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# SUSTAINABLE DEVELOPMENT
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The following recent publications are discussed in this essay:

*Our Common Future*, by the World Commission on Environment and Development. Oxford University Press, 1987, 400 pp.

"Environmentally Sustainable Economic Development: Building on Brundtland," working paper, edited by Robert Goodland, Herman Daly, and Salah El Serafy. The World Bank, July 1991, 85 pp.

*Cooperation for International Development: The United States and the Third World in the 1990s*, edited by Robert J. Berg and David F. Gordon. Lynne Rienner Publishers, 1989, 356 pp.

*World Development Report 1991: The Challenge of Development*, by The World Bank. Oxford University Press, 1991, 290 pp.

*Human Development Report 1991*, by The United Nations Development Programme. Oxford University Press, 1991, 202 pp.

*State of the World 1991: A Worldwatch Institute Report on Progress Toward a Sustainable Society*, by Lester R. Brown, et al. W. W. Norton & Co., 1991, 254 pp.

*For the Common Good: Redirecting the Economy Toward Community, the Environment and a Sustainable Future*, by Herman E. Daly and John B. Cobb, Jr. Beacon Press, 1989, 482 pp.

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In the first two weeks of June, representatives of virtually all the world's nations will meet in Brazil for the United Nations Conference on Environment and Development (UNCED), popularly named the "Earth Summit." The official delegates will sign a charter spelling out basic principles for the conduct of nations and people with respect to the environment. They are also expected to ratify agreements on a variety of legal conventions relating to such matters as protection of the atmosphere and biological diversity.

Important as UNCED will be in setting the agenda for official action on a host of critical environmental issues, the more interesting and far-reaching debates on the state of the earth and its peoples will take place elsewhere. The '92 Global Forum, which will be held simultaneously in Brazil, is expected to attract some 25,000 private citizens and representatives of nongovernmental organizations (NGOs). This is where issues not on the official agenda will be aired and where an agenda for a worldwide movement to establish more equitable and sustainable patterns of economic development will be set.

The challenge for both the official and unofficial gatherings will be to come to terms with a pervasive and rapidly deepening global crisis revealed not only in life-threatening environmental stresses, but also in a growing gap between rich and poor, increasing numbers of absolute poor, and a disintegrating social fabric. To date, the preparatory meetings of UNCED have focused almost exclusively on the environmental side of the environment and development agenda. Though some Southern countries have challenged this bias, the United States and other Northern countries have so far successfully argued that development issues are appropriately addressed in other established fora (over which, not incidentally, the North exercises far greater control).

Yet there is substantial reason to believe that the environmental crisis is inseparably linked to the development crisis and can be resolved only through a revolutionary change in our understanding of the relationship between human economic activity and the ecosystem and our perception of the nature of human progress. At the heart of the emerging controversy are three beliefs that have become so deeply imbedded in contemporary mainstream development thought and policy as to be considered almost a modern theology:

- Sustained economic growth is both possible and the key to human progress.

- Integration of the global economy is the key to growth and beneficial to all but a few narrow special interests.
- International assistance and foreign investment are important contributors to alleviating poverty and protecting the environment.

These beliefs are increasingly coming under challenge and for good reason. The emerging evidence suggests that the demands human economic activity places on the earth's ecosystem now exceed what that ecosystem can sustain. To use a convenient shorthand term, we have filled the ecological space available to us. One of the most important turning points in human history has been reached; though we are only beginning to grasp the full implications of this, the problem and many of its consequences are now common knowledge.

We have loaded the earth's atmosphere with pollutants faster than natural processes can reabsorb them. As a consequence, the ozone layer that protects us from the sun's lethal rays is thinning, and massive climate changes that threaten to melt the polar ice caps, flood vast coastal areas, and turn fertile agricultural areas into deserts are likely to occur. The soils on which we depend to grow food for an exploding population are being depleted faster than nature can regenerate them. More and more localities face severe shortages of fresh water. Garbage is accumulating faster than we can find ways to dispose of it, while chemical and radioactive wastes are rendering more and more areas of the earth's surface unusable. Fossil fuels are being exhausted even as we continue to expand the economic activities dependent on them.[1]

Economic growth and progress, as conventionally understood and measured, depend on increasing the flow of physical materials—such as petroleum, minerals, biomass, and water—through our economic system. We depend on nature to supply these materials and to absorb the resulting wastes. But we have now reached a point at which further advances in human well-being must be achieved without further increasing the economic system's physical throughput.

