

Teaching Latin America from an Environmental Perspective: Using an Eco-political Economy Framework to Arrive at a Holistic Understanding of the Region

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ABSTRACT

The concept of ecopolitical economy provides a useful framework for teaching Latin American courses. It encourages students to see the dynamic interrelationships between humans, their economic, social and political systems, and the environment. It allows presentation of findings from fieldwork within a theoretical context, rather than as pure description. The ecopolitical economy approach encourages students to explore many different types of connections and interactions: between past and present, between different forms of social and economic organization, between people and the environment in which they live, and among geographical regions.

My approach to teaching Latin America grows out of the human- environment tradition of geography, but seeks to go beyond it by analyzing the economic and social ramifications of human interaction with the environment. Lakshman Yapa's model of ecopolitical economy provides a good framework for this approach (Yapa 1979). Norgaard (1990) proposes a similar (but non-Marxist) model with his concept of coevolutionary worldview, which includes consideration of knowledge, values, social organization, technology, and ecosystems. These perspectives recognize that both our economies and our environmental relations are the result of interactions between economic, social and environmental factors. They are useful heuristic devices because they promote consideration of virtually all major aspects of Latin American society and environment as well as analysis of the interactions between them.

The ecopolitical economy approach takes advantage of the current resurgence of interest in the environment in general and the tropical rainforest in particular. Student interest in environmental issues can be used to guide them into awareness of and interest in other aspects of Latin America. It also allows the students to learn general concepts for understanding how humans interact with the earth and the predictable effects of such interaction; that is, basic human geography. Students come to appreciate how economic activities are inextricably linked to the environment in which they take place and are able to apply this concept to other regions of the world. On the other hand, the approach also entails consideration of the historical development of the specific factors that contribute to the modern ecopolitical economy of Latin America.

On the assumption that the present cannot be understood without looking at the past, I allocate several weeks of the semester to Latin America's prehistory and history. Students learn about precolumbian cultures, and particularly the various ways in which native Americans interacted with the natural environments in which they lived. This encourages students to recognize that different cultures (with a variety of forms of economic and social organization) perceive their environments differently and evolve different adaptations to a given type of environment. For example, we look at the complex workings of chinampas, terraces and swiddens. (For useful

material see Denevan 1984; Posey 1989; Harrison and Turner 1978; Slay 1988). After students have come to an appreciation of the sophistication of many indigenous adaptations to the environment, they begin to comprehend the tremendous impact of the Iberians on Latin American ecosystems and cultures. They also become more receptive to alternative ways of viewing economic development.

European conquest provides the opportunity to explore the differences between cultures. I tend to focus on cultural ecology, so we consider variations in environmental relations, especially the impact of different technologies on a given environment, as well as the impact of different forms of social and economic organization on environments and ways of living. Crosby's Columbian exchange concept provides a good perspective for this section of the course (Crosby 1972, 1986). The conflict and transformation engendered by the Conquest open up a great many topics for discussion. These can expand the student's horizons in terms of both the Latin American[**end p. 303**] experience and that of the post-1492 world in general. Colonialism in Latin America and its forms of social and economic organization affected the ecosystems of the region in various ways. In order to understand the environmental transformation, the students must first understand the colonial institutions that caused the transformation. Therefore, we consider colonial systems for the appropriation of land and labor, including *encomienda* and *repartimiento*, land grants, plantations and slavery. West and Augelli (1989) provide information on the environmental ramifications of these colonial institutions in Mexico and the Caribbean. The new forms of land use imposed by the Spaniards entailed the introduction of new technologies, such as plows, and new species of plants and animals. The introduction of exotics, whether domesticated or wild, provides a chance to discuss some basic ecological principles. The effect of exotics on island ecosystems is particularly interesting. The Spanish emphasis on mining and other primary sector activities also had environmental consequences such as mercury contamination and widespread deforestation, although these are not as well researched as the social and economic consequences.

In addition, the urban orientation of Spanish culture had environmental as well as social consequences, such as the widespread destruction of forests for building materials. On the other hand, the redistribution of population during the colonial period and regeneration of tropical forests in depopulated zones is interesting to note. The demographic impact of the Iberian conquest of the Americas, both the decline in native American populations and the importation of African slaves, often forced into very dense populations in plantation zones, needs to be included in any discussion of environmental impacts on Latin America, including the West Indies. Denevan (1976) provides a useful survey of information about native American population at the time of contact.

Political independence did not necessarily lead to economic independence or social restructuring. Therefore, a discussion of neocolonialism needs to precede consideration of modern environmental problems in Latin America. Latin America's linkage with the global economy began in 1492 and has intensified by means of neocolonialism and the dependent development characteristic of the modern era (Bunker 1985; Hecht and Cockburn 1989). This type of development has had many environmental consequences that are used as points of entry into discussion of modern economic and social issues in Latin America, including its enormous

foreign debt, rapid urbanization, industrialization, "national security" and its environmental costs and tourism as a development strategy (Leonard 1987).

