



Third World

Development and

Population

■ The Radical Position

Economic development and population growth in the poor areas of the earth are essential topics of environmental concern. Much of the so-called Third World suffers extraordinary—and rapidly accelerating—environmental degradation. The patterns of destruction experienced here are markedly distinct from those of the industrialized zone, calling for the development of a separate body of both social-environmental theories and economic-ecological programs. In the least developed countries, for example, toxic waste production is inconsequential (although such areas often serve as dumping grounds for the wealthy countries), but deforestation and desertification often proceed at devastating rates. Contrastingly, in the few Third World countries that are now industrializing successfully, toxic wastes are produced in massive quantities and are often disposed of far more casually than in the older industrial zone. In other words, both those countries that are successfully developing and those that are failing to develop often experience especially severe forms of environmental degradation.

A Third World?

One must take care to draw distinctions within this broad zone of global poverty. The environmental problems and prospects of Mexico, for example, are as different from those of Mali as they are from those of Germany. Still, terms such as “the Third World” or “the South” provide convenient labels for the earth’s relatively poor countries. In this chapter

Third World will be employed to designate both the relatively nonindustrialized and the recently industrializing areas of the globe. The term admittedly obscures almost as much as it reveals, but such imprecision is necessary if we are to avoid using stiflingly cumbersome forms of expression.

With the notable exception of the primitivists, eco-radicals are as troubled by the human suffering of the Third World as they are by the ecological traumas the region faces. But their dual social and ecological concerns generate a paradox, for the economic development necessary to bring about broad-based prosperity has always been associated with rapidly increasing pollution and resource consumption. If the entire world were suddenly to catapult to an economic status congruent with that of Europe, Japan, and the United States, the environmental consequences would be appalling. Consequently, radical greens argue that the development necessary to relieve Third World poverty must be substantially different from the development that has characterized the rise of the First World.

Complexly intertwined with economic development is population growth. With few exceptions, Third World growth rates range from brisk (India and Guinea-Bissau at some 2 percent a year) to breathtaking (Kenya at 4.2 percent, Jordan at 3.9 percent a year), thus requiring substantial economic expansion merely for living standards to remain stationary. Yet through much of the region, economic growth has failed to match demographic expansion, resulting in deepening poverty and mounting environmental degradation. In impoverished and densely populated areas experiencing relentless population growth, such as Bangladesh and Egypt's Nile Valley, complete ecological and social breakdown in the near future seems distinctly possible.

Population growth, like environmental degradation, is itself closely tied to poverty. Mainstream environmentalists have long argued that overcrowding strains local resources, thereby impoverishing the local population; eco-marxists and other leftist scholars, on the other hand, typically respond that poverty leads to high fertility rates in the first place. Marxists also commonly contend that so-called overpopulation is usually just a symptom of the maldistribution of land and other resources. Traditional environmentalists thus typically advocate state-directed population control, while marxian-inspired writers argue that only genuine economic development founded on social equality can lead to demographic stabilization.

Considering the complexity of these issues, it is not surprising that the various eco-radical contingents should hold widely divergent opinions

on Third World development and population growth. Let us now briefly explore some of these varying interpretations.

For and Against Development

The most extreme eco-radicals casually dismiss the very concept of development. If both social and ecological conditions were superior under regimes of subsistence agriculture—or better yet, hunting and gathering—then any step toward more complex economies will only result in the further degradation of both land and society. Moreover, since economic growth necessarily entails expanding levels of consumption, successful development will only further strain the already overburdened global ecosystem.

But even the most committed eco-radicals usually realize that a return to tribal subsistence is simply not possible, at least in the short run; population growth alone makes this quite impossible. Extremists of misanthropic bent thus openly hope that a massive increase in Third World mortality will diminish human pressures (see chapter one). More common is a vague despondency brought on by the realization of the fundamental incompatibility of economic development and ecological survival. As Catton (1980:88) argues: "The new ecological paradigm was prerequisite to seeing that universal development was an unattainable goal. It was tragic that such a goal came to be universally sought. . . . Most of the poor nations of the world would never become rich."

But over the past ten years, most radical greens—to their credit—have come to regard the hope that nature will soon take its revenge against the teeming hordes of humanity as both bigoted and cruel, just as they have come to dismiss the despondent fear that genuine development is impossible as self-centered and ultimately self-defeating. The most widespread eco-radical position now is that Third World environments can only be preserved if poverty is alleviated through certain kinds of development initiatives. Third World peasants, they correctly argue, are forced to deforest and overgraze their landscapes precisely because of their poverty.

The challenge is thus to devise an environmentally benign method of improving living standards; to construct, in other words, a platform for eco-development. Such a program presents a radical departure from conventional development plans, which are roundly assailed as both ecologically destructive and socially regressive. Development in the old, liberal sense, argues eco-feminist Shiva (1989:80), should be seen as merely a "new project of Western patriarchy." Few deep ecologists would disagree.

The tenets of eco-development follow directly from the central propositions of mainstream (or deep ecological) radical environmentalism.

Development, accordingly, should be based on small-scale projects run by local communities and governed through participatory democracy. As Riddell (1981:159) argues, poor countries would be much better off if they elect simply to bypass industrialization. Instead, the rural production of craft goods should be stressed, and only technologies that fit local circumstances should be introduced. Production must be for subsistence rather than for exchange, and bioregions must strive for a self-sufficiency that will allow them to sever their ties with the global economy. These are, of course, the same prescriptions most eco-radicals offer the industrialized world. Their vision is thus one of global convergence, with the Third World developing in precisely the same manner that the First World de-develops.

Eco-development proponents generally insist that local societies also shun cultural connections with the larger world, especially those maintained through the electronic media. As Young (1990:197) explains: "[P]oor countries . . . would be well advised to refuse such inducements as commercial television, however much their elites may demand them. Like transistor radios, television sets will be used primarily to create new wants, only to be satisfied by the abandonment of subsistence production."

Eco-marxists and other radicals of more traditionally leftist leanings diverge profoundly from the standard eco-development course. They typically consider it, if nothing else, theoretically unsophisticated. W. M. Adams (1990), however, has recently attempted to unite the political-economic concerns of the left with an eco-development platform, hoping to devise in the process a truly radical developmental agenda. He is particularly anxious to discredit mere reformist sensibilities, such as he believes are evident in the program of sustainable development (see below), and to attack any strategies that aim to preserve nature only for the benefit of the elite. He also makes it absolutely clear that a properly constituted *leftist* version of green development will remain committed to anthropocentric goals: "ultimately . . . 'green development' has to be about political economy, about the distribution of power, and not about environmental quality" (1990:10). Adams diverges sharply from the marxian path, however, by insisting that development initiatives must come from below, focusing on the "aspirations of individual people" (p. 201). In the end he almost seems to be arguing that adequate development will spontaneously occur if only poor, rural peoples could be left to their own devices. "Green development" of such a variety thus returns, by a tortuous path, to a position remarkably close to that of the antidevelopmentalism of the primitivists.

Adam's proposals fit most closely into the humanistic anarchist tradition and are thus unlikely to receive support from either eco-marxists or mainstream eco-radicals. All three of these camps, however, unite in their acceptance of the neo-marxian theory that international capitalism is ultimately responsible for all forms of Third World poverty and degradation.

Notions of Dependency

Hopes for First and Third World convergence reflect a desire to redress past wrongs almost as much as a concern for environmental salvation. Most radical greens believe that the wealth of the industrialized countries essentially stems from their rapacious exploitation of the rest of the world. Through imperial conquest, Western nations (and Japan) arrogated the accumulated capital, the mineral and biological resources, and the human labor of the colonized zones. Such ill-gotten gains provided the essential fillip to Western industrialization while simultaneously ensuring the continuing impoverishment of the rest of the world. As Barry Commoner (1990:166) argues, global poverty is simply "the distant outcome of colonial exploitation. Colonialism has determined the distribution of both the world's wealth and its human population, accumulating most of the wealth north of the equator and most of its people below it."¹

Virtually all eco-radicals concur, although few would frame the issue quite so simplistically. Moreover, most would further contend that the North's current prosperity and the South's current desperation remain directly and structurally linked. First World investment in poor countries, Porritt (1985:95) tells us, only results in further *underdevelopment*. Similarly, Rifkin (1989:232) argues that "as long as we in the United States continue to consume one-third of the world's resources annually, the Third World can never rise to even a semblance of a standard of living that can adequately support human life with dignity," while Bookchin (1989:11) informs us that the Sudanese could easily feed themselves if not forced by the United States—through its control of the World Bank and International Monetary Fund (IMF)—to grow cotton (see also Riddell 1981:79).

Our own industrial order thus becomes doubly objectionable, based on an ecologically unsustainable production system at home and on the unconscionable exploitation of lands and peoples abroad. Global development in the mode of the West is also revealed as impossible, since each developing region would have to exploit, and thus further impoverish, another even more marginal area. A few select countries might

rise to the ranks of the exploitative powers, but a large and thoroughly impoverished periphery will necessarily remain.

The notion that Third World poverty derives largely from First World power is rooted in two schools of neo-marxist political economy: dependency theory (Frank 1969) and world systems theory (Wallerstein 1974). Although these two theoretical bodies are distinct, they share a number of basic attributes; moreover, the global theory propounded by most eco-radicals lacks the subtle distinctions that mark neo-marxian discourse. The following discussion, therefore, presents a brief and generalized overview of the dependency and world systems notions commonly employed by radical environmental writers.

According to neo-marxian models, the Third World's widespread poverty and lack of industry stem not from the failure of development to occur spontaneously, but rather from the more active processes by which the West undermined and forestalled indigenous economic growth. The imperial nations, in other words, underdeveloped their colonies, protectorates, spheres of influence, and nominally independent trading zones throughout the entire Third World. In the most blatant instances imperial agents demolished nascent industries in order to prevent them from competing with home producers. Elsewhere, colonialists undercut local industries and crafts more subtly through ruthless competition aided, when necessary, by gunships, armies, and not-so-subtle forms of diplomacy. Distant reaches of the globe were thus drawn into a world economy centered on the core nations of the West. The new global periphery was, in turn, relegated to the tasks of providing raw materials to, and purchasing manufactured goods from, the industrialized core.

According to some dependency models, the more fully a peripheral area was integrated into the global economy, the more subjugated, and hence impoverished, it would become. Although the configuration of core, semi-periphery, and periphery might fluctuate, the chance of genuine development occurring in the true periphery is virtually nil in the absence of complete global economic restructuring. Only those few areas that withstood imperialist pressures and maintained autonomy—such as Japan—have been able to embark on a path of genuine capitalist development (Moulder 1977).

Most eco-leftists further argue that the current structure of the world capitalist system ensures widespread hunger in the Third World. Since profit is the sole motive in a capitalist system, foodstuffs flow only to those who can afford them, not those who need them. Owing to the logic of capital, subsistence cultivation continually gives way to the fitfully profitable production of export crops, destined for the global core, that

provides no sustenance for laboring populations. Similarly, eco-radicals argue that technical advances allowing increased harvests, particularly those associated with the so-called green revolution, result only in mounting landlessness, hence desperation, since only wealthier farmers can afford to use them in the first place.

Many proponents of dependency theory even argue that famines are largely a by-product of global capitalist economics, implying that hunger is virtually unknown in precapitalist and socialist societies. As capitalist social relations diffuse from the core and penetrate peripheral regions, previously existing social safety networks are steadily demolished. Such arguments can become quite intricate, if not disingenuous; Bradley and Carter (1989:113), for example, blame American capitalism for the Sahelian famine because American farmers sold wheat to the Soviet Union instead of donating it to the people of the Sahel. One might think that marxian communism would have to be considered *at least* as blameworthy in this instance, but the authors absolve it in one sentence, stating that only "individual Russian buyers" bear any responsibility. Again, the ills of capitalism are seen as systematic, while those of marxism are dismissed as accidental or idiosyncratic.

Dependency theory thrived in the 1970s when the locomotive of global economic expansion suddenly began to lose steam. Contrary to the expectations of liberal development theory, most Third World countries either stagnated or began to regress; the vaunted "take-off stage" of rapid development previously visualized now appeared to be little more than a mirage. Neo-marxian theories thus seemed to offer the most consistent explanations for the widespread failure of development to occur. For students and young faculty members radicalized in the late 1960s and early 1970s, the appeal of structural theories of global dependency was overwhelming.

Yet even as the gloomy doctrine of dependency began to sweep academia, rapid industrialization was occurring in several peripheral countries, most notably Brazil. Brazilian industrial growth was not marked by a decline in poverty for the country's most desperate regions and exploited communities, but it still defied the general expectations of dependency models. Even less explicable was the phenomenal expansion of South Korea and Taiwan. Here, at least, poverty was rapidly diminishing. By the mid-1980s a number of committed leftists began to reject the basic tenets of dependency theory. As Alain Lipietz (1987:4) writes of fellow marxists who have taken the doctrine too closely to heart: "When researchers . . . adopt such attitudes they abdicate their intellectual responsibilities. Every aspect of a real social formation is seen as result-

ing from the evils of 'dependency.' Every concrete situation is forced into the Procrustian bed of a schema established by some Great Author of the past, while anything that won't fit is simply lopped off." Indeed, in recent years, according to a prominent theorist of an opposing camp, "criticizing dependency theory has become an academic industry of the worst sort" (Haggard 1990:19).

The intellectual poverty of the more simplistic notions of dependency will be examined in greater detail below. What is significant to note here is that few eco-radicals have followed the contemporary marxist and post-marxist debates. As a result, they cling to theoretical models that were popular years ago, unaware of how insecure their foundations have been revealed to be.

Demographic Growth

Perspectives on Third World population growth also divide environmentalists into several camps. To a large segment of the environmental movement, nothing is quite so worrisome (Ehrlich and Ehrlich 1990). According to this mainstream position, any advance in pollution control or habitat protection will inevitably be lost as a mounting human population consumes an ever greater proportion of the planet's resources. Many environmental writers, therefore, advocate strict demographic control, often based on naked coercion.

Radical greens of leftist bent, on the other hand, usually downplay Third World population growth. In fact, until fairly recently, "the anti-imperialist left dismissed this problem out of hand because it clung to an angelic conception of an ideal schema of reproduction: more mouths to feed meant more arms to feed them" (Lipietz 1987:146). Many eco-feminists apparently still accept this notion; a recent article in *Ms.* magazine, for example, tells us that "blaming environmental destruction on overpopulation obscures the main causes of the crisis" (May-June 1991, p. 83). Eco-marxists generally cannot afford such a cavalier attitude, but they often still attempt to deflect demographic concerns. First they argue that poverty itself causes unsustainably high rates of population growth in the first place, and second they claim that the affluence of the wealthy generates far more environmental damage than does the mere human weight of the poor. The average American, they correctly inform us, is responsible for generating several hundred times more industrial pollution than is the average citizen in Bolivia, Mali, or Nepal. Taking this reasoning to its extreme, overpopulation in the world's poorest societies becomes a trivial problem when compared with overconsumption in the world's wealthiest societies.

Despite such arguments, eco-leftists cannot simply ignore Third World population growth. Rather, most call for the global redistribution of resources in order to break the connection between poverty and fecundity: "the world population crisis . . . ought to be remedied by returning to the poor countries enough of the wealth taken from them to give their peoples both the reason and the resources voluntarily to limit their own fertility" (Commoner 1990:168). Commoner (1990:164), for one, sees a relatively simple and deterministic relationship between per capita wealth and fertility. Thus, he argues that if all countries could reach the level of prosperity enjoyed by Greece, the population crisis would be immediately resolved.

One of the main reasons eco-marxists are not terribly concerned about population is that they typically regard habitat preservation as a low priority. In many Third World countries, and certainly in most of sub-Saharan Africa, human numbers can indeed increase for some time without directly threatening the resource base necessary for economic development. This by no means implies, however, that increasing demographic pressure will not detract from the reproduction of other species. Indeed, many nonmarxian environmentalists worry about high fertility rates in the Third World precisely for this reason.

