained the essential food and energy to continue living. What distinguished humans, thought Marx and Engels, was their capacity to produce, using tools and words. The tools of animals were, in most cases, parts of their bodies, with inconsequential effects on nature. Humans, by contrast, transformed external nature with instruments that were socially organized. In different periods in history, humans organized their instruments and labor into different modes of production. Gathering-hunting, horticulture, feudalism, capitalism, and socialism are different modes of production that transform nature in different ways.

Essential to the "ecological" vision of Marx and Engels is their study of the history of human interactions with nature. Early societies, they argued, had a different relationship to nature than do capitalist societies. While pastoral societies wander, taking from nature that which is necessary for life, horticultural societies settle down and appropriate the earth's resources for their own sustenance. Humans thus modify external nature, using the local climate, topography, and flora and fauna for their own purposes. The settled community uses the earth as "a great workshop," for its labor. Human labor, on the one hand, and the earth, with its soils, waters, and organic life as instrument of labor, on the other hand, are both necessary for the reproduction of human life. Humans, isolated from society, would live off the earth as do other animals.

For the earth to be appropriated as property, humans must settle on the land and occupy it. Under capitalism, the earth is bought and sold as private property. Here, according to Engels, the earth is peddled for profit. "To make the earth an object of huckstering," he wrote, "– the earth which is our one and all, the first condition of our existence – was the last step toward making oneself an object of huckstering." It is the ultimate in alienation. In the capitalist appropriation of the earth for profit, raw materials, to be taken from the earth, such as coal, oil, stone, and minerals, are the result of natural forces. They are the "free gift of Nature to capital." Nature produces them and the capitalist pays the laborer to transform them. Similarly, physical forces, such as water, steam, and electricity cost nothing. Science, likewise, costs capital nothing, but is exploited by it in the same manner as is labor.³

But these modes of transforming nature have unforeseen side effects. Like modern ecology, which is premised on the concept that everything affects everything else, Engels noted in his *Dialectics of Nature* that "in nature nothing takes place in isolation. Everything affects every other thing and vice versa, and it is mostly because this all-sided motion and interaction is forgotten that our natural scientists are prevented from clearly seeing the simplest things."

Engels warned that people should not boast about their ability to master nature because there were always harmful consequences of such conquests. . . .

"Thus at every step," Engels admonished, "we are reminded that we by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature – but that we, with flesh, blood, and brain, belong to nature, and exist in its midst, and that all our mastery of it consists in the fact that we have the advantage over all other creatures of being able to know and correctly apply its laws." The more one understands the laws of nature and the consequences of human actions, he went on, the more humans will come to

"know themselves to be one with nature," and that there is no inherent "contradiction between mind and matter, man and nature, soul and body." These dualisms originated in the philosophy of ancient Greece, were reinforced by Christianity in the Middle Ages, and codified by the philosophers and scientists of the seventeenth century. Their dissolution is one of the goals of the radical ecological and ecofeminist movements today.⁴

In *Capital*, Marx analyzed some of the "ecological" side-effects of the capitalist mode of production. He argued that capitalist agriculture, much more than communal farming, wastes and exploits the soil. In agriculture geared toward production for profit, the soil's vitality deteriorates because the competitiveness of the market fails to allow the large-scale owner or tenant farmer to introduce the additional labor or expense needed to maintain its fertility.

[...]

Industrialization, according to Marx, resulted in similar "ecological" problems. Wastes from industry and human consumption accumulated in the environment and were not reused by the capitalist unless the price of raw materials soared. Marx gave numerous examples of capitalist pollution: chemical by-products from industrial production; iron filings from the machine tool industry; flax, silk, wool, and cotton wastes in the clothing industry; rags and discarded clothing from consumers; and the contamination of London's River Thames with human waste. Yet this waste that clogged and polluted waterways was very valuable and had the potential to be recycled by industry. The chemical industry could reuse its own waste as well as that of other industries, converting it into useful products such as dyes and rugs. The clothing industry could improve its use of the waste through more efficient machinery. Human waste could be treated and used to build soil fertility. An "economy of the prevention of waste" that reused all waste to the maximum was required.⁵

Marx assumed a two-levelled structure of society: the economic base or mode of production (which consisted of the forces and relations of production) and the legal-political superstructure (Figure 11). Together these constituted the social formation. Different modes of production, such as primitive communism, ancient, asiatic, feudal, capitalist, and socialist, had different legitimating superstructures. Marx's theory of social change was based on a conflict between the material forces of production and the social relations of production. This dialectic initiates an era of social revolution in which the economic foundation breaks down, leading to a change in the superstructure. Today social ecologists envision a transformation of the global capitalist economy and its legitimating mechanistic worldview to a sustainable economy and a process-oriented ecologically-based science. It would be brought about by social movements, especially those concerned with environmental health and quality of life.