Latin America's foreign debt problem leads naturally into many avenues of discussion, including the globalization of the economy and how it promotes the exploitation of nature and cheap labor in third world areas such as Latin America. The current popular concern over deforestation in the Amazon can be parlayed into discussion of the reasons for forest clearance, including debt repayment. After students begin to analyze the economic constraints of many Latin American countries, and how much they rely on commodity production, they begin to realize the environmental implications of huge debt payments.

These discussions of debt problems and economic dependence on commodity production lead easily into consideration of the meaning of economic "development" for regions such as Latin America and analysis of some of the common models of development. I often break the class into three teams, each assigned to represent one perspective on development in a classroom debate. One team presents the views of the mainstream (or modernization) perspective, another presents Marxist (or dependency) theory, and the third represents the views of the moralist-idealist perspective, such as that of the liberation theologians, for example. McGinnis (1979) provides a useful framework for this classroom activity by analyzing *One flew over the cuckoo's nest* using these three perspectives.

The problems associated with the production of commodities for export provide the opportunity to discuss some general concepts that may be applied to any country. First, the issue of sustainability can be introduced. "Sustainable development" has become almost a mantra in third world development circles, yet it is rarely defined. Blaikie and Brookfield (1987) have raised some questions that may be useful in dealing with this concept. For example, they attempt to measure degradation and to identify the kinds of activities and land use intensity that cause degradation. Other useful sources of information on sustainability include Gliessman and Grantham (1990), Posey (1989), Redclift (1984, 1987), and Moran (1983).

The frequently used term, carrying capacity, can also be explored. In particular, students can be shown that carrying capacity is a very subjective, slippery term. The carrying capacity of a given place varies greatly with the intensity of land use. This discussion can lead to consideration of what students commonly perceive as **[end p. 304]** "overpopulation." By the end of the discussion, students should recognize that population pressure is the result of a number of factors such as the type of production (including the technology applied), where the products are consumed, the type of social organization involved and, of course, the number of people and the capability of the land to sustain the level of production demanded of it.

The ecopolitical economy approach lends itself beautifully to this type of analysis. The students can apply what they have already learned about the social and economic organization of Latin America to determine why commodity production is likely to expand into the frontier zones. This leads naturally to consideration of land tenure and resistance to agrarian reform. The tendency of many Latin American governments to promote colonization of frontier regions rather than confront the need for agrarian reform helps students understand why there is such

an inexorable drive for tropical forest clearance. From the perspective of the oligarchies that govern most Latin American countries as well as from the modernization perspective on development, not only do the commodities produced on cleared land help their trade balance and debt repayment, but also the clearance represents making wastelands productive. At the same time, land hunger is (supposedly) ameliorated, mitigating the need for agrarian reform in long-settled zones.

Deforestation threatens to undermine the biological diversity of the region, which is of particular concern in the tropical rainforest and montane forests. Many students are unaware of the various values of natural ecosystems, so we discuss why it is important to preserve species diversity. The biotic richness of tropical forests is important for many reasons, including scientific research, to provide for the basic needs of peasants and tribal peoples as forests have done for many generations, and to provide present and future economic resources, such as pharmaceuticals, oils and resins.

It is interesting to see how many students exposed to the ecopolitical economy approach begin to make the connection between our consumption levels (and our domination of the world's financial system) and the environmental degradation of tropical third world countries. A discussion of student lifestyles and daily activities can enlighten many students about their very real impact on Latin Americans and their homelands. For example, the gas and oil that keep students' cars running may come from the Ecuadorian Amazon, where oil spills pollute hundreds of miles of rivers, lead to massive deforestation following road building and job creation in the Oriente (Thomson and Dudley 1989). Even "protected areas" are subject to environmental degradation. For example, one of the major Amazonian parks, Yasuni National Park, a world Biosphere Reserve and legal homeland of the Huaorani Indians, is under the threat of oil exploration. Other commodities have environmental impacts, such as the palm oil used in the processing of many of the foods North American students buy. Eastern Ecuador has seen the destruction of great areas of virgin forest and its conversion to oil palm plantations and processing plants that pollute rivers, reducing or destroying the fisheries on which local inhabitants rely for protein. The hamburgers that students eat may be implicated in tropical forest destruction as well, as has been widely publicized. The lettuce and tomatoes on their hamburgers or in their salads may be the cause of pesticide poisonings of farmworkers in northwest Mexico, or declining fish populations in nearby rivers and seas. The grapes or other fruit that they enjoy in the middle of winter may be associated with the same thing in Chile. Students' all natural fiber wardrobes may be associated with high levels of pesticides in the people and ecosystems of El Salvador and Nicaragua. These few examples serve to illustrate how we are all enmeshed in not only a global economy but also a global ecosystem, in which consumption in one region may have effects thousands of miles away.