Combining the Affluence and the Overpopulation Arguments

Recently, Paul and Ann Ehrlich (1990) have attempted to accommodate the leftist "poverty thesis" into their own neo-Malthusian scenario of the soon-to-explode "population bomb." According to the Ehrlichs, population pressure is already at unsustainable levels virtually the world over. Continued demographic expansion, they argue, is the global environment's greatest threat. In a unique departure, however, they now contend that both wealthy and impoverished societies contribute to the problem in roughly equal measures. Environmental impact, they claim, is equal to a given country's population multiplied by its index of affluence and by its level of technology (in abbreviated form, $I=PAT$). Each (average) American, given his or her standard of living and access to technology, is thus ecologically equivalent to 280 citizens of Rwanda. Yet both countries are described as growing more grossly overpopulated with every passing day—Rwanda because its population (P) is expanding, and the United States largely because of its technological (T) advances. The Ehrlichs thus indict the overly affluent First World for maintaining (rough) population stability when in fact it should begin a rapid demographic descent in order to make up for its abnormally high levels of "A" and "T."

Yet a few wealthy countries have already started to experience popula-

tion decline. Even American fertility rates are below replacement level, and moderate demographic expansion is occurring here only because of immigration. To most observers this is irrefutable evidence that the First World is not experiencing a population explosion. But by equating human numbers with affluence and technology, the Ehrlichs can argue the contrary. They thus regard the birth of every American baby as a rather tragic event (1990: 10), and they consider couples who choose to have more than two children as abhorrently immoral. To counter the unsustainably high fertility rate of 1.9 children per American woman, the Ehrlichs (1990: 189) advise severe indoctrination: "happy, successful families in classroom stories and films should never be shown with more than two children." The resulting infringement of freedom is held to be a minor inconvenience; the very survival of the planet, after all, is at stake.

■ The Necessity—and Possibility—of Economic Development

As most greens realize, economic development of some sort is necessary for both social and environmental reasons. Political ecologists have demonstrated over the past decade that the poorest peoples in the poorest countries are increasingly forced to eke out their livelihoods from ever more marginal lands, resulting in deforestation, soil erosion, desertification, and other forms of habitat destruction. The lack of economic alternatives also leads Third World political elites to encourage the unsustainable harvests of living resources. Only through genuine development can such pressures be reduced.

The relationship between population growth and economic development is more complex. Despite the assertions of a few leftists, population stability does not always neatly correlate with economic development as defined by such crude but irreplaceable measures as per capita GNP. The wealthy oil exporters of the Persian Gulf, for example, are burdened by exploding populations (Qatar is expanding at a remarkable annual rate of 4.1 percent), whereas impoverished Sri Lanka has experienced a remarkable fertility decline (Sri Lanka is now growing at some 1.3 percent a year). But a less precise correlation between national prosperity and demographic stabilization does still obtain, bolstering the notion that economic development is necessary for environmental protection.

The essential challenge is thus one of devising an ecologically benign developmental pathway that will lead to population stability. Let us begin by examining the deep ecologist's proposed panacea, usually labeled eco-development.

From Eco-Development to Sustainable Development

Eco-development, as outlined above, rests on the same basic propositions of radical environmentalism that have already been rejected in this work. No program committed to small-scale technology and economic autarky can ever foster genuine development. Moreover, just because a project is small in scale by no means implies that it will be environmentally benign. A prime example would be China's 1959 "Great Leap Forward," a program predicated on rural iron production. Although eco-radicals such as John Young (1990: 183) automatically endorse this scheme because of its small-scale nature, careful scholars have shown that it was nothing less than an environmental disaster (Smil 1984).

Seeing the pitfalls of eco-development, a group of nonradical scholars has recently forwarded the concept of sustainable development as a means of addressing Third World poverty while ensuring environmental protection. Not surprisingly, sustainable development has been excoriated by right-wing thinkers for being hopelessly radical (Anderson and Leal 1991) and by leftist thinkers for being hopelessly reformist, hence conducive to continued exploitation (W. Adams 1990).² In reality, it is neither. Although sustainable development's initial premise, that "the natural capital stock should not decrease over time" (Pearce et al. 1990: 1), appears congruent with the radical opposition to the extraction of nonrenewable resources, the concept's key terms are defined broadly enough to allow both resource use and economic growth (see Pearce et al. 1990: 10). It turns out that the main premise of sustainable development is that economic growth must never undercut the productivity of natural ecosystems. In fact, some sustainable development enthusiasts advocate relatively fast economic growth in the Third World, provided that it is accompanied by a "significant and rapid reduction in the energy and raw material content of every unit of production" (MacNeill et al. 1991: 24). This is a platform on which Promethean environmentalists readily stand.

Nor is Promethean environmentalism necessarily opposed to all eco-development programs. Carefully devised, environmentally aware, small-scale development strategies, whether labeled "eco" or "sustainable," do form an essential interim approach for reducing rural poverty. Small-scale development projects, especially those that work through the ecological knowledge of indigenous peoples, can both safeguard local landscapes and significantly improve living conditions. In most areas of the Third World only ecologically oriented agrarian development programs can offer *immediate* hope for impoverished cultivators, and thus

begin to sever the links between deepening immiseration and accelerating degradation.

Eco-development programs should thus be embraced, but only in conjunction with policies ultimately aimed at industrialization. Unfortunately, even sustainable development advocates usually focus exclusively on rural, agrarian issues, ignoring the larger urban-industrial nexus. But ruling out industrialization would only condemn the Third World to perpetual poverty and subservience to the now industrialized countries. Although radical greens would counter that global equity should be achieved by deindustrializing the First World, such a fantasy will not likely ever be realized. Third World poverty, on the other hand, is a grinding reality.

Even from a strictly environmental perspective, any development program that denies the need for industrialization and urban development will ultimately prove self-defeating. Mere eco-development would, for example, preclude the Third World from enjoying the many environmental benefits provided by urbanization (see chapter three). As ecologist John Terborgh (1989) argues, urban growth in Latin America offers the only hope for habitat preservation. If rural populations continue to expand, the large blocks of wild vegetation necessary to ensure biotic diversity will inevitably diminish. Third World urbanization also promotes a shift away from utilitarian environmental attitudes. Popular ecological movements in the Third World are far more widespread in cities than in the countryside, and they usually rely substantially on middle-class support.³ Finally, but most importantly, it is essential to recognize that even the most successful rural development projects are not generally accompanied by plunging fertility rates; urbanization, on the other hand, usually is.

If Third World urban-industrial development offers long-term environmental advantages, it also clearly entails some spectacular short-term environmental costs. Early industrialization is accompanied by horrific pollution, forming an ecological assault that eco-radicals feel the earth could not tolerate. Although such fears are overblown, more benign forms of industrial production must be applied in the future. Most importantly, the sophisticated, environment-sparing forms of technology outlined in chapter four must be developed and transferred to the Third World as rapidly as possible. Ultimately, as Reddy and Goldemberg (1990:115) argue, Third World countries should strive to engage in "technological leapfrogging" by adopting "more energy-efficient technologies even before they have been widely adopted in industrialized countries." Whether this could occur quickly enough to spare the global ecosystem

is an open question; both rapid innovation and substantial state subsidies will probably be necessary. Technology transfer will also require major assistance from governments in the First World—a region increasingly preoccupied with its own economic and environmental problems, and remarkably stingy in sharing its industrial secrets (see Porter and Brown 1991).

Another legitimate concern is that heavily polluting industries will increasingly flee countries with stiff regulations to settle in poor countries with lax environmental standards. Indeed, some states (most notably Romania before its anticommunist revolution [Leonard 1988]) have sought to attract filthy industries, apparently unconcerned with their effects on the local environment. Although a few economists have argued that this form of pollution exporting may help poor nations industrialize, environmentalists recognize that it would also undermine regulatory attempts to improve environmental health in the First World. Overall, however, the "pollution haven" industrial transfer process has proved but a minor force in global economic restructuring (Leonard 1988). More worrisome is the export of toxic wastes and other hazardous materials from the First to the Third Worlds; on this score the actions of multinational corporations and First World governments have often been scandalous (Scherr 1987).

Urban Development Reconsidered

Critics of Third World urbanism and industrialization also point to the appalling environmental conditions of such overcrowded, industrial cities as São Paulo, Bangkok, and Mexico City. Urban development has already progressed too far they argue, spawning virtually uninhabitable megalopolises. But while the environments of such cities are wretchedly degraded, the question remains as to whether this stems from urbanism per se or from the poverty that accompanies low levels of economic development. London in the nineteenth century was a foul place, but as it became more prosperous, while still expanding, it grew steadily cleaner. Modern Tokyo is as large and as industrial a city as any, and if its environment is not the world's most pleasant it is certainly tolerable—and far less polluted than it was twenty-five years ago.

Several Third World metropolises admittedly face special environmental challenges that may not be solved by economic development alone. Mexico City, for example, confronts severe difficulties merely by virtue of its location in a high-altitude basin. Human numbers in the Valley of Mexico may already exceed the restorative capacity of the local environment. The Mexican government is thus wisely attempting to shunt

further urban growth to secondary cities (Leonard 1988:143). But the pull of the capital city remains powerful, and, as government planners recognize, state functions themselves must be transferred to other cities if urban decentralization is to occur.

The hyper-urbanization of cities such as Mexico points to an important aspect of Third World urban development usually neglected in the environmental literature. In many instances, the recent explosive growth of urban areas reflects not genuine economic development but rather the developmental distortions generated by a combination of economic stagnation and over-bureaucratization. In the absence of true development, the central government often becomes the single pole around which urbanization occurs. Most Third World countries are characterized by urban primacy; they are dominated, in other words, by a single, massive city. In a genuinely developing society, in contrast, separate urban areas are economically integrated into systems of cities that generally develop in concert.

Urban primacy is for good reason regarded as unhealthy, and many Third World countries are wisely encouraging the growth of secondary and tertiary cities. Urban decentralization of this sort is environmentally and socially desirable, but it is notoriously difficult to implement through fiat or even careful planning. Achieving economic development across a broad range of industries is ultimately necessary for the emergence of a healthy urban sector.

One must also recognize that the hellish conditions of many Third World cities reflect political failure as much as economic stagnation. In most of these cities elites have struggled to maintain the pleasant, low-density environments of their own posh neighborhoods, and in so doing they have forced the poor into horrendously cramped quarters. In seeking to staunch rural-to-urban migration, the wealthy have often prevented the disadvantaged from acquiring property rights, thereby discouraging private investment in impoverished neighborhoods. In seeking to maintain "visual aesthetics," the powerful have on countless occasions ordered the demolition of shanty settlements, thereby condemning thousands at a time to privation. And in shortchanging public investments, often in favor of vanity projects, political elites have failed to provide basic infrastructural services. Even in the world's poorest countries, urban sewer and water systems are within the scope of national economies—if only power holders (and international lending authorities) would recognize their importance (on political neglect in general, see *The Economist*, "Africa's Cities: Lower Standards, Higher Welfare," September 15, 1990, pp. 25–28).

Finally, one must realize that the problems faced by existing Third World cities could never be solved by rural eco-development projects. Short of a Khmer Rouge-style global deurbanization program, urban problems—requiring urban solutions—will persist.

Promethean environmentalism accepts the desirability—indeed, the necessity—of urbanization throughout the world. It seeks strenuously, however, to enhance *genuine* urban-social development. Essential to this project is the social mainstreaming of marginalized urban settlers. As Hardoy and Satterthwaite (1985:206) write: "The developing city is increasingly becoming an illegal city built by the efforts of people, many of whom were born, will live, work and die without a record." Guaranteeing basic human rights, in the end, will prove essential for both economic development and environmental protection.

Healthy urbanization thus demands both the provision of human rights as well as industrial development. Most eco-radicals, however, disparage industry, and even those few who recognize its value usually counter that peripheral industrialization is impossible in a capitalist world system. The present task is thus to reexamine the theory of dependency that influences virtually all forms of eco-radicalism.

Development and Dependency

As noted above, the dramatic success of South Korea and Taiwan undermines the main supports of the less sophisticated versions of dependency theory (Corbridge 1986). While some authors would dismiss the rise of these nations due to the favors they received from a United States anxious to stem the tide of communism, the equally remarkable success of Hong Kong and Singapore, as well as nascent industrial growth of Thailand, Malaysia, and Indonesia, indicates that the phenomena of Asian development is indigenous. It is true, however, that Taiwan and South Korea were, until recently, heavily dependent on the United States. But it is also clear that they were able to manage their dependency and eventually transcend it (Stallings 1990). As Ellison and Gereffi (1990:398) conclude, after rigorously surveying the economic evolution of a wide variety of developing countries, "[L]inkages to the world economy thus can have positive as well as negative consequences for national development, depending on how and when they are established, and whether they are congruent with key elements in the domestic environment."⁴

The crude version of dependency theory popular in eco-radical circles also fails a significant test when one examines countries that were never subdued by the imperial powers. Afghanistan, Nepal, and Ethiopia were lightly touched by European colonialism and they attracted scant atten-

tion from Western merchants. Dependency models would lead one to suspect that by maintaining autonomy such areas would have been able to lay the foundations for genuine development and that today they should be among the more prosperous of Third World countries. In actuality they are among the most impoverished. Such poverty cannot be attributed to their remote and rugged locations; all were sites of old civilizations that were once as prosperous as, if not more prosperous than, surrounding regions. Similarly, dependency models would lead one to suspect that countries such as Burma (Myanmar), Guinea, and Madagascar that have more recently isolated themselves from the world economy should have fared better than those countries that opened themselves to the rapacious firms of the imperialist powers, such as Thailand and the Ivory Coast. But again this notion is belied by recent history. Out of desperation the world's economic hermits are one by one asking for the return of foreign capital.

The economic records of Third World communist countries are no better. Not only have they failed to develop, but even the marxian excuse that they have at least eliminated hunger is overstated. As Hamerow (1990:322) shows, "more than a decade after the victory of the revolution in Vietnam, the government acknowledged that serious malnutrition threatened the nation because of a drop in food production and a rise in the birthrate." Eco-marxism cannot even begin to explain why the Vietnamese government now pleads for a reentry of foreign capital. A dozen years ago enthusiasts could still write about optimal industrial growth in socialist Third World cities (Forbes and Thrift 1981:14-15), but such a notion now appears quite ludicrous.

Yet the enthusiasm of Western radicals for marxist states like China can still verge on the pathetic. William Bunge (1989:356), for example, argues that "We could create societies where children bloom like little flowers, rather than die like flies—as the Chinese are demonstrating." If one wants to learn what is really happening to Chinese "little flowers," I would suggest reading Steven Mosher's (1983) *Broken Earth*. I would also ask Bunge where he thinks one might find the missing 600,000 Chinese girls born last year; many demographers, after all, strongly suspect infanticide (*New York Times*, "A Mystery of China's Census: Where Have the Girls Gone," June 17, 1991, p. 1).

Imperialism and European Prosperity

Even deeper flaws are apparent in the larger argument, propounded by Barry Commoner, that the success of the West is merely a result of its exploitation of the Third World. Although it is true that Western imperi-

alism inflicted drastic damage on the economies and environments of all colonized areas, and that exploitation of the periphery gave a profound boost to early industrialization in the imperial heartland, this is by no means the entire story. Ultimately, it is most reasonable to adopt a balanced view that sees First World prosperity and Third World poverty as related both to internal socioeconomic dynamics and to the history of external exploitation and oppression. In practice, however, weighing the relative importance of these two factors is almost impossible.

Determining the role of plunder and colonialism in generating Western prosperity is complicated by the intricate history of Europe's imperial grasp. In the initial phase of Iberian expansion, colonial gold and silver brought riches to the Spaniards, but they also undermined any previously existing developmental impetus (Ringrose 1989). The Portuguese, for their part, found that the costs of policing their far flung empire consumed most of their trade gains. Imperial wealth did invigorate European commerce, however, just as it enriched trading, banking, and manufacturing regions, such as the Spanish Netherlands. Yet the general upswing of the European economy began well before the voyages of exploration and conquest returned home with ill-gotten gold. In the seventeenth century Dutch mercantile imperialism, based on a tight-fisted control of Eurasian maritime trade routes, certainly yielded what Simon Schama (1988) calls an "embarrassment of riches." On the other hand, it by no means allowed the Dutch to "hatch the industrial chicks" and thus begin the cycle of self-perpetuating economic growth (Schama 1988:6). Moreover, the Dutch "mother trade" was intra-European, based on control of the Baltic. As the Netherlands' European position declined in the eighteenth century, so did Dutch prosperity—despite its vigorously expanding colonial holdings in what is now Indonesia.

