



“Summary of article by Juan Martinez-Alier: From Political Economy to Political Ecology” in Frontier Issues in Economic Thought, Volume 6: A Survey of Sustainable Development. Island Press: Washington DC, 2001. pp. 29-33

Social Science Library: Frontier Thinking in Sustainable Development and Human Well-being

“Summary of article by Juan Martinez-Alier: From Political Economy to Political Ecology”

Ecological economics differs from orthodox economics in its focus on the compatibility between the human economy and ecosystems over the long term. Ecological economists address the issue of translating environmental values into monetary values, but are skeptical about expressing future, uncertain, or irreversible externalities into monetary terms. The study of distributional issues in ecological economics constitutes a new field which the authors of this article call *political ecology*. Like the classic tradition of political economy, political ecology deals with distributional conflicts, but with an added focus on the interests of future generations, other species, and with special attention to non-marketed natural resources and environmental services.

Rather than seeking to internalize externalities through actual or surrogate markets, ecological economists recognize the incommensurability of many environmental resources and services. This article examines how ecological distribution conflicts are related to allocations of property rights, the distribution of income, and methods of valuing the future.

Ecological and Social Conflicts

Environmentalism is sometimes seen as the product of prosperity, a luxury for those whose material needs are satisfied. This has led many Marxists to scorn environmentalism as an upper-class fad. However, this is profoundly mistaken. In the developing world, the poor must often defend the environment in the interests of their own survival. There are numerous examples in Latin America of poor communities fighting water pollution from mining, defending forests from timber corporations, battling industrial pollution from smelters and factories, and protecting mangrove forests from the shrimp industry. These people might not describe themselves as environmentalists, but they are on the front lines of crucial ecological battles.

Social and environmental conflicts of this type raise far-reaching issues of ecological distribution and control of natural resources. Marxists, while emphasizing class conflict, have neglected such issues since Engels rejected Podolinsky's attempt in 1880 to introduce human ecological energetics into Marxist economics. However, it is essential to combine environmental and social history. Marxists fear "naturalizing" human history, and indeed there have been attempts to do so, ranging from Malthusianism to Social Darwinism to sociobiology. However, introducing human ecology into history does not so much naturalize history as historicize

ecology. Human endosomatic energy use is genetically determined, but the exosomatic use of energy and materials is socially driven, depending on economics, politics, and culture. Demography is related to changing social structures, and human migration patterns depend on economics, politics, and law rather than on natural imperatives.

Distribution and Valuing the Future

The economic system lacks a common standard of measurement for environmental externalities. Estimates of environmental values depend on the endowment of property rights, the distribution of income, the strength of environmental movements, and the distribution of power. The issue is further complicated by the difficulty of determining an appropriate discount rate for weighing future costs and benefits.

How can we justify the use of a positive discount rate? The justification for pure time preference is weak. The argument that future generations will be better off, and therefore have a decreased marginal utility of consumption, is not acceptable from the point of view of ecological economics. Greater consumption today may well leave our descendants with a degraded environment, and therefore worse off. A more reasonable case for a positive discount rate rests on the productivity of capital. But here we must distinguish between genuinely productive investment and investment which is environmentally damaging. Only *sustainable* increases in productive capacity should count. But the assessment of what is sustainable involves a *distributional* issue. If natural capital has a low price, because it belongs to nobody or to poor and powerless people who must sell it cheaply, then the destruction of nature will be undervalued.

Sustainability needs to be assessed through biophysical indicators which incorporate consideration of ecological distribution. Such concepts include the Ecological Footprint, Appropriated Carrying Capacity or Environmental Space, and appropriation of Net Primary Product (NPP). These measures do not translate easily into monetary terms because of *incommensurability*. The monetary values given to externalities by economists are a consequence of political decisions, patterns of property ownership, and the distribution of income. There is thus no reliable common unit of measurement, but this does not mean that we cannot compare alternatives on a rational basis through multi-criteria evaluation. Eliminating the spurious logic of monetary valuation opens a broad political space for environmental movements.

Ecological Distribution Conflicts

Ecological distribution refers to social, spatial, and temporal asymmetries or inequalities in the use by humans of environmental resources and services, and in the burdens of pollution. For example, an unequal distribution of land, together with pressure of agricultural exports on limited land resources, may result in degradation by subsistence farmers working on mountain slopes which would not be cultivated so intensively under a more equitable distribution of land. Other examples include the inequalities in per capita energy use and accompanying carbon emissions, territorial asymmetries in sulfur dioxide emissions and the burden of acid rain, and

intergenerational inequity between the use of nuclear energy and the burdens of radioactive waste.