The topic of land use can also lead to discussion of national security and geopolitical issues. For example, the current instability in Central America can be shown to be linked to questions of land use and struggles over rights to the land. The development strategy followed by the Central American countries, based on the export of agricultural commodities, leads inevitably to inequitable land distribution and pushes peasants into marginal lands in the mountains and in remaining wet rainforest areas. The United States has consistently promoted this development

strategy and has responded to peasant resistance with military force under the assumption that the peasants are communist-inspired and led. The unintended result is the destruction of remaining tropical forests followed by accelerated soil erosion, hydrologic disequilibrium and loss of biotic diversity. Deforestation results not only from clearance by peasants displaced by commodity production elsewhere but also from the effects of military activities (Hedstrom 1989). In the mid-1980s, for example, military activities in Honduras resulted in a deforestation rate more than twice the normal rate (Karlner 1990).

In Brazil, concern over effective control of northern Amazonia and its resources led to the creation of the Calha Norte program. Its intent is to prevent land grabs by neighboring countries, especially leftist Guyana and **[end p. 305]** Suriname, as well as the development of mineral and fossil fuel resources in the region. The main proponents of this program have been military men in the National Security Council, who describe Calha Norte in national security terms. The main impact of the project, however, is likely to be felt by the 50,000-60,000 Indians who live in this "empty" region and by the natural ecosystems upon which the Indians depend for subsistence (Treece 1989).

The fate of remaining natural areas of Latin America is a fruitful topic for discussion. First, the national security concerns discussed in the preceding section can lead to the compromise or even destruction of national parks that lie in critical areas, such as near international borders. Parks may be used as places of refuge by insurgents and therefore be subject to attack by national armies, sometimes resulting in substantial damage to ecosystems. Parks also may become embroiled in controversy over whom they are to serve, pitting proponents of Indian rights or peasant interests against conservationists. Some conservative politicians may want to preserve natural areas in order to promote tourism while progressive politicians may see parks as playgrounds for elites, both foreign and domestic, created at the expense of the rural poor. Other conservatives seek to open up "unproductive wastelands" for productive use and thus oppose national parks in principle. It is enlightening for students to be exposed to this political struggle over what they generally perceive as simply an environmental issue.

A recent increase in nature-based tourism may exacerbate political conflict over remaining natural areas. Tourism contributes a significant amount to the foreign earnings of a number of Latin American countries, especially Mexico and many Caribbean islands. Nature-based, or ecotourism, has increased dramatically in many parts of Latin America (Boo, 1990). Some countries, such as Costa Rica, have decided to make such tourism the centerpiece of their development strategy. Tourism is often promoted as a panacea for the ills caused by underdevelopment and it is useful for students to evaluate how well tourism lives up to its reputation as a "motor of development." The class can consider where tourist dollars flow, who pays for the cost of infrastructure for tourism and who uses it, who is employed (and in what capacity) in tourist enterprises, what impact employment in resort areas has on the local economy (especially farming), what impact interaction with tourists has on local people and what environmental problems may result from tourism (especially pollution).

Discussion of industrialization fits rather well into the political economy part of the ecopolitical economy model. The point of entry into the environmental aspects of this topic can be the

flight of highly polluting industries such as petrochemicals, steel and textiles into the third world in order to escape the increasingly stringent environmental laws passed in the developed countries. Further discussion can then be made of other reasons for the location of multinational industries in the third world, such as cheap labor. The proximity of Mexico and the Caribbean, with their abundance of cheap labor, to the vast market of the United States encourages the establishment of maquiladoras. This can lead to the discussion of migration and the growth of cities.

Urbanization is a rich topic for discussion, as it draws upon historical foundations in the culture created by Spanish colonialism as well as upon current political economy, which tends to concentrate the wealth of Latin American countries in their urban centers, from which it flows into the international economy. In terms of environmental issues, modern Latin American cities suffer from the same urban pollution ills that North American cities do, and in some cases are worse because of their extraordinarily high growth rates and lack of environmental regulations or enforcement of them. The air, water and solid waste problems in Mexico City have received considerable media attention. Therefore, it is probably easier to find information on Mexico than other cities. It is surprising, however, how little research is published on urban pollution problems in Latin America despite how obvious the problem is.