Throughout the sixteenth, seventeenth, and early eighteenth centuries, Europeans dominated only isolated ports through most of Africa and Asia. Land-based empires were still untenable in the former continent due to disease and in the latter due to the military power of the indigenous states. Only with Great Britain's conquest of Bengal in 1757 did European powers begin to build continental empires in the Eastern Hemisphere. The treasure hoard of Bengal was a tremendous windfall for Great Britain, and it is an intriguing coincidence that England's industrial revolution began at roughly the same time as its piecemeal conquest of South Asia commenced. It is also essential to note that imperial sugar plantations, usually based on slavery, provided the cheap calories needed to sustain the lives of the heavily exploited workers in England's early textile mills (Mintz 1985). But few scholars of the industrial revolution

see the plundered wealth of India, much less the flow of sugar, as early industrialism's *prime mover*.

The nearly complete division of the earth into colonial territories and spheres of influence did not occur until the late nineteenth century, well after the leading imperial powers were thoroughly industrialized. Marxist theory has long accorded this overseas thrust primarily to capitalism's incessant overproduction and corresponding need for captive markets, and secondarily to its expanding requirements for raw materials. Michael Doyle (1986), however, in his careful study of the history of imperialism, shows that while economic factors cannot be discounted, military, political, social, and cultural forces played equally important roles. The scramble for Africa, in particular, owed as much to intra-European national pride as to any real or perceived economic advantages to be gained. As John Hall (1985:224) concludes: "It is not possible to argue that colonies were required as places in which to invest capital for the simple reason that capital outflows from France went overwhelmingly to Russia, where good profits could be made, rather than to her own colonies. . . . Nor did French industry send massive amounts of exports to its colonies, most of which, being poor, were not able to afford them."

Penny-pinching mercantile capitalists usually preferred to obtain markets and materials through trade, unaccompanied by imperial expansion. Great Britain commercially penetrated independent Latin American countries more thoroughly than many of its own African colonies, a process that was, admittedly, highly destructive to local producers. By the late nineteenth century, after its manufacturing advantages had declined, British interest in Latin America began to shift toward infrastructural investment. Argentine railways, in particular, seemed an attractive opportunity. By investing capital, dependency theorists argue, European financiers distorted and undermined Argentina's economy for the benefit of the imperial states. It is, however, difficult to place all the blame for Argentina's current economic woes on such investments; after all, another favored target for British capital exporters was the United States.

The overall impact of imperial expansion, both formal and informal, on the European home economies is thus almost impossible to assess. Great Britain surely profited greatly from its trading and plundering activities, and its control of the Indian army allowed it to maintain a global empire at an astoundingly low cost (Washbrook 1990). But the long-term consequences of its early successes are by some accounts surprisingly negative. Michael Porter (1990), for example, convincingly argues that Great Britain's possession of a large and captive colonial market lulled its entrepreneurs into a deadly complacency. In contrast, American manufacturers,

selling initially within a domestic market, made steady gains in competitive advantage. And, despite high rates of return, British investment in Latin America may have ultimately undermined the British economy. Starved for the capital that increasingly flowed overseas, many British firms proved unable to keep pace with foreign competitors (Rosecrance 1990:56).

An interesting perspective on the role of colonialism in European economic history may be gained by comparing Great Britain and Germany. As a quintessential maritime nation and the first industrializer, Great Britain easily maintained its standing as the foremost imperial power. Germany, by contrast, missed the early waves of imperial aggrandizement, and while it was a prime instigator of the late nineteenth-century global land rush, its spoils were relatively insignificant. Germany brutally exploited its poor territories, but for meager rewards. Then, after the First World War, the Germans were divested of all overseas possessions. Yet such imperial failures did not undermine the German economy. By the time Africa was partitioned, Germany was already ahead of Great Britain in key industrial developments, and despite its devastating military defeats it has never had to look back. Indeed, Germany's lack of colonies forced it to devise technological substitutes for raw materials (Hugill 1988); chemistry, it has been said, was Germany's substitute for empire. Adversity, as always, has its advantages.

Wellsprings of Prosperity

If the West did not grow rich solely by plundering the rest of the world, what then were the secrets of its success? This is, of course, a wearisome and complex and controversial topic, and I can only offer here a few of the more cogent explanations offered in recent years. Rosenberg and Birdzell (1986) stress innovations in trade, technology, and social organization, arguing that the wide diffusion of power and the lack of strict religious restrictions offered vast room for economic and technical experimentation. Michael Mann (1986:412) locates Europe's rise in the Middle Ages and links it both to "the multiplicity of power networks and the absence of monopolistic controls" and to the "extensive networks and pacification provided by Christendom." Like Rosenberg and Birdzell, Mann stresses the diversity that characterized all spheres of European life. Similarly, Hall (1985) emphasizes the autonomy of power holders in traditional European civilization, and concludes that it was the miraculous combination of "commerce and liberty" (1985:249) that unleashed the forces of development. Finally, Joel Mokyr (1990) convincingly urges that we not downplay European technological innovations.

Although these theories deserve careful consideration, they all err in overstressing European exceptionalism; in today's world it is the rise of the East that demands explanation. The most impressive attempt to understand economic success in a non-Eurocentric manner is E. L. Jones's (1988) *Growth Recurring*. According to Jones, all societies have the potential for realizing intensive economic growth (characterized by increasing per capita wealth), but that in most instances rent seeking elites have skimmed off so much produce that only extensive growth (characterized by expanding populations or territories but stagnant income levels) is possible. In the few historical societies in which governments were neither too strong nor too weak, thus allowing economic forces room to operate (notably Sung China, Tokugawa Japan, and early modern Europe), genuine development occurred. According to this line of reasoning, the West triumphed largely because conditions conducive to intensive growth persisted over a large enough area and for a long enough time period that it could simply outdistance the rest of the world.

Just as the West did not rise merely by piracy, neither does its current prosperity derive fundamentally from its exploitation of the lands and peoples of poorer nations. Global trade and resource flows now largely connect the various wealthy zones with each other. Despite the tenets of several new international division of labor theories, the direct foreign investments of U.S. firms have been increasingly directed to Europe (Schoenberger 1990:380), where labor costs are high and safety and environmental standards stringent, rather than to the Third World, where labor is cheap and standards lax. The contemporary complaint of the world's poorest countries is not so much that they are being exploited but rather that they are being ignored. Whereas fifteen years ago cutting-edge marxists decried the dependency-generating flow of capital to the Third World, today they bemoan the fact so little development-generating capital is being transferred (Thrift 1989:31).

Contemporary Exploitation: Paradoxical and Marginal

This is not to imply, however, that the First World does not, in many real respects, exploit the Third World. But much of the exploitation that occurs has decidedly ambiguous consequences. Affluent American consumers, for example, benefit when they purchase clothing sewn by Bengali workers who are paid a bare survival wage, a relation that can hardly be considered nonexploitative. But if we were to cease importing garments from Bangladesh, Bengali workers—and indeed the entire Bangladeshi economy—would suffer mightily. Cut off from export markets, Bangladesh would relinquish the small chance it now has for successful

development, while its industrial workers would be forced into even more precarious positions as landless rural laborers. Many would probably join the exodus to Assam or the Chittagong Hills, thus displacing indigenous cultivators and destroying precious wildlife habitat.

The First World also benefits from the destruction of nature in the Third World. The tropical rainforests of Southeast Asia, for example, are being stripped so that wealthy consumers (primarily Japanese) can purchase cheap wood products (Laarman 1988). But such destruction is inconsequential to the national economies of the developed countries. In the timber-exporting countries, concession-holding elites may grow stupendously wealthy, but very little genuine development results from their activities. Ultimately, the draining of biological resources from the Third to the First Worlds does far more damage to the regions of extraction than it confers in advantages to the regions of consumption.

The wealthy countries also import large quantities of agricultural produce from the Third World, although less in relative terms than they once did. This is an especially paradoxical issue. Eco-development enthusiasts routinely denounce cash-crop exporting; by growing for the global market rather than for local subsistence, they argue, peasant communities sacrifice their ability to provide themselves with sufficient foodstuffs. The result, in the worst cases, is widespread malnutrition if not outright starvation.

Although the linkage between cash-crop production and malnutrition is well established, it remains true that national economic development requires the generation of foreign exchange. Otherwise, capital goods and, in most cases, adequate energy, could not be imported. Many Third World countries have had little option but to export agricultural produce. In fact, when wealthy nations cease to import farm commodities, the resulting economic dislocations are often devastating. America's boycott of Nicaraguan coffee during the days of the Sandinista regime was roundly denounced by American leftists for precisely this reason. Similarly, the proximate cause of the utter immiseration of peasants and landless workers in sugar exporting zones, particularly the island of Negros in the Philippines, is America's declining import quotas—the result of a policy aimed at protecting cane, beet, and corn growers in the United States. Certainly elite Philippine landlords are equally to blame, as many of them forbid their former workers from growing subsistence crops on the now idle lands. But if a return to subsistence cultivation would lead in the short term to fuller bellies, it would still never generate genuine development.

If global economic development were the sole concern, one would have

to argue that all import quotas and tariffs protecting agricultural and natural resource markets in the industrialized nations should be abolished. Ecological requirements, however, call for different policies. Buoyant export markets in agricultural and forest products lead inevitably to the conversion of natural habitats to biologically impoverished farmlands, tree plantations, or, in the worst cases, cut-over wastelands. The degree of degradation varies with different crops; sugar cane is a near total disaster, but shaded coffee plantations can actually support a healthy diversity of avifauna (Terborgh 1989:144). Yet it remains clear that an urban-industrial model presents a developmental path environmentally preferable to one based on the export of agricultural produce. Free trade in agricultural commodities proves to be an ecologically risky proposal indeed.

The Legacy of Imperial Exploitation

The preceding pages argue that (1) genuine development can and does occur in the periphery of the modern capitalist world system; (2) the wealth of the First World does not rest *fundamentally* on its exploitation of the Third World; and (3) exploitation itself often grows fuzzy when one considers its larger economic ramifications. But it cannot be denied that the poverty of the Third World can be traced *in part* to the damage inflicted by colonization. Just because a few former colonies have now achieved prosperity by no means absolves imperialism from its sins.

Dependency theorists are, for example, correct in arguing that the colonial powers often purposefully deindustrialized the areas they subdued. The British demolished early textile factories in Egypt (Bernal 1987:246–50), while all Western powers commonly disabled the more advanced local economic endeavors. Factory owners at home greatly feared colonial competitors who could profit from their access to cheap labor and raw materials. Owing to their influence over the metropolitan governments, industrialists were able to manipulate colonial policy to their own advantage. Here, it might seem, capitalism did indeed stifle Third World development.

The problem with such reasoning, however, is that it again fails to differentiate the logic of capitalism in general from that of the individual firm. English textile manufacturers acted in self-interest in demanding the destruction of colonial competitors, and the British government certainly acted in what it perceived as its own self-interest in complying. But such actions were entirely contrary to the spirit of capitalism, which never respects national boundaries or cultural distinctions. According to capitalism's advocates, competition is *always* a bracingly positive influ-

ence, even if it is *always* feared by vulnerable firms. But pure capitalism never exists; any given economy is always, to a greater or lesser extent, subordinate to national political interests. In most colonial settings individual capitalists and imperial agents successfully conspired against capitalism as a system.

The former Japanese colonies of Korea and Taiwan form an instructive counterexample to the process of colonial deindustrialization. Unlike the Western powers, the Japanese decided that it was in their best interests to industrialize several of their possessions (Myers and Peattie 1984). This was by no means done to improve local living standards; Japanese imperialism was as brutal as any. But the policy proved beneficial in the long run, and it is not coincidental that these two countries have been the most successful Third World industrializers. Still, it is far from the whole story. Japanese industrial investments in Korea were highly concentrated in the north, an area that has lagged woefully behind the formerly agricultural south.

In the final tabulation imperialism probably caused more damage to the colonized zone than it conferred in benefits to the colonizing powers. Although the legacy of imperial conquest and the realities of contemporary First World global economic domination do not explain the poverty of the Third World, they do form significant components of the story. The wealthy nations, particularly those that were the most brutal imperialists, thus owe a great debt of expiation to their former colonies. This could be partially accomplished by releasing poor countries from their debt burdens, a surprisingly inexpensive proposal (Krugman 1990:149–51) that could actually benefit the First World by increasing the global demand for capital goods and other industrial products. (As one hopeful sign, a debt-relief plan for Mexico has already given the country “the breathing space it needed to tempt back flight capital and boost GDP growth” [*The Economist*, April 27, 1991, p. 82].) The industrialized countries should also greatly accelerate the transfer of technologies, particularly those with environmental benefits, to the underdeveloped world. Importantly, this is exactly what many Third World countries are demanding before they agree to any sort of global environmental bargain aimed at protecting the atmosphere (Porter and Brown 1991). Shamefully, the United States, in particular, has steadfastly opposed all such proposals.

It is also reasonable to insist that wealthy nations are particularly obligated to assist their own former colonies. The United States thus owes its greatest debt to the Philippines, a nation that we victimized in myriad ways (Schirmer and Shalom 1987)—even if we were relatively

benign colonialists, at least when compared to the French and the British. Yet the United States at present seems perfectly willing to abandon the Philippines to a descent into Bangladesh-style immiseration.

If we can no longer accept the notion that poverty in the Third World is strictly a result of imperial exploitation, then we are challenged to devise a more encompassing theory. Only by understanding global poverty can we begin to devise workable developmental strategies, which, in turn, are necessary if we are to ensure planetary survival.

Capitalism and Mercantilism in the Third World

Most eco-radicals agree that peripheral capitalism in the Third World, subservient to the requirements of the metropolitan states, never results in genuine development. One of the many problems with this line of reasoning is that it incorrectly assumes that most Third World economies can be unproblematically characterized as capitalist. On the surface most are indeed capitalistic, founded as they are on the private ownership of resources and on markets in land, labor, and capital. But the forms of capitalism present in the underdeveloped world are fundamentally different from those that have launched the wealthy nations on a path of sustained growth, a difference that stems primarily from indigenous, not exogenous, forces. It is best to relinquish our view of a monolithic capitalism and instead inquire how specific political-economic circumstances within developing (or, as is unfortunately sometimes the case, de-developing) countries have undercut economic progress. To do so is not to place all blame on internal circumstances, as the preceding discussion makes clear, imperialism must never be absolved. But it is also counterproductive to use imperialism as a universal scapegoat and thus deflect attention from political and economic failings located within Third World societies.

One of the more powerful challenges to the notion that the Third World is fundamentally capitalistic may be found in the work of the Peruvian economist Hernando de Soto (1989), who typifies the so-called neo-liberal school of Latin American political economy. De Soto argues that Peru, like most poor countries, is more accurately characterized as mercantilist than capitalist; in other words, its political economy is strongly reminiscent of Europe's prior to the capitalist revolution of the late eighteenth and nineteenth centuries. A mercantilist polity is characterized by market relations to be sure, but in a manner so distorted and stifled by bureaucratic regulation that a true market economy does not exist. Under such conditions, state bureaucracies seek primarily to perpetuate themselves, regardless of the economic harm they may cause in

doing so, while an established merchant and industrial elite manipulates state agencies in order to shelter itself from competition. Both the bureaucracy and the established elite, de Soto argues, consistently deny commercial opportunities to the poor, whom they view as potential threats to the established order. The result is a kind of perverted socialism for the rich that leads invariably to economic stagnation.

One result of mercantile distortion is the emergence of a large informal (in other words, illegal) economic sector. Poor entrepreneurs are forced to operate outside of the law, since the time and money required to gain official sanction are well beyond their means. But as informals they lack property rights, preventing them from expanding and gaining economies of scale. De Soto's proposed solution is simultaneously to "formalize the informals," thus providing them the legitimate status needed if they are to compete with recognized operations, and to "de-formalize the formal sector," thus lifting from it the burden of capricious regulation that renders it uncompetitive. For this to occur, de Soto argues, both extensive judicial reform and a thoroughgoing democratization of political power are necessary.

De Soto presents his work as a challenge to both the Peruvian left and right. According to him, both camps—although they are loath to admit it—share a fundamental set of political-economic beliefs. As he argues (1989:xxvi), "The policies of both [the left and the right], at least in Peru, reinforce the mercantilist order. The right pursues mercantilism in order to serve particular business groups. The left does so under the illusion that it is benefiting the needy." De Soto also confronts the economic establishments of the wealthy countries which, he argues, have consistently stressed economic liberalization at the macro level only, ignoring the deeply rooted mercantile structures that consistently thwart development.