The implications of all this for a world in which more than a billion people live in conditions of extreme deprivation are profound. Further human progress, including the elimination of such deprivation, will depend on reallocating the ecological space that human beings have already appropriated. To survive and thrive, greater priority must be given to basic needs, wasteful consumption must be eliminated, and physical resources must be used more efficiently.

There is no real choice. If we do not bring our economic activity into balance with the limits of the ecosystem in an orderly way, nature will do it for us in a far more brutal way.

Unfortunately, most development thinkers, policymakers, and institutions have yet to acknowledge this new human reality and its implications. Consequently, they continue to pursue policies that are not only deepening the crisis, but also severely eroding our institutional capacity to address it. The current efforts of policymakers to deal with sustainability through the fine-tuning of existing policies and institutions are not only inadequate, but also dangerously misguided. Only a radical transformation of thought, policies, and institutions will allow us to avoid a social and ecological breakdown.

## The Limits of Mainstream Development Thought

In 1983 the United Nations set up an independent Commission on Environment and Development, widely known as the Brundtland Commission in recognition of its head, Gro Harlem Brundtland, the prime minister of Norway. Its assignment was to reexamine the planet's critical environmental and development problems and "propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond."[2] The commission's report, *Our Common Future*, brought the environment to center stage as a public policy issue and rapidly became the most important document in the sustainable development debate.

*Our Common Future* documented clearly and unequivocally the environmental devastation created by human society and the extent to which humans are dependent on the environment. It showed how economic growth as conventionally measured is heavily dependent on the ever increasing use of environmental resources and yet is deleterious to those very same resources. The report also documented the wasteful overconsumption of wealthy countries, the extent to which environmental destruction is both cause and consequence of poverty, and the extent to which current generations are depriving future generations of the possibility for a satisfying life because of waste, overconsumption, and exploding population growth. The report singled out the environment's inability to continue absorbing the waste products created by our energy consumption as perhaps the single greatest threat to future development. On the prescriptive side, the report called for a more responsible use of environmental resources, a dramatic reduction in arms expenditures, the elimination of poverty, and greater use of multilateral approaches in dealing with environmental issues. In all these respects, the commission's report made a seminal contribution in moving environmental concerns from the periphery to the center of the policy agenda.

Yet it also revealed many of the glaring contradictions that continue to plague efforts to reconcile the perceived imperative of economic growth with the finite nature of the earth's ecosystem. Though *Our Common Future* was billed as a major challenge to conventional development perspectives and purported to integrate environment and development concerns, many of its conclusions reaffirmed the fundamental premises of conventional development thinking, in particular the stress on economic growth above all else. "If large parts of the developing world are to avert economic, social, and environmental catastrophes, it is essential that global economic growth be revitalized," the commission concluded.

The report's key recommendations—a call for the world's economic growth to rise to a level five to 10 times the current output and for accelerated growth in the industrial countries to stimulate demand for the products of poor countries—fundamentally contradicted its own analysis that growth and overconsumption are root causes of the problem. Where ecological reality conflicted with perceived political feasibility, the latter prevailed. Thus, the world's ruling elites were reassured that the best way to resolve our environmental crisis is for the rich to increase their consumption to prime the growth engine. What the commission's own analysis had demonstrated to be the problem suddenly became the solution.

As the Brundtland Commission was finalizing its report, another major collaborative effort was taking place in the United States under the auspices of Michigan State University. This project set out to review U.S. policies of economic cooperation with the Third World, yet it had potentially international significance because the United States was at that time the single largest contributor of official development assistance (now second behind Japan) and then, as now, dominated the multilateral agencies that have the leading role in shaping global development policy.

Under the Reagan administration, the U.S. foreign assistance program had been losing its direction and its public support (a process that has continued under President George Bush). The Michigan State exercise sought to forge a new national consensus in support of international assistance and to counter tendencies toward "compassion fatigue" and withdrawal from concern for the plight of the world's less fortunate. The project involved 11 cooperating institutions, 800 individuals, 15 symposia, and nearly every development thinker of consequence in the United States. More than 100 papers were produced, and a major conference was held in 1988 to produce a synthesis of its recommendations.