Anarchist social ecology

Current theories of social ecology draw on Marx and Engels' approach to "ecology" and society. Additionally, social ecologists draw their ideas from premodern tribal societies, eastern cultures, and from analyzing the ecological problems of capitalist, socialist, and Third World countries. For anarchist philosopher Murray Bookchin, social ecology is rooted in the balance of nature, process, diversity, spontaneity, freedom, and wholeness. His ideal society would eliminate all hierarchies in ecology and in society. The ecological

Ecology and emancipatory strategies

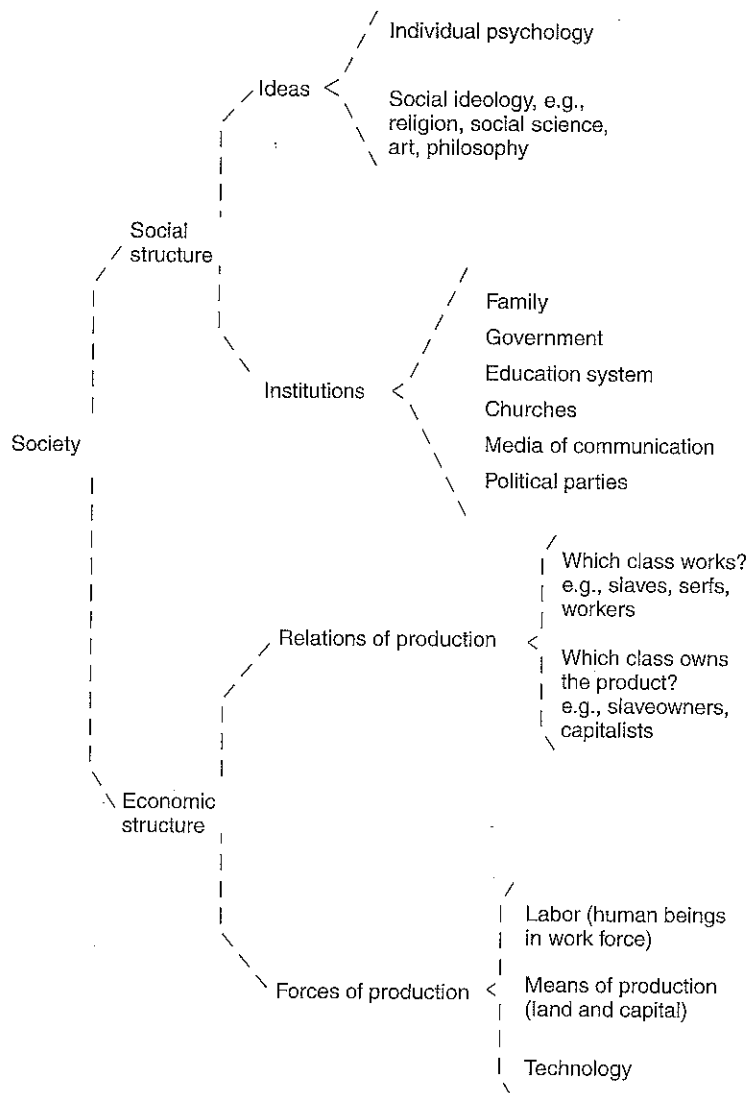


Figure 11 Marxist framework of social analysis

Source: Howard Sherman (1987) *Foundations of Radical Political Economy*, Armonk, N.Y.: M.E. Sharpe, p. 44, reprinted by permission.

society of the future would reclaim the fundamental organic non-hierarchical relationships of preliterate peoples.

[...]

... Scarcity and warfare escalated the problems created by the twin pillars of dominance and hierarchy, and non-egalitarian culture continued in all subsequent societies. Today dominance and hierarchy permeate all aspects of life, especially in the dominance of the

Thinking through the environment

intellectual over the physical, work over pleasure, and mental control over sensuous body. A major goal of social ecology is to abolish these dualisms.