By championing the poor not as state wards but as entrepreneurs, yet at the same time viewing them not merely as atomized individuals but also as community organizers, de Soto provides a challenging and innovative model of development. But the model is not without serious flaws. Leftists dismiss it for ignoring class, and they are indeed correct in noting that the structural barriers to Latin America's poor are much more profound than those merely of bureaucratic regulation. And as Robert Klitgaard (1991) demonstrates, the weakly developed information infrastructures of most Third World countries preclude the development of efficiently operating markets; concerted state-level intervention, he argues, is necessary *before* adequate market mechanisms can be established. We might also object to de Soto's historical analogy. Many mer-

cantile regimes of precapitalist Europe actually proved quite successful in nurturing productive enterprises, while both South Korea and Taiwan may be referred to as mercantilist polities without doing injustice to the term.

But regardless of such difficulties, de Soto's contention that we are ill served by viewing Peru as a purely capitalist country still stands. Moreover, the same argument may be made for most at the other nonsocialist Third World countries. The Philippines, in particular, provides an instructive example.

In the 1960s and 1970s Ferdinand Marcos attempted to create in the Philippines an authoritarian, technocratic, export-led, agro-industrial economic system, much on the model of South Korea and Taiwan (Hawes 1987). Marcos first had to contend with a wide variety of bourgeois classes (landed elites, import-substitution industrialists, exporters), all of which had different interests and pulled the state in different directions. After declaring martial law in 1972, Marcos claimed the power needed to reconstruct the economy as he saw fit, with the stated aim of bolstering exports, particularly of agricultural products and raw materials. To accomplish this, he transferred economic power from private to state hands, strengthening tremendously the sector of state capitalism. Eventually he established a system known locally as crony-capitalism, which quickly proved to be a parody of the genuine thing. Marcos would simply destroy firms owned by individuals perceived as enemies while subsidizing companies owned by supporters. That such an arrangement favors political over economic endeavors, undermines competition, and thwarts investment should be obvious. It also destroys any sense of national purpose. As Hawes (1987:142) writes: "As the agricultural export sector fell increasingly under the control of presidential cronies, the transparent use of presidential power to favor certain individuals and sectors of the economy destroyed the sense of community and common interest within the export sector."

Capital Flight

In Marcos's Philippines, as in so many other Third World countries, the beneficiaries of mercantile largesse seldom invested their easily amassed profits in local productive enterprises. More often they simply parked their capital in the United States or perhaps in Switzerland, countries perceived as providing better opportunities—as well as havens should their collective activities send their country into economic and social collapse. If Ferdinand and Imelda so assiduously exported their own ill-gotten gains, one could hardly expect their cronies to do otherwise. As

Bonner (1987:262) writes of the funds skimmed by top officials from the country's once lucrative coconut industry:

Over the years the coconut planters, through the government imposed levies, paid more than \$1 billion into the bank. Where it went nobody knows—nobody, that is, except Marcos, Cojuangco, and Enrile. But there can be little doubt that it went into their ostentatious life-styles. Cojuangco . . . owned . . . a \$20 million stud ranch in Australia. Enrile . . . purchased two condominiums in a luxurious building on Broadway in San Francisco. . . . Enrile's wife, Christina, was the registered owner, and in 1982, when the Enriles purchased a \$1.9 million apartment one block away, the two other apartments were transferred to a corporation called Renatsac, which was the backward spelling of Christina Enrile's maiden name.

The phenomenon of Third World elites transferring their money to the First World—capital flight as it is generally called—remains an underappreciated cause of economic stagnation. It represents a massive hemorrhage of capital, the lifeblood of genuine development. This flow of money from the poor to the rich countries probably outweighs the counterflow of aid and loans, and it may well form the largest net drain on Third World economic resources.

Capital flight represents, to a certain extent, the failure of Third World business classes to fulfill their historic mission to accumulate and invest locally. A Peruvian businessman depositing money in Miami may be acting in his own self-interest, but he is defying the needs of his society. Successful Third World countries have been able to retain capital during the crucial early stages of economic development. In South Korea, for example, capital flight has been virtually nonexistent (Fajnzylber 1990: 343). Fortunately, a few Third World leaders are beginning to realize the magnitude of the problem. Argentina's Carlos Menem, for example, must betray his own Peronista heritage in attempting to attract First World investment, but he argues that this is necessary because local capitalists have simply exported most of their funds (*Business Week*, September 24, 1990, pp. 60–61). But as the Philippine example shows, the champion capital exporters are often not business persons at all, but rather political elites who manipulate the market economy for their own personal advantage.

As Eric Jones (1988) shows, there was nothing magical about the capitalist transformation that brought wealth and power to the West. All societies, he argues, have a propensity for intensive economic growth. Throughout history, however, thriving economies have been strangled by

elites mindful only of their own self-interests, anxious to seek rent rather than to invest in productive enterprises. In most of the Third World rent-seeking regimes are currently in power; some are so rapacious that they may accurately be labeled kleptocracies. It is thus hardly surprising that capitalism in this distorted form has failed to bring about global economic development.

The Newly Industrialized Countries (NICs) of Asia

A few Third World countries, however, have been able to avoid the traps described above and graduate to (near) First World status. Significantly, South Korea, Taiwan, Singapore, and Hong Kong have all found success in a capitalist rather than a socialist developmental path. At present, two other Asian countries seem poised to gain NIC status in the near future: Malaysia and Thailand (with Indonesia forming a less likely third). In examining these success stories it is important to note both the differences and the commonalities that have marked their economic policies. All have relied on the market, but most have found it necessary for the state to intervene heavily in crucial areas.

The only NIC that would please the heart of a radical free-marketer is Hong Kong, which probably embodies the doctrine of *laissez-faire* more fully than any other polity in the world (Bauer 1981). But Hong Kong is a poor exemplar, being a city rather than a country and a territory rather than a state. Moreover, Hong Kong has benefited greatly from its unique position as gateway to China.

Much more compelling is the fact that the largest NICs, Taiwan and South Korea, have consistently eschewed the *laissez-faire* doctrine. In both countries the state has worked closely with private enterprise, financial markets have been tightly regulated, and domestic industries have been protected from foreign competition during their critical periods of initial growth. In fact, in all of the newly industrialized countries, "state-led industrialization has become the norm" (Gereffi 1990:23). From its very beginnings, South Korean industrialization was premised on the notion of "guided capitalism" (Haggard 1990:68), with the state using its powers to sustain rather than to repress the market (Yun-Shik 1991:108).

Perhaps most importantly, Taiwan and South Korea for many years carefully guarded their supply of capital. South Korea's first economic boom, in fact, was coincident with a governmental clean-up campaign that "attacked conspicuous consumption by urban industrialists" (Haggard 1990:72). Until recently, South Koreans could travel overseas only for business or political purposes, since the state feared the hemorrhag-

ing of capital that foreign travel would entail. Equally essential, the citizens of both countries took up the challenge themselves; in 1987 South Koreans saved 32 percent of their income. This was the second highest savings rate in the world, with only the Taiwanese coming out ahead (Porter 1990:467).

These policies served both Taiwan and South Korea well during their early years of phenomenal growth. Current trends, however, indicate that as they graduate to fully industrialized status, market-distorting restrictions are beginning to have deleterious effects. As a consequence, Schive (1990:289) strongly recommends economic liberalization, and there are some signs that this is beginning to occur in earnest. Both countries are also undergoing much needed political liberalization, although Taiwan has yet done little in the crucial area of democratization. The transition from the status of authoritarian, export-oriented industrializers to that of democratic, mature, industrial powers will not be easy, and both Taiwan and South Korea have seen their stellar rates of economic expansion falter over the past few years. Both countries have also experienced wage hikes that outpace growth, a trend worrisome to exporters, but hopeful for those who would welcome the emergence of broad-based economies that rely more on innovation than on cheap labor (see *Business Week*, December 3, 1990, p. 56; and *The Economist*, October 9, 1990, p. 33).

A consistent set of social characteristics also marks the successful industrializers. Most significantly, all enjoy relatively small income disparities. In 1980 the bottom 40 percent of Taiwanese citizens held a 22.7 percent income share, whereas in Mexico (in 1977) the bottom 40 percent held only an 8.2 percent income share (Haggard 1990:229). Moreover, through the 1950s, 1960s, and 1970s, Taiwan's wage structure grew increasingly egalitarian, while Mexico's grew increasingly inegalitarian (Haggard 1990:229). Indeed, in all measures of quality of life, the Asian NICs have shown remarkable progress, much in contrast to the struggling Latin American industrializers.

Many observers have credited thoroughgoing land reform in South Korea and Taiwan, as well as in Japan, for laying the social and economic foundations for subsequent industrialization (see Haggard 1990; Gereffi and Wyman 1990). Postwar land redistribution created a strong stratum of mid-level peasants who were subsequently able to invest in agricultural production. As Haggard (1990:232) writes, "Taiwan's record, the best among Asian NICs, suggests the importance of improving the distribution of income *within* the agricultural sector." East Asian land reform was also vital for the creation of industrial policy because it

demolished the notoriously conservative class of landed elites who would have otherwise opposed it (Haggard 1990:97).

All of the successful Asian industrializers have also invested heavily in human resources. In so doing they have created relatively healthy and remarkably well-educated populations. Michael Porter (1990:465) reports that the South Korean commitment to education is stronger than that of any other country he studied, a group including Germany, Sweden, and Japan. Significantly, the less successful Latin American NICs—Brazil and Mexico—have shown little interest in broad-based educational programs (Ellison and Gereffi 1990:386).

Finally, one must note that the Asian NICs are ethnically rather homogeneous. Such commonality has enhanced the emergence of a strong sense of national purpose—an essential precondition for successful development. The creation of a national bond is vital, Ronald Dore (1990:361) reminds us, because it affects “the likelihood that the policy of the government will be accepted as legitimate—that it will be believed to be in the *national* interest, and not some conspiracy to benefit a sectional interest group.” The absence of such unity may undermine development in other candidates for NIC-hood; tension between Malays and Chinese in Malaysia, for example, has already proven a strong fetter to economic growth. Polyethnic countries face the tremendous challenge of maintaining a sense of political and economic unity while simultaneously respecting cultural diversity and local autonomy. Despite fervent claims to the contrary, such a balancing act has seldom if ever been successfully achieved.

The differences among the various Asian NICs are, in the end, as instructive as their similarities. Only South Korea has fostered the growth of massive conglomerates, but its top four *chaebol* accounted for a remarkable 32 percent of its total exports in 1988 (Porter 1990:472). Taiwan’s economy, in contrast, is dominated by a multitude of small, family-owned firms. Both systems offer certain advantages. Korean companies can more easily expand into expensive, high-tech frontiers, whereas Taiwanese firms prove highly flexible in the face of quickly changing demand patterns. Singapore presents another permutation, as it has prospered in large part by attracting subsidiaries of American and Japanese corporations. Indeed, Singapore has at times actually favored foreign over domestic capital (Haggard 1990). Thailand appears to be following Singapore’s course, although in this instance few of the companies involved are American.⁵

Such disparities demonstrate that there is no single path to genuine development. Whether South Korea’s or Taiwan’s model proves more

successful in the long run remains to be seen. It is clear, however, that in East Asia, just as in the United States, small companies have done less to control pollution, and are more difficult to regulate, than large companies. This is one of the reasons why Taiwan in particular suffers such horrendous environmental degradation (see *The Economist*, October 6, 1990, p. 20).

Despite such differences, it is important to remember that the Asian NICs share some significant general characteristics. All have embarked on a globally oriented program of export-led growth. At the same time, all have also exhibited a striking sense of common purpose, and all have discouraged the individual aggrandizement that comes at the expense of national development. Again, we can see that competitive cooperation (or, if one prefers, cooperative competition), proves to be a key to economic success.

Radical scholars sometimes dismiss the Asian NICs by claiming that the entire world cannot find prosperity by exporting cheap toys to the United States. Although this betrays a naive conception of the South Korean and Taiwanese economies, it does bring up a valid point. Development in the Asian NICs has depended crucially on massive exports to the industrialized world, especially to the United States. Both economic and political factors, however, limit the quantity of imported goods wealthy countries can absorb. Considering its debt burden and trade deficit, the United States cannot remain the mass market for all of the world’s would-be export-oriented industrializers.

But the fall of the United States from global economic dominance may allow other countries partially to assume the role as export absorber. A rising society characteristically passes through several distinct stages, culminating—if it ascends to the position of global pivot—with a massive conversion to the doctrine of free trade. In fact, Japan has already reached the stage at which it must begin to open itself to imports; if it refuses, economic imbalances may well topple the entire world economy. Japan is indeed beginning to move in this direction. A significant proportion of the burgeoning output of Thailand, for example, flows to Japan, although it is notable that the great bulk of these exports are produced by Japanese corporations.

The economic evolution of Taiwan and South Korea lends credence to the notion that other countries might follow the Asian path of development. The now industrialized Asian nations began their ascents by exporting cheap consumer items, especially textiles. Subsequently, all have begun to graduate to more sophisticated products (Schive 1990). Such a move is indeed forced by the wage-level increases that accompany

successful industrialization, but forward-looking governments recognize this as a healthy processes. The government of Singapore has, at times, actually encouraged wage hikes "in order to force firms to create more skilled positions and to adopt more capital- and technology-intensive processes" (Haggard 1990:146).

As successful industrializers abandon low-end products, poorer countries can step in to fill the void. Such a process helps explain the recently explosive growth of countries like Thailand and Indonesia. Development in these sub-NICS is also fueled by capital transfer, increasingly from the NICS themselves. In 1989, for example, Taiwan made direct investments in Southeast Asia worth more than \$2 billion (*The Economist*, October 6, 1990, p. 33). But protectionist measures in the First World, most notably the Multifiber Agreement that limits textile imports, threaten the continuation of the process. As many nonradical environmentalists recognize, industrial protectionism presents one of the greatest obstacles to Third World development (Repetto 1990:16)—and to environmental protection as well.⁶ As Porter and Brown write, "The liberalization of import restrictions on labor intensive manufactured goods . . . would encourage movement of capital out of resource-depleting export crops . . . , thus easing pressure on natural resources" (1991:138).

In the end, successful industrialization requires the initiation of a virtuous spiral of capitalist development. Once it becomes clear that a national economy is quickly expanding, local elites will find it in their own best interest to invest at home. Foreign concerns too will smell profit, and capital will begin to flood to the region. Foreigners will, of course, repatriate much of their profits, but in a rapidly growing economy this will be of little consequence. Repatriation did not hurt the United States in the nineteenth century, and it is certainly not hurting Singapore today. Social conflicts will also diminish as joblessness eases and as health and education levels improve. All of these developments are visible today in Taiwan and South Korea. Moreover, as popular economic power grows, democratic forces cannot long be suppressed—again, witness South Korea. Of course, social tensions will never vanish (again, witness South Korea!); capitalist development, after all, never promises utopia.

As Fernando Fajnzylber (1990) brilliantly shows, Brazil and other stalled-out Latin American industrializers have pursued a policy of "showcase modernity" based on the emulation of U.S. consumption patterns among members of the elite class. Such elitist policies invariably fail. The genuinely developing nations of Asia have, in contrast,

adhered to a Japanese model that stresses *relative* egalitarianism, constrained consumption, heightened investment, and broad-based education. In the end, such a recipe will prove essential not just for economic development, but for achieving environmental sustainability as well.

Environmental Conditions in Industrializing Countries

No radical environmentalist would find occasion to cheer the economic success of the NICS. Their growth has obviously come at the price of massive environmental degradation. Indeed, one would be hard pressed to find a city more polluted than Taipei outside of Eastern Europe. Burgeoning industries throughout the region spew out noxious wastes, and expansion-oriented governments have been unwilling to throttle their miraculous economies for the sake of environmental protection. Taiwanese companies, for example, generate some 19,655 tons of wastewater sludge every day, very little of which receives treatment (Chuang 1988:403). As Southeast Asia industrializes, many insidious forms of industrial pollution grow more threatening year by year. The Straits of Malacca, for example, are already highly contaminated with heavy metals (see Hungspreugs 1988; Jaynal 1985). In the East Asian NICS increasingly affluent citizens are consuming ever more resources, just as they are responsible for a burgeoning output of greenhouse gases. Intensive agriculture in Taiwan and South Korea relies on unsustainably heavy applications of fertilizer and pesticides, resulting in severe water degradation. Nor should one overlook South Korea's infamously efficient fishing fleet, which is devastating marine resources the world over.