In its final recommendations, the Michigan State study called for urgent attention and unprecedented international cooperation in three critical areas: Third World debt, Africa, and the environment. The effort identified a broad consensus that future U.S. assistance programs should focus on improving health systems and population planning, working for sustainable agricultural systems, developing environmental programs and policies that will protect natural resources and that emphasize renewable energy sources and conservation, and fostering sound urban development policies. The conference's recommendations and a collection of its essays were compiled in a volume entitled *Cooperation for International Development: The United States and the Third World in the 1990s* edited by Robert J. Berg and David F. Gordon.

Committed to building a case for continued U.S. development assistance to poor countries, the Michigan State project did not presume to provide a critical assessment of prevailing development theory and practice. As a consequence, the resulting volume largely accepts without challenge the conventional wisdom of the mainstream development community regarding economic growth, free trade, international investment, and foreign assistance. Though the project cites alleviation of poverty and protection of the environment as central concerns in its recommendations, it leaves largely unexamined the reasons why poverty and environmental degradation have persistently increased since President Harry Truman proposed in his historic 1949 inaugural address to extend the concept of the Marshall Plan to certain Third World countries.

It is particularly striking, given that the environment was featured prominently on the report's priority lists, that only one contributor to *Cooperation*, William Chandler, makes more than a passing mention of the environmental crisis. He concludes that international assistance, technology, and free-market forces can largely resolve the environmental problem by increasing the efficiency of resource use. Only in the last sentence of his essay does he mention that one of the world's leading high-tech market economies, the United States, is perhaps one of the worst offenders when it comes to pollution, waste, and inefficiency. Except for this sentence, the possibility that economic growth may be a major contributor to environmental destruction is not raised in the volume.

Perhaps the volume's most important contribution is the essay by Colin Bradford, which takes a serious critical look at the ideological predispositions of U.S. policymakers and economists that have led them to misinterpret important aspects of reality. In his essay, "Shaping a U.S. Approach to the 1990s: Reading Reality Right," he notes the widespread praise for

Asia's newly industrializing countries (NICs) as models of the free-market, export-oriented approach to growth advocated by most development agencies despite overwhelming evidence that the NICs are examples of successful centrally planned and managed economies that make use of a mix of market and nonmarket forces.

Both the Brundtland Commission and Michigan State exercises called on members of an existing intellectual and policy establishment to critically assess the very concepts and policies that they themselves had helped to put in place. There are clear limits to the extent to which such undertakings (including the upcoming UNCED) can be expected to produce fresh ideas that effectively challenge the conventional wisdom.

The same may be said for mainstream institutions as well. For the most part, official development agencies around the world have responded to the environmental crisis by labeling themselves green, putting out a call for additional funds for environmental projects, and resuming a business-as-usual commitment to accelerating economic growth. The premises underlying this commitment and the possibility that there might be fundamental conflicts between the existing policies and the imperatives of sustainability remain largely unexamined even by those now preparing for the upcoming "Earth Summit."

## Economic Growth

Perhaps no agency has more fully epitomized the business-as-usual response to the growing social and environmental crisis than the World Bank. The 1991 edition of its annual report on the state of global development, *World Development Report 1991: The Challenge of Development* (*WB 1991*), presents what the Bank believes to be the major lessons of the past 40 years of development experience—that accelerated economic growth and integration of the world economy are the keys to human progress.

The report is also evidence of the Bank's continued faith in the premise that growth, development, and improved human well-being are synonymous, and that gross national product (GNP) is their measure. The Bank argues that increasing the incomes of the rich to expand demand for the products of the poor is a key to overcoming poverty, but the Bank's analysis suffers from none of the ambiguities and contradictions found in the Brundtland Commission's presentation of a similar conclusion.

*WB 1991* takes no note of the growing competition between rich and poor for a declining resource base. In assessing the reasons why economic growth in the 1980s fell below World Bank projections, the possibility that environmental constraints might have been a contributing factor is not raised. Indeed, the central point that *WB 1991* seeks to establish regarding the environment is that only through economic growth can the resources required for investments in environmental protection be generated.[3] In other words, growth is treated as basically a precondition for environmental protection. The possibility that growth itself has contributed to environmentally destructive practices is not mentioned in *WB 1991*.

One of the better official contributions to the sustainable development debate from among the multilateral development agencies is the series of human development reports initiated by the United Nations Development Programme in 1990. These reports look beyond conventional measures of GNP in an effort to establish a more meaningful index of human well-being and progress. A human development index is assigned to each country based on measures such as educational attainment, life expectancy, personal income, and progress toward the elimination of absolute poverty.