In an ecological society, Bookchin argues, dominance and hierarchy would be replaced by equality and freedom. An "ecology of freedom" would reunite humans with nature and humans with humans. This would be achieved through an organic, process-oriented dialectic that would reclaim the outlook of preliterate peoples. The merging of their ecological sensibility with the analytical approach of Western culture would produce a new consciousness. Thus the advances of science and technology could be retained and infused with an ecological way of living in the world. This recognizes the mutual dependence of humans and nonhuman nature. The ecology of freedom is rooted in a concept of ecological wholeness that is more than the sum of its parts. "Unity in diversity" means the unfolding of the processes of life. Bud is replaced by flower and flower by fruit, as moments in an emerging unity. Spontaneity is the continual striving of nature toward change and of humans toward greater self-awareness and freedom.

Bookchin distinguishes between ecology and environmentalism. Environmentalism adopts the mechanistic, instrumental outlook of the modern world that sees nature as resource for humans and humans as resources for the economy. Nature consists of passive resource objects in habitats constructed for human benefit. Environmentalism does not question the *status quo*, but facilitates the domination of humans over nature and humans over other humans. Ecology, premised on interactions among the living and nonliving, contains the potential for an alternative. Social ecology incorporates humans and their interdependences with nonhuman nature. Bookchin uses the term ecosystem to mean "a fairly demarcatable animal-plant community and the abiotic or nonliving factors needed to sustain it." Extended to society, it becomes "a distinct human and natural community, [including] the social as well as organic factors that interrelate with each other to provide the basis for an ecologically rounded and balanced community."⁶

[...]

Social ecology has a deep commitment not only to reversing the domination of nature, but also to removing social domination. Hierarchical and class inequalities have resulted in homelessness, poverty, racial oppression, and sexism. Of particular concern are forced and insensitive methods of controlling populations, rather than restructuring and redistributing food, clothing, and shelter.

Bookchin argues that certain deep ecologists ... are insufficiently sensitive to social issues, especially regarding population, race, class, and sex. This includes some, although by no means all, supporters of Earth First!, the spiritual Greens, some bioregionalists, and some spiritual ecofeminists. To speak of a global population problem as threatening wilderness and the entire biosphere is incorrectly to analyze the roots of ecological problems by disregarding the differential impact of economic growth, especially capitalist growth, on indigenous people, marginalized rural and urban people, people of color, and women.

Social ecologists decry the idea of involuntary methods of population control, the Malthusian idea that famine, disease, and war are positive checks on population expansion, and the policy that immigration of southern and eastern hemisphere people into northern countries should be tightly restricted. Instead they support an ecologically-based development policy that uses resources in a sustainable way while raising the quality of life and redistributing the means of fulfilling basic needs.

The debate between deep and social ecologists highlights differences of opinion on where

to place the core of the analysis as well as approaches to solutions. Social ecologists tend to see the problem as rooted in the dialectic between society (especially economies) and ecology, whereas deep ecologists focus on the conflict between the ecological and mechanistic worldviews. Similarly, for social ecologists, action must be focused on ecodevelopment and social justice as opposed to the deep ecologists' goal of transforming the worldview and reclaiming spiritual connections to the earth.

Socialist ecology

Another alternative rooted in the Marxist tradition is socialist ecology. Socialist ecology offers an eco-economic analysis of the interaction between capital and nature and the transition to a post-capitalist society. Instead of Bookchin's emphasis on hierarchy and domination, a utopian anarchist society modelled on "nature," and a Hegelian dialectic, it envisions an economic transformation to ecological socialism, initiated by new green social movements.

Socialist ecology is spearheaded by economist James O'Connor, author of *The Fiscal Crisis of the State* and other books on economic crises. Rooted in Marx's conceptual framework, it nevertheless goes beyond Marxism to incorporate concepts of ecological science, the social construction of "nature," and the autonomy of nature. It argues that the environment and ecology are the key issues for the late-twentieth and twenty-first centuries, as evidenced by the global ecological crisis and the rapid growth of green social movements, ecofeminism, working-class anti-toxics crusades, and farm-worker anti-pesticide coalitions. It encourages an analysis of the dialectics between economy and ecology and between nature and history. Additionally, it offers a critique of existing socialist societies which have failed to address the ecological crisis and fosters thought about a reconstructive ecological socialism. In addressing the general problem of capitalism, nature, and socialism, it encourages dialogue among Marxists, Marxist-feminists, ecological Marxists, post-Marxists, left-greens, red-greens, and others.