Yet the NICS have made several impressive environmental strides. Most important is their precipitous drop in fertility. The South Korean population is now expanding at a rate of only some 1.2 percent a year (compared to 2.25 percent between 1965 and 1970), while Singapore has reached virtual demographic stability. Even Thailand has seen its annual rate of population growth decrease from 3.1 percent between 1965 and 1970, to 1.5 percent at present. Nondeveloping North Korea, in contrast, is still expanding at nearly 2.5 percent a year, while stagnant Bangladesh must accommodate some 2.7 percent more inhabitants every year. The Asian NICS are also preserving their remaining forests more successfully than are most of the economic laggards. South Korean and Taiwanese peasants, who find numerous opportunities in urban areas, are not forced to clear forest lands in order to construct marginal farm sites. More significantly, as prosperity builds, environmental movements are emerg-

ing with impressive alacrity. Taiwanese citizen groups have recently prevented the completion of several particularly noxious plants, and they have even forced one existing chemical factory to close (*The Economist*, September 8, 1990, p. 25).

Even the Taiwanese government increasingly recognizes that environmental degradation threatens future economic growth. Fortunately, it can afford to do something about it. In January 1991 Taiwanese officials announced an unparalleled \$303 billion investment program targeting health, education, technology, infrastructure, and environmental protection (*Business Week*, March 25, 1991, p. 46ff.). Although environmentalists will regret that only \$10.3 billion will be awarded primarily to environmental programs, one must admit that this is hardly a trivial sum. Meanwhile, Singapore has set its sights on providing environmental services to other Asian NICs. Singapore's Ministry of the Environment has even "set up its own company to sell expertise to neighbours" (*The Economist*, February 1, 1992, p. 80). Considering the problems at hand, and the economic resources available, environmental cleansing in East and Southeast Asia should present a substantial business opportunity.

The fear that multinational corporations will undermine Third World environments by using newly industrializing countries as pollution havens has also been partially allayed. First, only a few industries have experienced international redeployment due to environmental concerns. More importantly, successfully developing countries are becoming more sophisticated in bargaining with foreign firms, and they are increasingly unwilling to tolerate excessive pollution (Leonard 1988). Ironically, multinational corporations often operate under much stricter pollution control standards than do local firms (Pearson 1985:36-42; Pimenta 1987). Moreover, as Leonard (1988:212-13) discovered in his study of pollution in four industrializing countries, state-owned firms (especially in old industries) are usually the worst environmental offenders, while municipal governments are often not far behind.

Economic development ultimately proves to be a dual-edged sword. Although it brings about tremendous degradation, it also generates the economic resources necessary to begin solving environmental problems. In Asia environmental amelioration is already beginning to occur in the successfully industrializing countries. The air in Beijing and Calcutta, for example, is more seriously contaminated by particulates and sulfur dioxide than is the air of either Bangkok or Kuala Lumpur (*The Economist*, October 6, 1990, p. 19ff.). Ultimately, *lack of development* in the Third World is probably the gravest environmental threat the planet faces.

Southeast Asian Deforestation

Industrial pollution may be intensifying as Malaysia, Thailand, and Indonesia begin to develop, but forest destruction remains the region's most severe environmental problem. Southeast Asia's tropical rainforests (as well as its seasonally dry monsoon forests) are in dire threat of extirpation. Commercial logging, largely for export, has been a highly profitable endeavor for select concession holders, but any benefits that may have been conferred to the national economies are clearly unsustainable. Indeed, even the short-term profitability of Southeast Asian forestry has been vastly overrated (Repetto and Gillis 1988). Most cut-over lands are so degraded that forest regeneration would require hundreds of years. In fact, researchers at the World Resources Institute show that if such processes of natural capital consumption are factored in, Indonesia's recent annual GNP growth rate must be reduced from some 7 percent a year to some 4 percent a year (a figure that still remains substantially higher than its annual population growth rate of 1.6 percent) (*The Economist*, August 26, 1989, p. 53).

In stagnant, isolationist, and Buddhist-socialist Burma (Myanmar), by contrast, extensive forests have remained largely untouched. Anti-humanist greens, therefore might conclude that development after all is not worth the consequences. But it now appears likely that Burma too will sacrifice its trees. In 1990 the Burmese government decided to award most of its teak stands to Thai loggers, a move made in part so that Thailand would relinquish its support of the Karen and other autonomy-seeking nationalities within Burma's borders (*Far Eastern Economic Review*, February 22, 1990, p. 16ff.). A country that retains its forests not by virtue but rather by default—and which is happy to sacrifice them so that it might more effectively repress its own people—can hardly be considered an environmental model.

The deforestation of Southeast Asia is a global tragedy. One can only hope that successful industrialization, now only in its infancy, will soon begin to undermine the economic and political forces that lead to rampant logging. But more direct action is necessary if adequate natural habitat is to remain. First World countries should prohibit the importation of any tropical forest products harvested on a nonsustainable basis. Similarly, global environmental agencies should work with Southeast Asian countries to establish nature reserves large enough to ensure that healthy populations of elephants, orangutans, and rhinoceroses will be able to survive. By emphasizing tourism and allowing the sustainable harvest of select forest products, reserve planners might be able to support local economic development as well. Equally important, econo-

mists must strive to convince Third World governments that they have consistently undervalued "the continuing flow of benefits from intact natural forests" (Gillis and Repetto 1988:389).

But if nature reserves of adequate size to ensure minimum habitat protection are to be established and policed, Third World countries will have to forego certain economic benefits. Since the entire planet benefits from the preservation of natural diversity, reserve financing should ultimately be placed on a global rather than a national basis.

The Futility of Internal Colonization Schemes

Southeast Asia also forms a prime example of the environmentally disastrous and economically futile policy of attempting to alleviate rural poverty through population redistribution. On this score, at least, Arcadian and Promethean environmentalists agree fully. Several countries in the region have long encouraged peasants to move from high-density areas to frontier zones of sparse settlement. Typically, migration target areas are initially covered with thick forest and lightly inhabited by indigenous peoples—both of which retreat rapidly as the flood of immigrants arrives. The stated rationale behind most resettlement programs is both to relieve crowding in densely inhabited core areas and to spread the development process into previously underutilized hinterlands. An equally important hidden purpose, however, is to enhance state control over remote areas.

Such movements, whether state-funded or spontaneous, seldom if ever reduce poverty. Fertility rates generally remain high in the source areas, which in a few generations are more densely populated than before. Immigrants to the frontier zone, for their part, are usually confronted with poor soils and high disease rates, and they seldom have adequate capital to build viable agricultural enterprises (Fegan 1982). Moreover, migrants, desperate for the labor needed to clear land for production, often have very large families. Before long, even the former frontier zone may suffer from crowding and extreme poverty. In the end, genuine development must be characterized by intensive growth; the extensive growth characteristic of internal colonization is intrinsically destructive to the environment and does nothing to alleviate human suffering.

The Indonesian transmigration scheme, through which the central government has devoted millions of dollars to moving Javanese, Madurese, and Balinese peasants to the outer islands, has received scathing criticism from both environmental and human rights organizations (Reno n.d.). More often than not, transmigration has proven to be little more than a program of forest destruction, peasant immiseration, and

tribal group dispossession. Such criticisms have provoked a major reassessment of the environmental consequences of relocation projects by the World Bank, a major transmigration supporter in the past. Whether the World Bank's newfound sense of environmental responsibility turns out to be genuine remains to be seen. Meanwhile, transmigration proceeds.

It is the Philippines, however, that illustrates the final results of internal colonization. At the time of the American conquest, several Philippine regions, most notably the Ilocano-speaking northwest coast of Luzon, suffered from rural overcrowding, but in general the archipelago was lightly peopled and huge expanses of land remained thickly forested. The American authorities, however, encouraged Ilocanos to move to Luzon's central plain, which was quickly denuded and converted to farmland. Soon the stream of migrants had to be pushed into the vast Cagayan Valley to the northeast (McLennon 1980). Today, a few forested frontier zones persist in the Cagayan drainage, but they are in fast retreat. More significant is the fact that the Cagayan Valley has since become one of the Philippines' poorest and most lawless regions. The same process has been repeated elsewhere in the country, especially on the islands of Mindanao and Mindoro. Because of internal migration, small-scale societies have been destroyed and wildlife habitat has vanished. Today the only substantial remaining frontier is on the island of Palawan, but it too is undergoing rapid colonization.

With 65 million inhabitants expanding at an annual rate of 2.5 percent and suffering under an economic regime that shows no signs of sustained development, the Philippines exerts tremendous pressure for continued population dispersion. But soon the migration stream will come to an end, simply because the frontier will have vanished. One may well ask what the Philippines has to show for all of this. Its population continues to be impoverished—despite the bright prospects that it held only some thirty years ago. With its frontier safety valve operating for so many years, the Philippine government was able to avoid the fundamental socioeconomic restructuring that could have built the foundation for genuine, intensive development. Now, however, options are much more limited. The country is soon even going to have to begin importing lumber, as its own forests are virtually exhausted.

To avoid internal colonization, Third World countries can encourage *small-holder* agricultural intensification, much as did Japan, Taiwan, and South Korea in the postwar years. (Any program aimed at helping large-scale farmers will likely backfire; the mechanization of southern Brazilian farming may have resulted in an overall decline in Brazil's rural

population [Bradley and Carter 1989:118], but it also led to a massive influx of dispossessed peasants into the rainforests of Rondonia.) Small-holder development, in turn, usually requires massive land reform. As it stands now, especially in Latin America, peasants are often forced to migrate simply because landed elites occupy, and underutilize, the best lands. In many cases, enactment of a more progressive land tax code alone might force ineffective elite landholders to divest themselves of their properties (Gillis and Repetto 1988:405). If the most fertile lands were distributed to peasants, output would increase, easing the pressure for migration.

In the short run, one must admit, agricultural intensification usually entails ecologically damaging chemical applications. Yet the overall environmental costs of chemical-intensive farming are lower than those of internal colonization. The social costs of modern intensification have also been overemphasized by radical scholars. Although the green revolution has been justly criticized on both social and environmental grounds, in many Asian villages small-scale cultivators have been able to use certain pieces of the green revolution package to their own benefit (Critchfield 1983).

Ultimately, however, a more environmentally benign form of high-yield agriculture accessible to a wide spectrum of peasant cultivators must be developed. This might rely on low-tech aspects of indigenous intensive farming (Richards 1983; Wilken 1987) combined with certain high-tech bio-engineering innovations. Indeed, Ghatak (1988) convincingly argues that a more environmentally benign second green revolution might occur in the tropics. This would be based on both ancient and modern biotechnologies, the latter including genetic engineering.

However important rural development is, it must still be joined to urban and industrial growth. A sufficient number of urban jobs must emerge to attract and support in decent fashion would-be land colonizers. Here again we can note the success of Taiwan and South Korea, and contrast it with the sad failure of the Philippines, and indeed most other Third World countries. Closely connected is the issue of population, for as industrialization proceeds, fertility rates generally decline. But as with other developmental issues, demography proves more complex than it might appear at first glance.

■ The Promethean Response to Population

Paul and Anne Ehrlich's (1990) recent work, *The Population Explosion*, is a necessary starting point for environmentalist demography. The Ehr-

lichs argue fervently against the population optimists, both those who welcome an ever increasing tide of humanity and those who assume that stabilization will automatically occur as poor countries pass through a second demographic transition. The Ehrlichs wisely regard both views as naive and dangerous. Increasing human numbers cannot help but translate into decreasing biotic diversity, while the global fertility decline over the past several decades is far too small to portend salvation.

The Ehrlichs attack the simple version of the demographic transition thesis for postulating a direct link between a given country's level of economic development and its rate of population growth. As they demonstrate, many areas of the world exhibit strikingly divergent patterns. We may elaborate this point by comparing levels of per capita GNP (admittedly, a poor measure of development, but the best one available) and rates of demographic expansion for select countries. In doing so we discover that Greece and Portugal have achieved virtual population stability, and may soon begin to decline, despite relatively modest levels of development (per capita GNP at 5,340 and 4,260 respectively), while Libya and Oman, with similar levels of per capita GNP (5,410 and 5,220 respectively), are expanding at a remarkable rate (4.2 percent and 4.7 percent respectively; all figures from the World Bank 1990). We might also note that several of the world's more impoverished areas, such as Sri Lanka and India's Kerala province, have seen substantial drops in their growth rates.

The forces behind such demographic patterns are far too complex to be encompassed by any single factor explanation, or even to be discussed adequately in a work of this nature. It is necessary to note, however, that the population explosion of the current era cannot be attributed merely to the decline in death rates that followed the diffusion of modern medical and sanitary practices. Far too many environmentalists accept this simplistic notion at face value. Accordingly, their demographic theories unrealistically ignore fertility rates.

Fertility patterns varied tremendously from society to society well before the transition to modern, industrial regimes. Historical demographers have, for example, uncovered a substantial increase in European birth rates in the immediate preindustrial period, a time marked by the spread of large-scale rural craft production. Such proto-industrial employment may have enabled peasant families to escape family size limitations previously imposed by the desire to avoid subdividing farm plots and by the need to delay marriage until adequate dowries had been accumulated (Kriedte 1983). Japan, however, shows a different pattern. In the second half of the Tokugawa period (Japan's long epoch of isolation),

the country's population stabilized as families adopted strict control measures (including abortion and, at least in some cases, infanticide)—at precisely the same time as proto-industries developed (Hanley and Yamamura 1977). Only when Japan opened itself to the world economy in 1854 and began to industrialize did its fertility rate increase. In Southeast Asia the early modern period was similarly characterized by very low rates of population growth, a phenomenon definitely not attributable to high mortality rates. The "shift to rapid population growth in the nineteenth century," Anthony Reid (1987:43) concludes, was probably brought about by changing social organizational patterns coincident with the spread of Western power, and by the diffusion of lowland Southeast Asian cultural norms into upland areas.

A powerful school of materialist demography has recently argued that fertility varies according to the economic value that children confer to their parents (Caldwell 1978; Cain 1981). Simply stated, high birth rates may be expected where children labor diligently for their families and where they form their parents' sole source of social security. In many peasant societies a family's prosperity depends crucially on how many children (often, how many sons) toil on its behalf. In contrast, in the more developed societies where children require expensive education and generally fail to contribute to the family account, low birth rates may be expected.

This value of children hypothesis may help explain the rise in fertility that often accompanies the initial movement away from traditional social arrangements. In the early stages of development young people often find new opportunities to earn money (albeit in meager amounts) in the burgeoning cities. By finding employment in distant areas, children no longer form as much of a pressure on local resources, thus diminishing a previously existing fertility constraint. More importantly, by participating more fully in the commercial economy, children may be able to remit small amounts of cash to their parents, thereby bolstering the latter's economic standings.

In many respects, this preliminary stage of economic development is the most environmentally threatening. As agriculture is commercialized and chemicals introduced, degradation usually accelerates. Cities often grow more quickly than their local environments can tolerate, pollution thickens, and booming fertility results in rapidly mounting population pressure at the national level. If economic growth then stalls out, forestalling the emerging modern sector's ability to absorb the increasing human burden, an expanding class of landless rural inhabitants

may be forced to clear new lands in marginal environments and in formerly rich wildlife habitats.⁷

The value of children hypothesis also helps explain the fertility decline experienced by successfully industrializing societies. As prosperity builds, other economic alternatives soon outweigh family remittances. More importantly, in an industrial society people begin to become individualized, losing intimate contact with their extended families and often even severing the economic bonds with their own children. As parental authority collapses, children may no longer be compelled to contribute to the family budget, while increasingly affluent parents will be more inclined to assist their children than to derive succor from them.