UNDP's data and analysis build a convincing case for the conclusion that high levels of economic output are neither necessary nor sufficient to significantly reduce human poverty and deprivation. For example, the report presents data showing that Saudi Arabia's literacy rate is lower than Sri Lanka's, despite the fact that its per-capita income is 15 times higher. Brazil's child mortality rate is four times that of Jamaica, even though its per-capita income is twice that of Jamaica. The report attributes such disparities to differences in how services and job opportunities are distributed. "If a better link is to be created between income and human development, it is mandatory to adopt policies that distribute these economic assets and opportunities more equitably,"[4] it concludes.

To demonstrate that industrialization and high levels of economic output offer no guarantee of advanced human well-being, *UNDP 1991* notes that in the wealthy market-oriented industrial countries, 100 million people still live in poverty, while another 100 million live in poverty in the centrally planned industrial countries of the Soviet Union and Eastern Europe. It also calls attention to the unraveling of the social fabric that accompanies industrialization as the ties of family and community are sundered—with a resulting sense of isolation and alienation manifest in high rates of drug addiction, homelessness, suicide, divorce, and single-parent homes. *UNDP 1991* further establishes that even relatively poor countries could significantly advance human development by merely reallocating existing financial resources away from military spending and public enterprise subsidies and increasing the efficiency of social service delivery.

Its basic message is that rising national income is no guarantee of rising human well-being. Yet scattered throughout the text of *UNDP 1991* are variations of the apparently obligatory catechism that "economic growth is essential to human resource development"—all in seeming contradiction of the report's own evidence and analysis. This affirmation of faith is reportedly a direct response to concerns expressed by the World Bank and others that UNDP might be deviating from the politically correct view that growth is the central enterprise of development.[5]

While *UNDP 1991* seems at one level to echo the Bank's perspective on growth and trade, there is a refreshing difference. It focuses on the importance of growth in the Southern countries without suggesting, as does the Bank, that the rich have a duty to consume ever more as their contribution to uplifting the poor. *UNDP 1991* also demonstrates a far stronger and more consistent concern for environmental sustainability, equitable distribution of benefits, and broad-based political participation. Furthermore, its discussion of protectionism focuses squarely on Northern barriers that exclude Southern exports. The report does not call for a unilateral removal of import duties by Southern countries as a stimulus to their economies (as recommended in *WB 1991* and often demanded by the Bank's structural adjustment packages). Nor does it claim that the path to prosperity for Southern countries lies in their greater integration into the global economy.

Overall, *UNDP 1991* takes an important step toward offering an alternative perspective to the official doctrines of the World Bank, International Monetary Fund (IMF), and General Agreement on Tariffs and Trade (GATT). However, in its haste to affirm the growth catechism, *UNDP 1991* fails to acknowledge and analyze the fundamental conflict between economic growth and sustainability. Ironically, probably the most important recent contribution to this basic task comes from within the World Bank itself.

Only a few months after *WB 1991* was released with the usual fanfare, the World Bank's Environment Department quietly issued a working paper "prepared for internal use." This collection of essays compiled by World Bank staff economists Robert Goodland, Herman Daly, and Salah El Serafy presents an assessment of the global development experience sharply at odds with the official Bank orthodoxy set forward in *WB 1991*. The conclusions of "Environmentally Sustainable Economic Development: Building on Brundtland" should have special weight. Its essays are carefully documented and well-reasoned, and its contributors include two Nobel laureates in economics—Jan Tinbergen, who received the first Nobel

Prize in economics in 1969, and Trygve Haavelmo, who was honored in 1989 for his contribution to founding econometrics.

Publication of "Building on Brundtland" in book form by the United Nations Educational, Scientific and Cultural Organization (UNESCO) is forthcoming. It is still not certain whether the working paper will be published as a book by the World Bank, however, because some of the more orthodox economists on the Bank's publications committee have raised objections. They have argued that it is not up to the Bank's high "technical" standards—a rather remarkable charge given the professional stature of the document's contributors. Some outsiders see "Building on Brundtland" as a seminal work and suggest that the Bank's concern for political correctness is at issue, not its technical standards.

As already demonstrated by the response of the Bank's publications committee, "Building on Brundtland" is destined to be greeted by the economic and development establishments with all the enthusiasm with which the Catholic Church received Martin Luther's Theses on the Papal Indulgences. An equally revolutionary document, it makes the case that conventional economics and many of the policies it espouses have been rendered obsolete by a fundamental change in the relationship between economic activity and the earth's ecology.