O'Connor's theory of capital and nature is grounded in the traditional Marxian dialectic between the forces of production (technologies) and the relations of production (exploitation of labor by capital). This dialectic is the first contradiction of capitalism and leads to economic crisis and the breakdown of capitalism. But O'Connor equally emphasizes a second contradiction within capitalism, that between production and the environmental conditions of production (Figure 12). Marx and Engels used the term conditions of production to encompass human resources (labor), natural resources, and space. In ecological Marxist theory, these conditions of production come into conflict with the forces/relations of production. This second contradiction of capitalism leads to eco-economic crisis, initiating the transition to ecological socialism.⁷

Ecology is the basis of three conditions of production. First are the external physical conditions, what Marx called the natural elements entering into capital. Examples are the health and viability of ecosystems, such as the adequacy and stability of wetlands and the quality of soils, waters, and air. Second are the personal conditions of the laborers. Examples are the health of workers, as affected by the environment. Toxics and pesticides in the workplace, smoggy air and polluted water, unpleasant surroundings in the work environment, all affect the well-being of workers. Third are the social conditions of production, such as the means of communication among workers and managers.

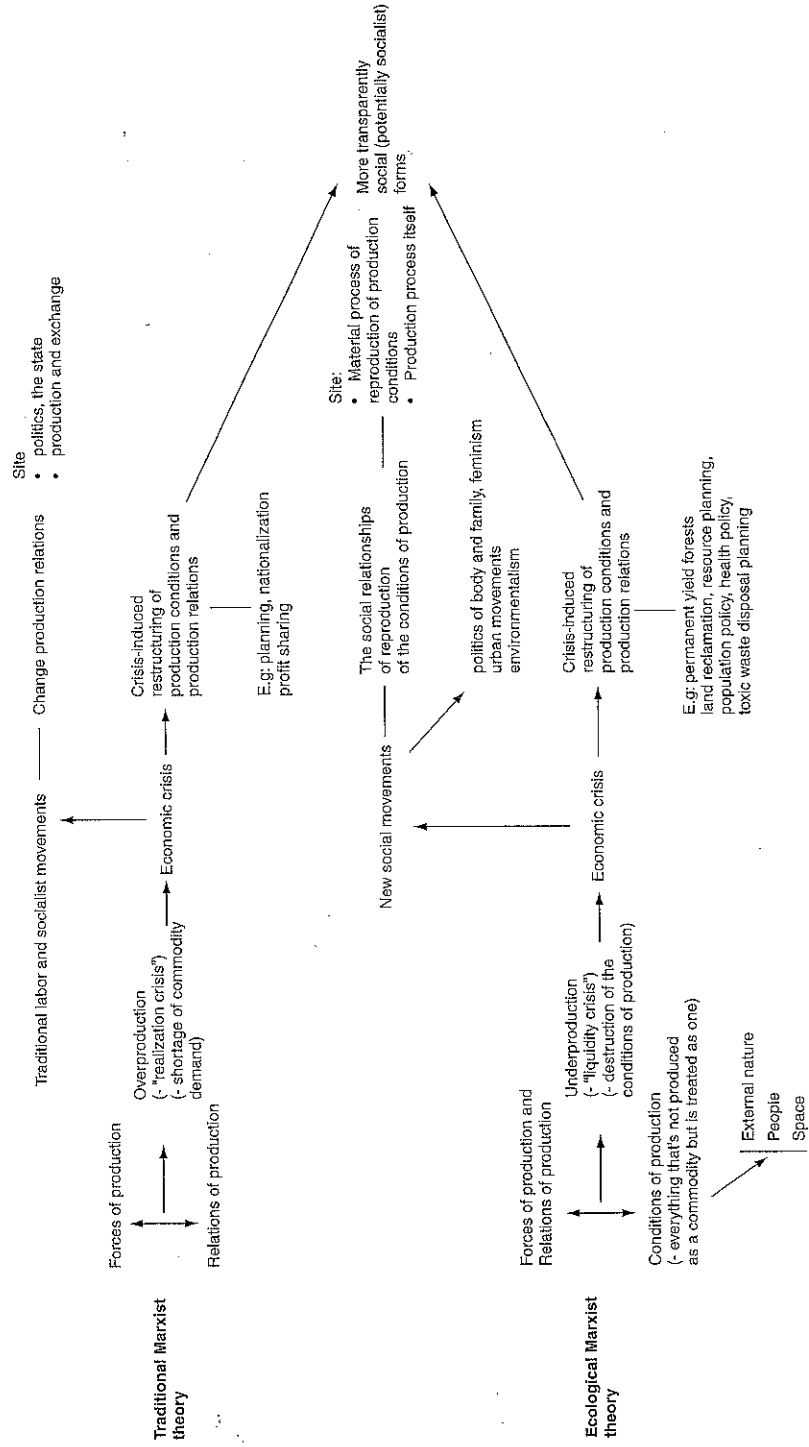


Figure 12 Socialist ecology
 Source: Diagram by Yaakov Garb, based on James O'Connor, 'Capitalism, Nature, Socialism: A Theoretical Introduction', *Capitalism, Nature, Socialism*, Fall 1988, pp. 11-38.

In traditional Marxist theory, the first contradiction of capitalism leads to overproduction of goods. There is a decreased demand among consumers for the product. In ecological Marxist theory, however, the second contradiction of capitalism leads to underproduction. Capitalism creates its own barriers to growth by destroying its own environmental conditions of production. Ecologically destructive methods of agriculture, forestry, and fishing raise the costs of raw materials that lead to the underproduction of goods and the underproduction of capital. Soils are depleted, waters are polluted, workers' health fails, yields of produce, meat, wood, and textiles decline. In its hunger for profits, capital thus destroys its own ecological conditions of production. Rather than leaving Nature free and autonomous, capitalism recreates it as capitalized nature – a second nature treated as commodity and subjected to ecological abuse.

In traditional Marxism, the agencies of social transformation are the traditional labor and socialist movements that change the relations of production, through collective bargaining for example. Here economic crisis make it possible to imagine the transition to socialism. In ecological Marxism, instead, the agencies of social transformation are the new ecological social movements: environmental health and safety, farmworkers' antipesticide coalitions, ecofeminist protests over groundwater toxins, leftwing green parties, and so on. Here it is ecological crises that make it possible to imagine the transition to socialism. Such crises and social movements push capitalism to respond in more transparently social and potentially socialist ways. In turn, capitalism responds by introducing more environmental and natural resources planning – sustained yield forests, environmental health policies, toxic waste disposal practices, and so on.