The fertility decline that usually accompanies urbanization and industrialization ought to present an unsettling paradox for eco-radicals. Their own envisioned future, one of nonindustrial population stabilization, could only be realized if all vestiges of development were removed, returning the entire world to a truly premodern mode of existence. Not only would modern transport systems have to be dismantled, but all modern medical technologies also would have to be abandoned; a high death rate was, after all, a major contributor to the *relative* stability of most premodern population regimes. But if we admit that such a scenario is both fantastic and bigoted, we can only conclude that the eco-radical agenda would work strongly against population stabilization. By opposing urbanization and romanticizing the intimate surroundings of extended families and small communities, radical environmentalists struggle against the very forces that reduce fertility. Ultimately, by fighting against industrialization they would only help trap the Third World in the hyper-destructive state of initial modernization.

Beyond the Value of Children

Despite its manifest strengths, the value of children hypothesis cannot be taken as the last word in demographic theory. Many societies simply exhibit contrary patterns. In the Buguias region of the Cordillera of Northern Luzon, for example, the birth rate remains high, despite the fact that children form a net drain on parental resources. Young men even in their twenties commonly return home to ask for supplements when they find themselves in financial difficulties. Indeed, I was continually asked whether it was true that in the United States children are forced to support themselves upon reaching eighteen years of age. As one elderly man stated, "We wish we could do the same, but it is against our

ugali [culture]; in Buguias we must take care of our children no matter how old they are."

In the case of Buguias I was tempted to explain the persistently high birth rate on cultural rather than material factors. In the Buguias ideology a person's afterlife position depends on the animal sacrifices made by his or her descendants. The more progeny one has, the higher one's heavenly station is likely to be. As one elder phrased it, "if you have no children you are erased from the map of Buguias." The difficulty with this line of reasoning, however, is that members of the Christian minority, persons who deny such beliefs, have roughly the same fertility rate as the members of the Pagan majority.

Globally, it is notoriously difficult to ascribe fertility rates to religious beliefs. Catholic Italy, for example, has one of the world's lowest birth rates. Only in the case of religious groups that segregate themselves from larger national societies can one occasionally identify distinct patterns. American and Canadian Hutterites and other Anabaptists, for example, are famous for their remarkable fecundity. The clannish Mormons of Utah and southeastern Idaho also stand out strongly on maps indicating fertility rates.

In the end, we must conclude that a multitude of forces, some overt, other subtle, determine the fertility pattern of any given population. Other factors that cannot be analyzed here for lack of space include inheritance norms (especially whether land is divided or goes to a single heir), the presence of social institutions that promote celibacy, health and nutrition levels (healthy, well-fed populations can support high fertility rates; those with endemic venereal disease often have trouble reproducing at all), the work patterns of women (the meager body-fat reserves of highly mobile hunter-gatherers inhibit fertility), nursing patterns (prolonged lactation reduces fertility), and even the horse-riding, bathing, and undergarment-wearing habits of men (long hours in the saddle, hot baths, and tight underwear all reduce sperm motility). And last, but by no means least, we must take into account governmental population policy. Despite the claims of many radical theorists, population control programs often do succeed, at least to a limited extent. As Repetto (1985:135) argues, "Most countries that have experienced rapid fertility declines have made vigorous efforts to bring modern means of birth control within reach of the entire population."

One specific factor, however, does seem to be of overriding significance: the social position of women. Several studies have shown a strong correlation between the average levels of female education and overall fertility rates (Tienda 1984:163). In strongly patriarchal societies, men

often want as many children (generally, sons) as possible, and in such a social environment they are usually able to overrule their wives, who may well hold different opinions. Such patriarchs typically exercise tremendous power over all of their dependents, and thus by having numerous offspring they can augment their own economic positions and enhance their own social prestige. Moreover, a man, unlike a woman, can generate dozens of children at no cost to his own body. Children may confer many benefits to their mother, but pregnancy, childbirth, and nursing are all enormously taxing. All other things being equal, women generally prefer smaller families in which each child can be afforded plentiful attention.⁸

The position of women thesis helps explain several anomalies in global demography. The patriarchal countries of the Middle East all have high fertility rates, but the richest among them, such as the United Arab Emirates (with a per capita GNP of \$18,430), are actually expanding much more quickly than several of the much poorer ones, such as Egypt. In South Asia birth rates are moderately low in areas where women are relatively empowered, such as the Indian state of Kerala, whereas in zones of strong patriarchy and much higher levels of per capita wealth, such as the Punjab, birth rates are elevated.

Accordingly, the global dismantling of patriarchy must be seen as an essential precondition for reaching population stability. Unfortunately, this goal seems distant, in part because residents of the First World are so little concerned. We hear few reports of the shocking conditions in the patriarchal tyranny of Pakistan, a country in which a woman's testimony in court is regarded as worth exactly half of that of a man. Overall, the position of women in Pakistan is much like that of blacks in South Africa. But whereas racial apartheid has rightfully provoked global outrage, gender apartheid is all but ignored. Where are the campus protests against America's traditionally cozy military relationship with Pakistan? Where are the calls for sanctions?

This silence indicates that the deeply seated structures of patriarchy have not been excised from the American consciousness. But it also derives in part from one of the favored myths of the American left. According to contemporary leftist ideology, all of the Third World's problems are the result of Western imperialism and neo-imperialism. Such nonsense blinds radicals to the undeniable fact that patriarchy is not only indigenous to virtually the entire world, but that it has reached its apogee in certain non-Western cultures. Historically, European women may well have been second only to Southeast Asian women (on the latter score, see Reid 1988) in their overall degree of social power,

the societies of the Middle East and North Africa, South Asia, and East Asia have all been far more repressive. In fact, through most of the world, Westernization is equivalent to *partial* feminization—which is one reason why it is so detested by certain fundamentalist Islamic clerics.

Population Programs

In order to defuse the still ticking population bomb, the prime requirement is global development, both social and economic. Third World countries must invest in education, institute social security programs, and, most importantly, achieve equality of the sexes—and First World countries must donate substantial funds to such efforts. But it is questionable whether such fundamental social transformations could be accomplished quickly enough. State-sponsored population programs, based on subsidized birth control and on (voluntary) sterilization, are clearly in order. In the most densely inhabited Third World countries, however, even more forceful population control measures might be necessary. Perhaps China should be commended on this score, as reprehensible as the Chinese regime is in most other respects. Although the one child policy has been accompanied by some-staggering human rights abuses, considering the magnitude of its population problem, China has few options. Unfortunately, environmental requirements occasionally conflict with human rights. In such cases, the survival of the planet must be granted priority.

Land and Population

Although virtually all Third World countries are growing at an alarming rate, it is important to recognize that many poor lands are still sparsely populated. Environmentalists, unfortunately, have seldom differentiated the demographic prospects of a country like Bangladesh (with 8,400 persons per 1,000 hectares) from those of a country like Gabon (with 44 persons per 1,000 hectares). Because of this oversight, anti-environmentalists can argue with some force that concerns about overpopulation are outrageously overblown.

There is a modicum of truth to this allegation. While most scholars would have a difficult time denying that Bangladesh, Java, Burundi, and the lower Nile Valley are overpopulated, one could hardly say the same for Bolivia, Angola, or Mongolia. By Asian standards, virtually all of sub-Saharan Africa (excluding Nigeria and the rift zone) is *sparsely* inhabited. Moreover, it is essential to recognize that food production (except in Africa!) has generally been keeping pace with population growth. In fact,

famines are much less common than they were 100 years ago (Tarrant 1990:467).

Certain African leaders have, in fact, argued that their continent is underpopulated and hence unable to reap significant economies of scale. They trace this paucity of human numbers to the depredations of the slave trade, and they are indeed correct in noting that slavery resulted in a long period of African demographic stagnation. Similar patterns of historical depopulation at the hands of European imperialism may also be detected in much of Latin America, where several regions have still not recovered from the massive die-off that accompanied the introduction of European diseases in the sixteenth century.

Most environmentalists, not surprisingly, reject such reasoning out of hand. The Ehrlichs (1990) argue, for example, that Africa must be grossly overpopulated, despite its moderate population density, simply by virtue of the fact that it is increasingly unable to feed itself. They stress that much of the continent is cursed with poor soils and thus could never support the crowded settlements found in fertile Asian deltas. There is some truth here as well. Angola is no barren wasteland, but then again it is hardly an agricultural paradise. Only a few scattered African regions, most of them in the Rift Valley, are blessed with rich soils.

But this line of reasoning is also limited. While most African soils are poor, they can produce abundant crops if appropriate techniques are employed. In several densely populated areas of Nigeria, for example, local farmers have devised ingenious methods of coaxing good crops from meager soils (Netting 1968). Moreover, as the Ehrlichs recognize, the food crisis in contemporary Africa derives in large part not from intrinsic carrying capacity limitations, but rather from state policies that favor urban dwellers over peasant agriculturalists. Most African states have long mandated low food prices in order to allow low urban wages and to quell restive urban mobs. Faced with dismal grain prices, peasants are often unwilling to grow for the market, resulting in chronic production shortfalls. Although urbanization remains environmentally desirable, state policies that unfairly favor cities by undercutting agriculture will quickly prove destructive in societies struggling to produce adequate foodstuffs.

More compelling than fears about existing overpopulation in Africa, however, is the realization that, given current trends, severe demographic stress will not be long in coming. Thirty years ago Kenya was lightly populated, holding only some 6.3 million persons. Today its population stands at 25 million, and by 2025 it is expected to have reached 77.6 million. In other words, Kenya will have been transformed

from a sparsely to a densely populated land in only some sixty-five years. As this process continues, most Kenyans will find their lives growing ever more precarious.

Another equally compelling reason for population stabilization even in lightly populated Third World countries stems from the requirements of the economic development process itself. Development can only occur if per capita economic activity increases, which means that economic growth must continually outpace population growth *regardless of population pressure*. It is quite a challenge, however, for any economy to grow more rapidly than 3 percent a year, the rate at which most African populations are currently expanding. Although the Asian NICs have easily maintained much higher rates of economic growth, most other countries, including the United States, have not been able consistently to accomplish as much for many years. Even many prosperous oil exporters are now de-developing insofar as their populations are expanding more rapidly than their economies. In sub-Saharan Africa, a few countries are tumbling downward in a de-development spiral. Zaire, for example, experienced a real per capita annual GNP growth rate of -1.6 percent between 1980 and 1989 (World Bank 1990:9).

A rapidly growing population places innumerable strains on all but the most vibrant economies. The infrastructural investments needed merely to accommodate the burgeoning numbers of young persons are staggering. Many poor countries are thus beginning to see declining levels of education, the Philippines being a prime example. Moreover, even successful educational programs can become counterproductive under such circumstances. The huge generational cohorts of youngsters found in fast-growing countries seldom find adequate employment when they graduate. The resulting contingent of educated but unemployed youngsters makes for social dynamite. In much of the Middle East, such dissatisfied young men are increasingly embracing an uncompromising, hyper-patriarchal form of Islamic fundamentalism. Such a movement bodes ill for both the global environment and for the alleviation of oppression within their own countries.

Finally, population stabilization throughout the Third World is essential for the maintenance of biotic diversity. Given present demographic trends, Africa's remaining havens for large mammals will give way to human pressures within several generations. At present, the best hope is that a few African countries will find it in their best interest to preserve sizable areas, if only to attract tourist dollars. Without economic incentives, habitat preservation will prove an expendable luxury in the increasingly desperate nondeveloping world. In the short run, engaging in

eco-tourism is, in most cases, one of the best investments an affluent First World environmentalist can make.

Such are the demographic problems and prospects of the Third World. The task remains, however, to examine population patterns in the industrialized countries.

Population in the Developed World

Leftist critics have often dismissed concern about Third World population growth as little more than an imperialist ploy designed to allow the wealthy nations continued access to the bulk of the planet's resources. As the preceding discussion shows, denying the problem of demographic expansion is both naive and potentially destructive, but the point remains valid that pollution and resource depletion are in large part attributable to the world's wealthy societies. Any political program that would attempt to limit population growth in the Third World merely to maintain resource flows to the First World is indeed morally untenable.

But the discrepancy between the wealthy and the poor countries continues to present a special challenge for those who regard sustained economic growth as impossible. If one holding such a view wishes to avoid the taint of conservatism, he or she must advocate either a decline in the First World's living standards or a massive drop in its population. While most greens favor the former approach, Paul and Ann Ehrlich (1990) argue forcefully for the latter.

According to the Promethean environmental perspective, neither of these two alternatives is desirable. Although the Ehrlichs' recent work on the population explosion presents a valuable overview of Third World population problems and prospects, I must conclude that its analysis of demographic patterns in the First World leaves a great deal to be desired.

According to the Ehrlichs, a wealthy country like the United States, regardless of its population density or demographic trends, suffers from just as severe a population problem as an impoverished, closely settled, and quickly growing country like Bangladesh. America, they claim, is grossly overpopulated. Yet this assertion runs counter to common sense; ours is a country of moderate human density blessed with fertile soils and burdened by mounting agricultural surpluses. To take the Ehrlichs' next step and argue that the United States is undergoing a massive *population explosion*, brought on by an unsustainably high fertility rate, requires a concerted suspension of disbelief. The average American woman, after all, gives birth to only 1.9 children, a figure well below the replacement rate of 2.2. The Ehrlichs are able to accomplish such intel-

lectual gymnastics, however, by mathematically equating affluence and technology with population. Although America's affluence has been static for some time, its technology is advancing, thereby forming, according to the model, the equivalent of a population explosion.

The essential question is whether such an equation is either scientifically meaningful or politically useful. Unfortunately for the Ehrlichs, the more carefully one scrutinizes the $I=PAT$ model the more specious it is revealed to be. First, the equation is so vague as to be virtually nonsensical. A given area's population is a discrete number, and thus can easily be factored into any number of equations. Affluence, on the other hand, is a more slippery notion, being imperfectly quantifiable through such crude measures as per capita GNP. But even if it could be unproblematically measured, affluence would never provide an accurate indication of impact. Two equally affluent countries can be responsible for vastly different degrees of environmental degradation, depending on how their wealth is obtained and how their societies are organized. This is readily evident, for example, if one contrasts Sweden, wealthy yet relatively benign, with the United States.

Technology, the "T" factor of the equation, is far more problematic. To begin with, technology simply cannot be quantified, and is thus useless in an equation. If the technology of the United States were to count as 100, what then would be the value of Sweden's or Japan's—much less Russia's? Furthermore, although many technological advances are indeed ecologically disastrous, others—of equal sophistication—are environmental godsend. According to a strict reading of the Ehrlichs' model, every advance in pollution control technology (an increase in "T"), would contribute to the population explosion. Most advanced technologies, however, are environmentally ambivalent; the manufacture of computer and telecommunication equipment, for example, generates toxic waste, but, if put to good use, the resulting products can be environmentally beneficial. How then do such technologies fit into the equation? Ultimately, $I=PAT$ is an example of pseudo-science, impressive only to those mystified by equations and other scholarly trappings.

The Ehrlichs' demographic thesis is also undermined by their implicit assumption that environmental degradation is a unitary phenomenon. According to their arithmetical reasoning, each society exerts a singular force on the environment, a quantity calculable as the figure "I." But in reality, environmental impact derives from such a wide array of human activities that quantification is impossible. Different human groups exert incommensurable kinds of environmental pressures. No single metric of impact can ever be derived.

In particular, wealthy and poor societies are characterized by markedly different patterns of environmental degradation. The average inhabitant of the First World is extremely taxing on the earth in many crucial areas, but in others may be completely innocent. Which country—for example, the United States or Yemen—exerts a greater destructive force on the earth's few remaining rhinoceros herds? It is essential for environmentalists to acknowledge the fact that habitat destruction is occurring more rapidly in the poor than in the wealthy countries. Of course, Third World peasants are not generally culpable, for they are usually forced to degrade their lands by circumstances beyond their control. But questions of blame notwithstanding, it remains true that relentlessly expanding Third World populations can hardly help but displace wildlife, while stabilized or shrinking First World populations can increasingly afford to return land to wildlife habitat, if only they would choose to do so.

The absurdity of regarding impact as a unitary phenomenon is evident in the Ehrlichs' contention that a single American generates the same degree of environmental destruction as do 140 citizens of Bangladesh. In accordance with such reasoning, Bangladesh's human impact would only be as large as that of the United States if Bangladesh supported a population density 140 times greater than that of the United States, or, in other words, if Bangladesh held some 9,240 persons per square mile for a total population of 513,725,520 (instead of the 115,000,000 it contains today). It is difficult to imagine provisioning a human community in such a densely populated environment, let alone preserving any biotic diversity. The Ehrlichs' impact equation may be heuristically employed for select global issues, such as carbon dioxide production, but as an all-encompassing measure of environmental degradation it has no meaning whatsoever.