Its basic argument is both simple and deeply disturbing. Human society has built its economic theory and institutions on the premise that the total demand that human economic activity places on the environment is inconsequential relative to the environment's regenerative capacities. In short, contemporary economic theory and policy assume an "empty world." We now face a new reality. In the opening essay, Goodland presents alarming data on global warming, ozone depletion, land degradation, shrinking biomass, and waning biodiversity in making the argument that human activity has grown to the point at which it now either fills the available ecological space or will within a few more years. In this respect, Goodland's essay complements Worldwatch's annual *State of the World* report, which is now available in more languages than *Reader's Digest* and probably surpasses in readership and credibility any official U.N. or other multilateral agency publication dealing with similar issues.

Skeptics will surely wish to debate Goodland and Worldwatch on whether one or another environmental limit has already been passed or will not be passed for another 10, 20, or even 30 years. From a historical and policy perspective, however, such details are of little practical relevance. Basically we have filled our world and have little time to reverse our course before the damage becomes truly irreparable. The confrontation with ecological limits is a *current*, not a *future*, event.

The authors of "Building on Brundtland" argue that our new full-world reality means we must come to terms with the basic distinction between growth, which "means to increase in size by the assimilation or accretion of materials," and development, which "means to expand or realize the potentials of; to bring to a fuller, greater or better state."[6] They explicitly dismiss *Our Common Future*'s argument that growth can alleviate poverty in the absence of a radical commitment to redistribution. Assuming it were environmentally feasible, which it is not, the across-the-board 3 percent annual growth in income proposed by the Brundtland Commission would do remarkably little for the poor, they point out:

> [A]n annual 3% global rise in per capital income translates initially into annual per capita income increments of $633 for USA; $3.6 for Ethiopia; $5.4 for Bangladesh; $7.5 for Nigeria; $10.8 for China and $10.5 for India. By the end of ten years, such growth will have raised Ethiopia's per capital income by $41 . . . while that of the USA will have risen by $7,257.[7]

In *State of the World 1990*, Lester Brown provides corroborating evidence that growth does not necessarily eliminate poverty. Brown observes that on average the additions to global economic output achieved during *each* of the past four decades have matched total economic growth since the beginning of civilization until 1950. Yet during these four decades of unprecedented growth, we have also seen unprecedented increases in the numbers of absolute poor and the rate of environmental destruction, and arguably unprecedented disintegration of the social fabric.

Jan Tinbergen and Roefie Hueting take issue in their contribution to "Building on Brundtland" with those who maintain that sustained economic growth can be achieved by expanding economic activity that is not harmful to the environment. They point out that there are two ways to increase economic output. One is to increase the number of people who are employed, which generally contributes little to growth on a per-capita basis. The other is to increase the productivity—the value of output per worker—of those already employed, which historically has been the major source of growth. About 70 percent of economic growth through productivity increases has come from the 30 percent of economic activity that is environmentally the most harmful—notably the oil, petrochemical, and metals industries; agriculture; public utilities; road building; transport; and mining.

"Building on Brundtland" also takes issue with those economists who have long argued that market forces will correct for any problem of scarce or diminishing resources by pushing up prices and thereby encouraging the use of substitutes. This argument may hold true to some extent in the case of depletable physical resource inputs such as petroleum and copper, but it is clear that the market cannot automatically correct for limits on the environment's ability to absorb the pollution of our economic processes (what the authors call "sink constraints"). When a producer dumps pollutants into the air or water, the costs are passed on to the community; the producer's own costs are not increased. Therefore there is no automatic market incentive for the producer to take corrective action. "Building on Brundtland" notes that in general we are finding that sink constraints such as greenhouse gases, ozone depletion, and air and water pollution pose a more immediate ecological limit to economic expansion than does the depletion of physical inputs.

Daly, in his essay on the historical turning point from what he calls empty-world to full-world economics, suggests one reason why neoclassical economics has not come to terms with the implications of this fundamental shift in reality. Neoclassical economics is blinded by the commonly accepted premise that man-made capital can serve as an almost perfect substitute for natural capital. In fact, natural and man-made capital often behave more like complements than perfect substitutes. The fishing boat is useless without the fish. The saw mill has no function without the forest. Natural capital has been the limiting factor throughout most of human economic history, now more than ever.