But in imagining the transition to an ecological socialism, socialist ecology criticizes state socialism, arguing that this is not what the new vision entails. State socialist societies have created ecological crises and fostered ecologically destructive policies, as have capitalist societies. Their planning processes nationalize production rather than democratizing and socializing it. They stifle individual creativity and are bureaucratically inflexible. They abuse and deplete nature as do capitalist societies, but do so not because of the profit-motive, but because their commitment to full employment stifles appropriate technologies and permits pollution.⁸

In an ecological socialist society, Nature will be recognized as autonomous, rather than humanized and capitalized. Ecological diversity, an ecological sensibility, and a science of survival based on the interrelatedness of living organisms and the environment will all be needed and valued.

What is an example of such an ecology of survival? One such case history is the use of biological insect controls in Nicaragua. Before the Nicaraguan revolution of 1979, agricultural production was dependent on heavy applications of pesticides to produce high cotton exports.

Broad-spectrum chemicals destroyed natural insect enemies, created new chemically-resistant pests, and caused high numbers of pesticide poisonings among workers. A pesticide treadmill set in, in which a cotton export economy became dependent on increasing amounts of pesticides to maintain yields, fueling the profits of foreign chemical companies. After the overthrow of the Somoza regime, the new socialist government stepped up the use of Integrated Pest Management (IPM) techniques and revolutionized the forces of production.

Integrated Pest Management uses biological methods of controlling insect pests as its

core. It depends on the careful monitoring of pest levels by trained field aides who assess when the economic threshold of pest damage has been reached, as opposed to spraying broad-spectrum chemicals on predetermined calendar dates. Pesticides are applied only in limited amounts and in narrow ranges. Plants are cut and plowed under the soil between seasons to avoid carryover of pests. Before the Sandinista revolution, regional IPM programs had been difficult to implement because not all capitalist growers in an area cooperated. The restructuring of farms under the new government created new relations of production which allowed new forces of production such as IPM to take root. These new productive forces fostered better conditions of production by improving both the health of the soil and the health of the workers. The government was able better to plan production, train IPM field hands, save on the enormous costs of pesticides, and achieve higher yields.