Considering the fact that the United States is not heavily populated and has reached a native state of population stability if not decline (its growth being attributable solely to immigration), one must conclude that it is not experiencing a population explosion. It does, of course, suffer from many staggering environmental problems, but these stem from how its population lives and the technologies it employs—and elects not to employ.

The Ehrlichs, however, dismiss the contention that the American environmental crisis derives from behaviors and policies rather than mere numbers. To their way of thinking, we must accept the realities of the American lifestyle: "To say that [the United States is not overpopulated] because, if people changed their ways, overpopulation might be eliminated, is simply wrong—overpopulation is defined by animals that

occupy the turf, behaving as they naturally behave, *not by a hypothetical group that might be substituted for them*" (Ehrlich and Ehrlich 1990:40).

This is an unusual argument indeed for two environmentalists to make; most of their colleagues, after all, argue that Americans behave in a distinctly *unnatural* fashion. Actually, human behavior can never be adequately conceptualized as either natural or unnatural, unlike most other animals, our actions are shaped by cultural norms, malleable institutional guidelines and barriers, and personal initiatives. The Ehrlichs' argument is also self-canceling, for the same logic would compel us to conclude that reducing our population would be equally impossible, since it would require "substituting a hypothetical population" with a different fertility pattern "for the one presently occupying the turf."

One might reasonably argue that the United States does have a population problem, however, if one considers migration. Owing to immigration, the American population is expanding at roughly 1 percent a year, a rapid pace by global historical standards. Certainly this level of growth can be accommodated for some time, but if it persists the environmental consequences will eventually become severe. Yet in many ways immigrants help create a more vibrant and productive economy, a contribution that has notable environmental benefits. American migration policy is obviously a matter for careful and reasoned debate within the environmental community.

American Population Reconsidered

The Ehrlichs' horror at the thought of an American woman giving birth to more than two babies probably stems either from a profound distaste for the human species or from an attempt to mollify leftist opinion (which automatically suspects any concern with Third World population as a mask for racism). In either case, the arguments they present are counterproductive for the environmental movement. The occasional misanthropy of green activists has long been the movements' greatest stumbling block in gaining widespread acceptance; the louder one denounces humanity, the less public support one may expect. If, on the other hand, the Ehrlichs are merely trying to curry favor on the extreme left, I believe they are committing a grave tactical error. While leftists may hold great power within universities, in the larger scheme of American politics their influence is nil.

By adhering to a radical stance of baby-bashing, the Ehrlichs risk reducing the very real problem of global population pressure into an easily derided crank theory. In regard to population more than anything

else, environmentalism must be based on a solid theoretical and empirical foundation.

Conclusion

To sum up, the notions of global development and population growth prevalent in the eco-radical literature are no more helpful for constructing an efficacious environmental movement than are the eco-radical theories regarding technology and economic scale. Most radical greens walk on shaky ground indeed when they enter the Third World, although little do they realize it. They want desperately to alleviate human misery, but they can only advocate programs that would preclude genuine development. They hope for nothing more than the stabilization of population, but they can only propose policies that would lead to continued growth. They are horrified by wildlife destruction, political repression, and the exploitation of women and minority groups, but they hurry to absolve Third World societies of *all* responsibility, and in so doing obscure many of the reasons why such problems exist in the first place.

To understand why eco-radicals so misunderstand the global predicament it is necessary to examine in greater detail their romantic sensibilities. The conclusion of this work will therefore open with a brief return to the thesis of primal purity.



Conclusion

The rocky crests, the juices in the meadows, the body heat of the pony, and man—all belong to the same family. Chief Seattle of the Suquamish tribe.

Orientalism and Radical Environmentalism

Chief Seattle's paean to nature occupies a central place in contemporary environmental literature. His speech strikingly reveals the unflattering contrast between Euro-American attitudes toward nature, based on thoughtless exploitation, and Native American attitudes, founded on spiritual union. Eco-radicals, in particular, find comfort in his words, seeing in them an eloquent demonstration of the superiority of the primal way and an unimpeachable accusation of Euro-American cupidity and destructiveness.

Unfortunately, the speech is fraudulent. These words were written not by a despondent indigenous philosopher in the days of his peoples' dispossession, but rather by a white American screenwriter, working for the Southern Baptist Convention (*Environmental Ethics* 1989:195–96). The attitude that they so eloquently express is not that of an indigenous people, living in harmony with nature until the arrival of rapacious Westerners. Rather, they exemplify the ideas that modern American society considers fitting for the less technologically oriented peoples who supposedly retain a primordial bond with the earth.

The Seattle hoax was uncovered by scholars sympathetic to eco-romanticism, and their exposé was printed in a journal of decidedly eco-radical inclinations. No doubt they were distressed to uncover the text's true authorship, but they realized how damaging the revelation could be if delivered by their opponents, and they sought to defuse any potential backlash by exposing the story themselves. Moreover, they argued that

one fraudulent text would do little damage to the environmental movement's faith in Native American wisdom; just because Chief Seattle never uttered these oft-quoted words does not invalidate the many other statements expressing the indigenous American philosophy of nature.

The editors of *Environmental Ethics* are right to argue that ecological wisdom can be found in Native American philosophy (or, as I would prefer, philosophies). But this does not mean that we should simply dismiss the Seattle episode as an unfortunate result of sloppy scholarship conducted by overly enthusiastic environmental advocates. The speech is, after all, probably the most widely cited evidence for the superiority of American Indian traditions over those of the materialistic and exploitative West. Seattle's (supposed) words obviously struck a chord not just in the minds of eco-radicals, but in those of the American public at large.

The appeal of Chief Seattle's speech, I would propose, lies in the longing for a return that invariably accompanies technological advance. Human beings usually crave progress, but rarely without misgivings. Such doubts are translated into visions of Arcadian serenity. As John Sisk (1991:239) shows, the philosophical roots of eco-radicalism can easily be traced to ancient Greek thought: "One thing is clear, however: the discontent and disgust with civilization that we find in the Cynics and some of the Stoics are thoroughly familiar to us. They believed that after a promising and perhaps Hyperborean beginning in golden times, things had gone wrong as humans departed perversely from the way of nature. In due time this realization produced an immense amount of literature, ranging from elegiac regret to that despair of human reason and inventiveness always lurking in the dark shadows of romanticism."

Marianna Torgovnick (1990) has admirably chronicled the twentieth century's idealization of the primal past in *Gone Primitive: Savage Intellectuals, Modern Lives*. Our literature, art, and psychological theories—whether devised by leftists, rightists, or centrists—create an image of an idealized primitive. Fictitious notions of savagery conjure whole literary genres, while art and myths created by peoples deemed close to nature are appropriated and imbued with meanings of our own making. Such meanings, more often than not, prove foreign to the cultures whose forms and artifacts we preempt. Where modernist artists saw a frenzied sexuality in African masks, the artists who carved them saw rather a pleasing composure that brought to mind ritual activities of a decidedly nonerotic nature. Yet we continue to congratulate ourselves in making such misrepresentations, believing that we accord respect to primal peoples by elevating them to the status of nonalienated humanity in its

essence, at one with earth and nature. In reality, this procedure denies them their own existence, making them instead a dumping ground for our own fears and longings, a "distorted mirror of the western self" (Torgovnick 1990:153).

Eco-radicalism carries this intellectual error beyond merely distorting primal peoples for present purposes. At the very foundation of eco-radical thought lies a gross distortion of human history, a singling out of the West as the sole source of environmental degradation, and indeed, in the most extreme examples, as the single repository of human evil. In doing so, it ironically perpetuates the discredited intellectual tradition of orientalism. Orientalists of past generations believed that the timeless East, a realm extending from Istanbul to Tokyo, was fundamentally homogeneous, at least when compared to the restless and dynamic West (the non-Eurasian world, in this scheme, was hardly considered worthy of discussion at all). Contemporary eco-radicals largely agree with the former contention, except that they reverse the moral signs: the soul of wisdom is now to be found in non-Western stasis.¹ For Roderick Nash (1989:113), foremost historian of the environmental movement: "The oriental mind tended to regard nature as imbued with divinity. . . . All beings and things, animate or inanimate, were thought to be permeated with divine power or spirit, such as Tao or, in Shinto, Kami." These sentiments fit remarkably well within the tradition of orientalism. Romantic orientalist have always hoped that the spiritualism of the East could "defeat the materialism and mechanism (and republicanism) of Occidental culture" (Said 1978:115). Even the more moderate environmental works often fall into the same mold. Philip Hurst, in *Rainforest Politics* (1990), for example, informs us that the traditional Eastern land management concept was based on communal control informed by holistic philosophies (1990:246-47), and he further implies that economic growth is strictly a "Western ideal" (p. 254).

As I have endeavored to show, the West holds no monopoly on environmental destructiveness. In fact, in many respects the East is guilty of the modern world's most extreme violations. Hong Kong, after all, is the center of the global trade in endangered species. The Chinese taste for bear paws and gall bladders, monkey brains and snake skins, elephant tusks and cat pelts is entirely indigenous—a fact conveniently ignored by the scores of environmental articles extolling the ecological virtues of Taoism and Buddhism, and informing us that the materialism (or, in some versions, the biblical tradition [White 1967]) of the West lies at the heart of the human assault on the global ecosystem.

More fundamentally, however, the very notion of the West is gradually

losing its meaning. The concept is flagrantly Eurasia-centric in conception, and has long been without a clear geographical referent in any case. The rise of Eastern Eurasia is now demolishing even the socioeconomic vestiges of meaning in the category of the West as well. Can we really speak of a "West" that increasingly looks to Japan for technological and financial leadership? It would appear rather that we are witnessing the emergence of a global cosmopolitan culture, only some of whose roots lie in Western Europe.

The academic left is now engaged in an all-out assault on the Eurocentric traditions of the university. The initial premise of this attack is entirely legitimate; the traditional college curriculum vastly overrates Europe's importance. In fact, it is our staggering ignorance of non-Western cultures that allows us to be so easily beguiled by eco-romantic fantasies. But the left's usual methods of rectifying Eurocentrism paradoxically aggravate the central problem. Much radical scholarship actually retains a strongly Eurocentric bias, albeit one that disparages rather than celebrates Western achievements. The non-European world increasingly receives attention, but only in its role as victim, or resister, of Western exploitation. Little interest is shown for the historical development of Asian, African, and indigenous American cultural and intellectual traditions in their own right. The call is for the study of contemporary political works written by the downtrodden, certainly not for the Analects of Confucius or Meso-American cosmology and calendrics (D'Souza 1991). Scholars in anthropology and geography are increasingly retreating from overseas fieldwork, which some see as inescapably imperialistic, in favor of producing ideological critiques of earlier scholarship, or of further dissecting the dominant tradition of the United States. In the process, any hopes of establishing even partial cross-cultural understanding are relinquished.

The counterhegemony of the academic left also proves intellectually destructive in ignoring, if not denying, the various evils, both social and environmental, that have always infected non-Western cultures. Most discussions of slavery, for example, focus exclusively on the Atlantic trade, overlooking the equally brutal export of Africans to the Middle East. Orientalists, in both their traditional and modern guises, have typically downplayed or apologized for Eastern slavery; some have even regarded it as positive in crucial respects. But anyone who examines the historical records of the East African slave trade, replete with such horrors as the eunuch factories of upper Egypt, would have a difficult time justifying such an attitude. As Bernard Lewis (1990) concludes in his book *Race and Slavery in the Middle East*:

The myth of Islamic racial innocence was a Western creation and served a Western purpose. Not for the first time, a mythologized and idealized Islam provided a stick with which to chastise Western failings [p. 101].

The white man's burden in Kipling's sense—the Westerner's responsibility for the peoples over whom he ruled—has long since been cast off and seized by others. But there are those who still insist on maintaining it—this time as a burden not of power but of guilt, an insistence on responsibility for the world and its ills that is as arrogant and as unjustified as the claims of our imperial predecessors [p. 102].

I am not proposing that we ignore the brutality of Western societies, nor am I advocating a retreat into non-Western antiquarianism. Rather, I am calling for a globalist approach, one that takes seriously the historical-geographical unfolding of the entire world. All cultures should be studied, both in their internal dynamics and in their interactions with other cultural systems. Contributions to human culture have come—and will come—from all reaches of the world, no region should ever be denied or overlooked—or deemed primary. But equally important, we must realize that destructiveness and exploitation have been features of *all* human societies. To reduce the evil in human history to the functioning of a specific socioeconomic form (capitalism), or to limit it to a single subcontinent (Europe), is a foolish gambit indeed.

Radicals are correct to argue that we must pay particular attention to Euro-American imperialism, which completely redrew the map of the earth to its own advantage. But let us not ignore other imperialisms. In the modern world it is hard to find a country more brutally imperial than China, as the Tibetans can surely testify. Historically as well, the global comparative study of empire is essential for understanding the failings of human social and economic development. The Mongol conquests were not only some of the most vicious the earth has ever known, but they may have actually contributed to the rise of Europe—the only Eurasian civilization largely spared their depredations (A. Lewis 1988). Central Asian conquerors were also guilty of extraordinary environmental degradation, and some areas they plundered have yet to recover. As Grousset (1970:428, 429) explains:

At Zaranj, capital of Seistan, Tamerlane 'put the inhabitants to death, men and women, young and old, from centenarians to infants in the cradle.' Above all, Tamerlane destroyed the irrigation system

of the Seistan countryside, which reverted to desert. . . . The desolation that strikes the traveler in this region even today is the result of these acts of destruction and massacre. The Timurid chiefs were finishing what the Jenghiz-Khanite Mongols had begun. Both . . . made themselves the active agents in this 'Saharifying' process, to which the center of Asia, by its geographic evolution, is already too prone. By . . . turning the land into steppe, they were unconscious collaborators in the death of the soil.

The Threat of Radical Environmentalism

Eco-radicalism is admittedly a marginal social movement, its adherents forming an exiguous ideological minority. One might be tempted to conclude that it poses no threat to our economy, our society, and our environment. This may ultimately prove true, but it cannot be assumed. Radical environmentalism enjoys substantial, and growing, intellectual clout. If its concerns merge with those of the broader academic left, a trend visible in the rise of both eco-marxism and of a self-proclaimed subversive postmodernism, we may well see the intellectual hardening of uncompromisingly radical doctrines of social and ecological salvation.

Academic radicals hope to create a potentially revolutionary intelligentsia in the United States. On this score they seem to be succeeding. But this intelligentsia, I believe, will find itself restricted to academia. The professoriate may be increasingly radicalized, and it may be able to recruit enough graduate students to carry on the cause, but its influence on the vast bulk of undergraduates will remain minimal. Despite receiving an increasingly leftist education, young college graduates, like their less-educated generational peers, are notoriously conservative. Indeed, voters born after 1960 are "by far the most Republican-leaning youths in the sixty year history of age-based polling" (Strauss and Howe 1991:326). The radical message does not appear to be sticking; quite the contrary, it seems to be backfiring—and with some heat.

A majority of those born between 1960 and 1980 seem to tend toward cynicism, and we can thus hardly expect them to be converted en masse to radical doctrines of social and environmental salvation by a few committed thinkers. It is actually possible that a radical education may make them even more cynical than they already are. While their professors may find the extreme relativism of subversive postmodernism bracingly liberating, many of today's students may embrace only the new creed's rejection of the past. Stripped of leftist social concerns, radical postmodernism's contempt for established social and political philosophy—indeed, its contempt for liberalism—may well lead to right-wing totalitari-

anism. When cynical, right-leaning students are taught that democracy is a sham and that all meaning derives from power, they are being schooled in fascism, regardless of their instructors' intentions.

According to sociologist Jeffrey Goldfarb (1991), cynicism is the hallmark—and main defect—of the current age. He persuasively argues that cynicism's roots lie in failed left- and right-wing ideologies—systems of thought that deductively connect “a simple rationalized absolute truth . . . to a totalized set of political actions and policies” (1991:82). Although most eco-radicals are anything but cynical when they imagine a “green future,” they do take a cynical turn when contemplating the present political order. The dual cynical-ideological mode represents nothing less than the death of liberalism and of reform. Its dangers are eloquently spelled out by Goldfarb (1991:9): “When one thinks ideologically and acts ideologically, opponents become enemies to be vanquished, political compromise becomes a kind of immorality, and constitutional refinements become inconvenient niceties.”