The transfers involved in these unequal distributions have no agreed-on monetary values. They have, however, become the subject of political discussion, for example in North/South negotiations over carbon emissions, or in the environmental justice movement over the siting of toxic waste facilities and polluting industries in the United States.

There is also a gender dimension to ecological inequality, as shown by the prominent role of women in local environmental movements in Peru. Women's role in provisioning and care of the household leads to a special concern with such issues as scarcity and pollution of water and lack of firewood. Women often have a smaller share of private property, and depend more heavily on common property resources. Also, women often have specific traditional knowledge in agriculture and medicine which is devalued by intrusion of market resource exploitation or state control.¹

Some have suggested that environmentalism arises as a result of a change in values away from material consumption towards appreciation of environmental amenities. This may be true for the more affluent, but it fails to describe the "environmentalism of the poor" reflected in numerous grassroots movements against environmental destruction. These include the rubber tappers in Brazil, the Chipko movement and the resistance to the Narmada dam complex in India, and the Ogoni struggle against Shell in Nigeria. Ex-slaves in the Trombetas river region in Brazil have fought hydro-electricity generation and bauxite mining; local Amazon fishermen have defended communal management against the intrusion of commercial fishing; and women in the Brazilian northeast have defended the babassu palm against landowners seeking to clear land. In Peru, villagers have fought against pollution from copper mining and smelters, and in Ecuador against waste dumping, coastal pollution, and destruction of forests and rivers by the oil industry.

International Externalities

Global exploitation of nature raises the issue of the internationalization of externalities. The value of such externalities is clearly related to outcomes of distributional conflicts. What is the true value of a barrel of Texaco oil, a bunch of bananas, or a box of shrimp from Ecuador? The answer depends on the value of the damages caused in production, but this valuation is a product of social institutions and distributional conflicts. Damages of \$1.5 billion have been claimed from Texaco in connection with oil extraction in Ecuador, as compensations for oil spills, deforestation, and disruption of the life of local communities. The plaintiffs are Indians and other local people. The Ecuadorian government, not a plaintiff in the suit, has tried to arrange an out-of-court settlement for about \$15 million -- one hundredth of the damages sought. How should the New York court where the case was brought assess damages, according to U.S. or Ecuadorian values? Can poor people be persuaded or coerced into accepting a settlement of much lower value than U.S. citizens would expect?

Similar cases have been brought by unions from Costa Rica and Ecuador in a Texas court against Shell, Dow Chemical, United Fruit, and others, seeking compensation for male sterility in Costa

Rican and Ecuadorian workers caused by the pesticide DBCP. How much is a case of male sterility worth? Does the value of this externality depend on the distribution of income? As Lawrence Summers, former chief economist for the World Bank, put it in a now infamous memo, "the measurement of the costs of health-impairing pollution depends on the foregone earnings from increased morbidity and mortality. From this point of view a given amount of health-impairing pollution should be done in the country with the lowest cost, which will be the country with the lowest wages."² But courts may not necessarily be bound by the logic of the market. International legal cases such as these provide a practical arena for observing social and institutional influences on the valuation of externalities.

Commercial shrimp cultivation in Ecuador has also caused substantial losses to people who make their living from sustainable use of mangrove forests on the Pacific coast. This has not yet become the subject of a court case, but similar issues of valuation and property rights arise. Throughout the developing world, regions that have been developed on the basis of extractive enterprises are the victims of ecologically unequal exchange. The externalities that they suffer are chronically undervalued by the market. The externalization of social and environmental costs by resource-extracting firms gives rise to new social movements.

As the market system has spread over the world, it generates political responses to the inequities of ecological distribution. Global issues, first raised by scientists, also provide the basis for local or national campaigns, as in Southern demands for compensation for the "ecological debt" created by high Northern carbon emissions. The rich behave as if they were owners of a disproportionate part of the planet's carbon dioxide absorption capacity, and then dump excess carbon into the atmosphere as if they owned that too. In an ecological sense, Southern nations are in a creditor position, and can use this to advantage in international negotiations. There is a basis for an alliance between Southern groups seeking to protect the rainforest (a carbon sink) or to oppose oil extraction and Northern environmentalists trying to restrict oil use and carbon emissions.

Issues of ecological distribution thus provide a link between political ecology and political economy in many domestic and international policy areas. These environmental conflicts, and the resistance movements which they engender, provide the research agenda for the evolving field of political ecology.

Notes

1. Bina Agarwal (1992).
2. "Let Them Eat Pollution," 1992. Lawrence Summers, appointed Secretary of the U.S. Treasury in 1999, was chief economist at the World Bank at the time this internal memo was leaked.