Urbanization also provides an opportunity to discuss hazards, because slums and squatter settlements are often relegated to hazardous areas such as seasonally flooded stream channels or lowlands, or places subject to landslides or mudslides. Prevalent methods of house construction, particularly the use of unreinforced masonry, also increases the susceptibility of slum dwellers to hazards such as earthquakes.

In conclusion, the ecopolitical economy framework allows me to teach my Latin American classes from a unified theoretical perspective but provides the opportunity to include a wide variety of topics in class discussion. I try to make these discussions more tangible by having students discuss real life situations, particularly those that they may experience in their own lives. We try to examine the Latin American side of things that may seem to be merely part of the North American middle class lifestyle, such as eating a hamburger in a fast food restaurant, buying clothes or going on spring vacation in Mazatlan or Cancun. I hope that my approach gives students a perspective and level of understanding not given in either other social science or natural science classes.

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References

- Blaikie, P. and H. Brookfield. 1987. *Land degradation and society*. London: Methuen.
- Boo, E. 1990. *Ecotourism: The potentials and pitfalls*, 2 vols. Washington, DC: World Wildlife Fund.
- Bunker, S. G. 1985. *Underdeveloping the Amazon*. Urbana: University of Illinois Press.

- Clay, J. W. 1988. *Indigenous peoples and tropical forests: Models of land use and management from Latin America*. Cambridge, MA: Cultural Survival, Inc.
- Crosby, A. W. 1972. *The Columbian exchange*. Westport, CT: Greenwood Press.
- _____. 1986. *Ecological Imperialism*. New York: Cambridge University Press.
- Denevan, W. M., ed. 1976. *The native population of the Americas in 1492*. Madison: University of Wisconsin Press.
- _____. 1984. Ecological heterogeneity and horizontal zonation of agriculture in the Amazon floodplain. In *Frontier Expansion in Amazonia*. Ed. by M. Schmink and C. Wood, 311-335. Gainesville: University of Florida Press.
- Fearnside, P. M. 1989. Deforestation in Brazilian Amazonia: The rates and causes. *The Ecologist* 19(6): 214-218.
- Gilbert, A. 1982. Mining and manufacturing. In *Latin America: An introductory survey*. Ed. by Brian W. Blouet and Olwyn M. Blouet, 250- 277. New York: Wiley.
- Gleissman, S. and R. Grantham. 1990. Agroecology: Reshaping agricultural development, In *Lessons of the rainforest*. Ed. by S. Head and R. Heinzman, 196-207. San Francisco: Sierra Club Books.
- Harrison, P. D. and B. L. Turner II, eds. 1978. *Pre-Hispanic Maya agriculture*. Albuquerque: University of New Mexico Press.
- Hecht, S. B. 1989. The sacred cow in the green hell. *The Ecologist* 19(6): 229-234.
- Hecht, S. B., and A. Cockburn. 1989. *The fate of the forest*. London: Verso.
- Hedstrom, I., ed. 1989. *La situación ambiental en Centroamerica y el Caribe*. San Jose, Costa Rica: Editorial Departamento Ecumenico de Investigaciones (DEI).
- Karliner, J. 1990. Central America, Political Ecology and U.S. Foreign Policy in *Lessons of the rainforest*. Ed. by Suzanne Head and Robert Heinzman, 145-155. San Francisco: Sierra Club Books.
- Leonard, H. J. 1987. *Natural resources and economic development in Central America*. New Brunswick: Transaction Books.
- McGinnis, J. B. 1979. *Bread and justice: Toward a new international order*. New York: Paulist Press.
- Moran, E. 1983. *The dilemma of Amazonian development*. Boulder: Westview Press.
- Norgaard, R. B. 1990. The development of tropical rainforest economics. In *Lessons of the Rainforest*. Ed. by Suzanne Head and Robert Heinzman, 171-183. San Francisco: Sierra Club Books.
- Odell, P. R. and D. A. Preston. 1978. *Economies and societies in Latin America*. New York: Wiley.
- Posey, D. A. 1989. Alternatives to forest destruction: Lessons from the Mebengokre Indians. *The Ecologist* 19

(6): 241-244.

Redclift, M. 1984. *Development and the environmental crisis: Red or green alternatives?* London: Methuen.

_____. 1987. *Sustainable development: Exploring the contradictions.* London: Methuen.

Smith, N. J. H. 1981. Colonization lessons from a tropical forest. *Science* 214: 755-215.

Thomson, K. and N. Dudley. 1989. Transnationals and oil in Amazonia. *The Ecologist* 19(6): 219-224.

Trecece, D. 1989. The militarization and industrialization of Amazonia. *The Ecologist* 19(6): 225-228.

Yapa, L. 1979. Ecopolitical economy of the green revolution. *The Professional Geographer* 31: 371-376.

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