But unlike the youth of today, few eco-radicals are cynics at heart. Quite the contrary, they remain intense idealists. Most radical environmentalists are member of the baby boom generation, which Strauss and Howe (1991) convincingly portray as inherently idealistic. Members of this cohort incline toward stern doctrines that picture the world in stark terms of good and evil. Most eco-radicals unambiguously define as good the realms of nature and primal culture, and as evil the domain of modern industrial society. Marxists, whether environmentally oriented or not, similarly draw strength from moral absolutes, and some are honest enough to admit that they consider capitalism to be nothing less than evil (Walker 1989:160). Even the supposedly skeptical relativists of the subversive postmodernist camp often follow suit, finding within the dominant culture all attributes commonly associated with evil.

Throughout this work I have referred obliquely to the religious aspects of eco-radicalism; in concluding I can hardly emphasize them strongly enough. From its beginnings the contemporary environmental movement has been obsessed with religion (for example, Barbour 1973). Indeed, Scheffer (1991:7) describes environmentalism itself as a kind of religious reformation. While relatively few eco-radicals have formed full-fledged churches (see, however, Gelber and Cook 1990), all have a fundamentally religious, indeed, millennialist, outlook on the world. To the true believer, the modern world is thoroughly derelict, and it will either perish for its sins or we will collectively find eco-salvation. Many green radicals are also strongly attracted to asceticism, again showing their religious zeal.

While I have nothing against religion in general or environmental religion in particular, I do fear the religious intensity that so often infects members of an idealistic generation. In the heat of ideological fervor, true believers have time and again proved themselves capable of committing dreadful acts in the name of a higher good. While seeking moral and social perfection, those committed to a purist vision consistently work against the development of the social consensus necessary to make reforms work. Whereas social progress demands broad inclusion, radicalism excludes all persons judged sinful—or, in the current jargon, politically incorrect. Where workable solutions to social and environmental problems require compromise, radicalism calls for implementing only one's own program while vanquishing those of one's rivals.

This quasi-religious character of the radical environmental movement draws on its great strength: a consistently utopian vision. Imagining a world in which human beings live in harmony with each other and with nature is a rewarding and comforting exercise, and the utopian imagination deserves credit for enriching global culture. By selecting specific social traits and environmental relations from a host of small-scale societies, and by placing the idealized melange in a timeless land unthreatened by rapacious neighbors, deep ecologists have indeed constructed a tempting scene, an ideal escape from the frenetic world we all inhabit.

But for all of its attractions, utopia remains, and will always remain, “no place.” Although the vision is easy to conjure, the reality is elusive. In fact, those political regimes that have struggled hardest to realize utopian plans have created some of the world's most dystopian realities. Unfortunately, Americans as a people seem uniquely drawn to such fantasies, and a right-wing variant of utopianism has even guided our recent national administrations; as Robert Kuttner (1991:5, 157) shows, laissez-faire itself is an ideologically driven utopian scheme that has dire consequences for the earth's economy and ecology. As Michael Pollan (1991:188) eloquently demonstrates, eco-radicalism and right-wing economic theory are more closely allied than one might suspect: “Indeed, the wilderness ethic and laissez-faire economics, as antithetical as they might first appear, are really mirror images of one another. Each proposes a quasi-divine force—Nature, the Market—that, left to its own devices, somehow knows what's best for a place, Nature and the Market are both self-regulating, guided by an invisible hand. Worshippers of either share a deep, Puritan distrust of man, taking it on faith that human tinkering with the natural or economic order can only pervert it.”

So political extremists of all stripes offer utopian visions, which cred-

ulous idealists find remarkably attractive. But considering the disparity of the visions offered—the perfect market of *laissez-faire*, the perfect society of socialism, or the perfectly harmonious environment of eco-radicalism—it is not surprising that utopianism in the end only increases our social and intellectual rifts, steadily diminishing our chances of avoiding an ecological holocaust.

As I have argued throughout this work, social polarization is itself one of the central threats to the global environment. Most eco-radicals, however, disagree sharply. In fact, even moderate environmentalists often argue that green extremism serves a useful purpose by making other forms of environmentalism seem moderate in comparison, hence more palatable to a large segment of the population. But according to this logic, any vociferous, ideological minority ought to be easily able to pull public opinion in its own direction. This is, I strongly assert, a naive and dangerous belief. Extreme positions usually provoke fervent opposition among nonbelievers, not partial, lukewarm conversion. Do the aggressive and outrageously anti-environmental proposals of the “wise-use movement” convince environmentalists that George Bush is really on their side after all?

In conclusion, environmentalism’s challenge must be more than to criticize society and imagine a blissful alternative. On the contrary, the movement must devise realistic plans and concrete strategies for avoiding ecological collapse and for reconstructing an ecologically sustainable economic order. To do so will entail working with, not against, society at large.

The best hope I see is through a new alliance of moderates from both the left and the right—a coalition in which moderate conservatives continue to insist on efficiency and prudence, and where liberals forward an agenda aimed at social progress and environmental protection, but in which both contingents are willing to compromise in the interests of a common nation and, ultimately, a common humanity. The environmental reforms necessary to ensure planetary survival will require the forging of such a broad-ranging political consensus. By thwarting its development, eco-radicalism undermines our best chance of salvaging the earth—offering instead only the peace of mind that comes from knowing that one’s own ideology is ecologically and politically pure. It is time for the environmental movement to recognize such thinking for the fantasy that it is. We must first relinquish our hopes for utopia if we really wish to save the earth.

Promethean environmentalism is not simply a watered down, com-

promised form of the radical doctrine. Although its concrete proposals and its philosophical positions are consistently at odds with those of eco-radicalism (see the appendix), its ultimate purpose is in fact the same: to return the surface of the earth to *life*, to life in all its abundance, diversity, and evolutionary potential. Prometheans maintain, however, that for the foreseeable future we must *actively manage* the planet to ensure the survival of as much biological diversity as possible. No less is necessary if we are to begin atoning for our very real environmental sins—for our fall from grace that began at the end of the Pleistocene epoch.

Eco-radicalism tells us that we must dismantle our technological and economic system, and ultimately our entire civilization. Once we do so, the rifts between humanity and nature will purportedly heal automatically. I disagree. What I believe we must do is disengage humanity from nature by cleaving to, but carefully guiding, the path of technological progress. It is for the environmental community to decide which alternative offers the best hope for ecological salvation.



Notes

■ 1 The Varieties of Radical Environmentalism

- 1 Not surprisingly, the eco-radical movement is marked by strong internal disagreements over ethical principles. Whereas outsiders often assume that a strong affinity exists between radical environmentalists and members of the animal rights movement, the two groups are uneasy allies at best. Animal rights advocates typically limit their concern to sentient beings (see Singer 1975), a restriction that most eco-radicals find highly prejudicial. The main body of the eco-radical movement bases its ethical concerns at the ecosystem level, stressing not individual entities at all but rather mutual relations. According to Nash (1989:5), this more encompassing vision reveals a progressive expansion of the ethical universe, a realm that begins with the self but that may ultimately include the entire universe. Such holistic moral reasoning easily leads to a mystical extension of consciousness to complex features of the natural world, such as rivers and mountains (e.g., Devall and Sessions 1985:112). Many environmental philosophers, however, reject such mysticism. Brennan (1988), for example, argues that while we should focus our ethical concerns on ecosystems rather than individuals, we would best avoid the pitfall of a quasi-spiritual systemic understanding that denies the reality of individual entities. In the most philosophically rigorous exposition of environmental ethics to date, Paul Taylor (1986) denies the extension of ethical principles to inanimate objects, and on the whole is quite skeptical of ecological holism, but he vigorously upholds the principle of biotic egalitarianism (believing that all forms of life are deserving of equal moral consideration). As a result he is implacably opposed to sport hunting and even fishing; activities supported by many eco-radicals as exemplifying natural processes. More recently, Stone (1988) has suggested that environmentalists abandon the quest for a unitary set of moral principles and instead embrace moral pluralism, a stance vigorously countered by Callicott (1990).
- 2 In his recent work *Confessions of an Eco-Warrior*, Foreman (1991) takes a more accommodating stance and seeks nonviolent approaches where possible.

- 3 In many European countries marxian political parties are both more powerful and more concerned with environmental issues than are their counterparts in the United States. This is especially true in Italy, where the Communist Party "has shown the most genuine concern for environmental issues, particularly in some of the communities and regions it governs" (Liberatore and Lewanski 1990:37).

■ 2 Primal Purity and Natural Balance

- 1 Guthrie argues that horses may have been able to readapt to the environment of the American West due to landscape changes wrought over the past 10,000 years by human beings (1984:289, 290), a thesis far-fetched but difficult to falsify.
- 2 Gimbutas's thesis has been recently challenged on archaeological and linguistic grounds, most notably by Renfrew (1987). According to Renfrew, Indo-European languages originated in Anatolia and spread in a generally peaceful process. And as Mallory (1989:258) cautions in his balanced account of Indo-European origins: "We are always wary of suggesting models of expansion that will be characterized as hordes of frenzied Aryans bursting out of the Russian steppe and slashing their way into the comparative grammars of historical linguists."

■ 3 A Question of Scale

- 1 This famous slogan was apparently popularized by an eco-religious sect in California called Creative Initiative which later transformed itself into the antiwar federation known as Beyond War (Gelber and Cook 1990:188).
- 2 Sale assiduously avoids the tainted term "hierarchy," preferring instead the locution "like Chinese boxes" (1985:56).
- 3 It is also apposite to note that the (direct) democratic party of Pericles in ancient Athens was also the main force behind the policy of imperial expansion and exploitation—a policy that eventually brought ruin to Athens.
- 4 Dave Foreman (1991:79), however, apparently does believe in respecting game laws.
- 5 Population density figures derived from estimated 1989 population figures found in the California Statistical Abstract (1989:14–18; table B-4), and from land area figures found in the California Statistical Abstract (1973, section A, p. 1; "Area, Geography and Climate"); areas of inland water were excluded from the calculations. The following counties were tabulated: over 2,000 persons per square mile, San Francisco; 1,000–2,000 persons per square mile, Alameda, Contra Costa, Sacramento, San Mateo, and Santa Clara; 200–1,000 persons per square mile, Marin, San Joaquin, Santa Cruz, Solano, Sonoma, and Stanislaus; 50–200 persons per square mile, Amador, Butte, El Dorado, Fresno, Kings, Merced, Monterey, Napa, Nevada, Placer, Sutter, Tulare, Yolo, and Yuba; 10–50 persons per square mile, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Lake, Madera, Mariposa, Mendocino, Shasta, Tehama, and Toulumne; and under 10 persons per square mile, Alpine, Inyo, Lassen, Modoc, Mono, Plumas, Sierra, Siskiyou, and Trinity. Voting figures obtained from "Certified Statement of Vote, Nov. 6, 1990, General Election," compiled by March Fong Eu, secretary of state, and "Certified Statement of Vote, June 5, 1990, Primary Election," compiled by March Fong Eu, secretary of state.

Southern California counties are excluded by virtue of their geographical patterns: the immense county of San Bernardino, for example, has large areas of metropolitan suburbs, yet even larger areas of unpopulated desert.

- 6 The one saving grace of suburbs is that their residents tend to vote in favor of environmental issues, as is evident in tables 1 and 2.
- 7 We must also note that, with due respect to Reich, the transnationalization of capitalism may soon face insurmountable limits; Michael Porter (1990:19), in fact, argues that globalization will only make a given firm's home base ever more important.

■ 4 Technophobia and Its Discontents

- 1 The commercialization of continuous-fiber ceramic composites could, in fact, result in an energy savings of .7 quadrillion Btu by the year 2010 (Hirst 1991:32).
- 2 As cold-blooded animals, fish convert vegetable matter into flesh much more efficiently than do mammals and birds.
- 3 Biotechnology can be employed for environmental benefits in many areas other than agriculture or toxic waste decomposition. Biohydrometallurgy, for example, employs bacteria to remove sulfur from coal or mine wastes, and it can even be used to extract copper from ore bodies, obviating the need for environmentally destructive smelting. In the future, advocates of the process foresee the application of microorganism-based techniques to "in situ mining, which would leave the surrounding environment relatively undisturbed while removing the desired metals" (Debus 1990:55). For the present, biohydrometallurgy has already been responsible both for saving the American copper industry from financial collapse and for reducing significantly its environmental impact.

■ 5 The Capitalist Imperative

- 1 The prominence of marxist geography is clearly evident in lists of most-cited articles; see, for example, Whitehand (1990:21).
- 2 Virtually all that Seldon (1990:126) writes about Japan is that its successful firms often ignore governmental directives—a truth so partial as to be meaningless.
- 3 Several writers have argued that no German capitalists actually supported Hitler in his early rise to power (for example, Hall 1985:168), but scholarly opinion on this matter is still divided.
- 4 This "sports analogy," however, can be taken too far: unsuccessful athletic teams, for example, do not go bankrupt and disband. Despite both its intrinsically competitive nature and the astronomical salaries of its star players, major-league athletics is in some ways rather socialistic—just try to imagine a draft system in which unprofitable firms get the first choice on hot young MBAs!
- 5 One recent study does show, however, that plants with worker participation committees sometimes prove less efficient than those without them (see *Business Week*, April 1, 1991, p. 18).
- 6 It should be noted, however, that a recent MIT study indicates that gas taxes may not be as regressive as previously thought (see *Business Week*, April 8, 1991, p. 16).
- 7 Writers for *The Economist* fear that Japan and Germany may be beginning to emulate the Anglo-Saxon model of "punter-capitalism" that emphasizes stock

market gambling. "If the two pairs of countries keep moving in their present directions" they inform us, "it is only a matter of time before Japanese and German firms are systematically squandering their capital" ("Survey of Capitalism," May 5, 1990, p.17).

■ 6 Third World Development and Population

- 1 Whatever one thinks of Commoner's views on development, one must admit that his assertion that more people live in the Southern Hemisphere than the Northern Hemisphere betrays an appalling ignorance of world geography.
- 2 O'Riordan (1988:30, 48) intriguingly mixes both views by arguing that sustainability is "politically treacherous since it challenges the status quo," but that it "can be manipulated into tinkering adjustments to the status quo by established interests."
- 3 There are, however, a number of successful rural Third World environmental associations, most notably the *Chipko* forest-preservation movement of India, and the rubber-tapper organizations of the upper Amazon Basin.
- 4 Historically too, it is necessary to realize that even in a few colonized zones, participation in the world economy brought some benefits. Indeed, the socialist historian David Washbrook (1990) verges, at points, on describing India as Britain's partner in empire, and he shows clearly how British ideas of private property helped nurture an indigenous and progressive Indian capitalism.
- 5 The Latin American experience, however, would caution against such a heavy reliance on direct foreign investments. It is quite possible that Singapore has found such a strategy advantageous only because its exiguous size has precluded the development of a more nationalistic form of capitalism.
- 6 It must also be noted, however, that even in the absence of protection, export-led growth is never secure. The development of fully automated textile technology, for example, could result in the transfer of production back to the First World.
- 7 In some areas, however, land degradation may stem from population decline. When opportunities increase for wage migration, the labor formerly devoted to maintaining intensive, soil-conserving forms of agriculture may be no longer available, resulting in accelerated soil erosion.
- 8 This gender difference in reproductive preference may even be partially rooted in biology. Sociobiologists, whose reductionistic and deterministic reasoning must be approached with considerable caution, argue that since males can have a virtually unlimited number of offspring they often consider it a worthwhile gamble to squander genetic material in hopes that at least a few of their many children will make it to adulthood and thus pass on their genes—giving little regard to the amount of care that children require. Females, on the other hand, who intrinsically have a much more limited potential for reproduction, find greater genetic advantage in investing heavily in a small number of children.

■ Conclusion

- 1 As Said (1978:42) makes it clear, "the essence of orientalism is the ineradicable distinction between western superiority and oriental inferiority." The inverse orientalism of the eco-radicals might therefore be more properly labeled "occidentalism."



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