IPM as a force of production creates independence as opposed to chemical-company dependence and creates jobs for field workers. Yet the problem of outside markets for the sale of agricultural produce was obfuscated by trade embargoes imposed by the United States and by the continuing devastation of the country by the war with the Contras. Thus, despite increasing independence in production, dependence on world markets and politics hindered economic stability.⁹

[...]

Conclusion

Social ecology emphasizes the human implications of systems of economic production on the environment. Both capitalism and state socialism produce externalities that disrupt nature. Social ecology envisions a world in which basic human needs are fulfilled through an economic restructuring that is environmentally sustainable. While social ecologists would like to see world population stabilize at a level that is compatible with environmental sustainability, they deplore any programs that result in genocide, racism, or callous disregard for human rights in bringing about a demographic slowdown. Instead, economic programs that provide for basic needs, healthcare, security in old age, and employment are the pathways that will bring about a demographic transition in developing countries and equalize the quality of life in both developed and developing countries. Finally, social ecology advocates a science oriented toward social values and the recognition of change, rather than stability, as the basic premise on which to understand the natural world. It is similar to deep ecology in calling for a major transformation in worldviews and a process-oriented science, but differs from it in its emphasis on the human condition, the economic basis of transformation, and a homocentric as opposed to an ecocentric ethic.

Notes

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- 4 Parsons, ed., *Marx and Engels on Ecology*, quotation on p. 179.

- 5 Parsons, ed., *Marx and Engels on Ecology*, quotation on p. 177.
- 6 Murray Bookchin, "The Concept of Social Ecology," *Coevolution Quarterly* (Winter 1981): 14–22, quotation on p. 17, Bookchin, *Ecology of Freedom* (Palo Alto, 1982).
- 7 O'Connor's second contradiction is similar to my first contradiction, that between ecology and production. In my framework, the second contradiction is that between production and reproduction. James O'Connor *The Fiscal Crisis of the State*, New York: St. Martins Press, 1973.
- 8 James O'Connor, "Capitalism, Nature, Socialism: A Theoretical Introduction," *Capitalism, Nature, Socialism* 1 (Fall 1988): 11–38.
- 9 Sean Swezey and Daniel Faber, "Disarticulated Accumulation, Agroexport, and Ecological Crisis in Nicaragua: The Case of Cotton," *Capitalism, Nature, Socialism* 1 (Fall 1988): 47–68.

Source: Carolyn Merchant (1992) *Radical Ecology: The Search for a Liveable World*, London: Routledge, pp. 134–50, 153–4, 253–4.

6.3

Robyn Eckersley

Ecoanarchism: the non-Marxist visionaries

... [E]coanarchists divide in terms of the various theoretical explanations they offer to account for the ecological crisis (e.g., social ecology attaches greater theoretical importance to social hierarchy than does ecocommunalism); the types of ecocommunities they advocate (e.g., social ecology is more libertarian, whereas the economastic strand of ecocommunalism tends to be relatively more ascetic); and the *degree* to which they are critical of the Western anthropocentric heritage (e.g., the ecocommunal tradition is generally more ecocentric than social ecology). A further difference is that social ecology is largely the work of one particular theorist – Murray Bookchin – who has developed a distinctive organismic ecophilosophical perspective whereas ecocommunalism is a more general category that I employ to encompass a variety of other kinds of ecoanarchist approaches of a relatively more ecocentric persuasion.

The social ecology of Murray Bookchin

Murray Bookchin stands as one of the early pioneers of Green political theory. Over the past three decades, Bookchin's numerous publications on "social ecology" have sought to restore a sense of continuity between human society and the creative process of natural evolution as the basis for the reconstruction of an ecoanarchist politics.¹ Bookchin describes his thought as carrying forward the "Western organismic tradition" represented by thinkers such as Aristotle, Hegel, and, more recently, Hans Jonas – a tradition that is process oriented and concerned to elicit the "logic" of evolution.² According to Bookchin, the role of an ecological ethics is "to help us distinguish which of our actions serve the thrust of natural