Today investment in natural capital has become at least as important as investment in man-made capital because of the perilous state of the environment:

> Past high rates of return to manmade capital were possible only with unsustainable rates of use of natural resources and consequent (uncounted) liquidation of natural capital. The new era of sustainable development will not permit natural capital liquidation to count as income, ***and will consequently require that we become accustomed to lower rates of return on manmade capital.*** . . . [8]

To raise the importance of natural capital to that of man-made capital will require a fundamental shift in how we live and in how we think about returns on investment. Historically, economic progress has been based on the ever expanding colonization of ecological space to increase the physical throughput of the economic system. The resulting depletion of natural capital has been disregarded, and much of the resulting consumption has been extravagantly wasteful. To reverse this perilous trend, "Building on Brundtland" argues that development "by the rich must be used to free resources . . . for growth and development so urgently needed by the poor." Moreover, economic policy "will have to suppress certain activities in order to allow others to expand, so that the sum total remains within the biophysical budget constraint of a nongrowing throughput."[9] In short, the rich must dramatically alter their way of living to reduce the demand they create for high levels of physical throughput of the economic system, a conclusion exactly opposite of that reached by the Bank's *World Development Report 1991*.

The extensive opportunities that exist for reducing waste and overconsumption without a sacrifice of life-style are suggested by the differences in consumption patterns among industrial societies. For example, Americans consume 2.5 times as much energy per capita as do Japanese, and 1.7 times as much as West Germans.[10] Americans and Canadians generate roughly twice as much garbage per person as do West Europeans and Japanese.[11] Other examples of unnecessary waste include the estimated 10 to 30 percent of all global environment degradation due to military-related activities.[12]

The first step toward a sustainable human future must be to break the grip that the growth myth retains on our thinking and institutions. Growth-centered development is itself inherently unsustainable. Sustainability does not depend on ending human progress, only on abandoning the myth that erroneously equates such progress with growth.

### Integrating the Global Economy

"Market-friendly development," the World Bank's latest catchphrase, is the focal theme of *WB 1991*. According to the Bank's assessment, the lessons of 40 years of development history reveal that the market is the key to growth. The Bank is now calling on governments to complete the integration of their national economies into the global economy, invest more in social and physical infrastructure, and allow international market forces to play themselves out locally without government interference.

In recent years the full political and economic force of the Bretton Woods institutions—the World Bank, IMF, and GATT—has been marshalled behind these principles. In keeping with this philosophy, country after country has been encouraged to embark on export-led growth strategies, open its borders to imports and foreign capital, and gear its economy to the needs of international markets. The Bank—like most of the development establishment—takes the benefits of free trade and foreign investment as a given. The issues, however, are more complex than the Bank's treatment suggests.

The principal difference between a market economy and a state-dominated command economy is not appropriately defined by the degree of openness to unrestrained and unregulated international market forces—as the Bank's current policy thrust seems to imply. Many market economies are substantially protected. As will be argued below, some degree of protection may be essential to achieve a sustainable relationship between economic and ecological systems.

While the World Bank's current concept of development may be "market-friendly," that is not the same as being people-friendly. *Our Common Future* presents a substantial body of data demonstrating the inequities of the international trade and investment system and the negative consequences associated with the South's heavy dependence on that system. It shows how, for instance, the pressures on nonindustrial countries to increase their exports of primary commodities under export-led development strategies have increased environmental stress and depressed international commodity prices. The more prices are depressed, the worse the terms of trade the country faces, and the greater the pressure to export still more simply to maintain established levels of foreign exchange earnings. The only certain beneficiaries are the transnational corporations that dominate the international commodity trade.

"Building on Brundtland" takes up this theme. "While many nice things can be said about liberalizing and thus increasing trade, the structure of trade, as we know it at present, is a curse from the perspective of sustainable development," Trygve Haavelmo and Stein Hansen argue. Trade and sustainable development often run at cross purposes, they maintain, because of the "drive for efficient resource use in the presence of significant environment externalities and other market imperfections." The only way to resolve this dilemma is to require full-cost pricing of resources, they argue. But to do this would require "substantial intervention at national and supra-national levels into otherwise free market forces of domestic and international trade." Otherwise, in a regime of free trade, countries that practice full-cost pricing would, "in the short-run, lose out to countries that did not."[13]

An example from the Brazilian rain forest illustrates the kind of conflict that emerges between economic policies and activities that *internalize* environmental costs (full-cost pricing) and the competitive dynamics of free trade that create pressures to *externalize* these costs. The hundreds of thousands of inhabitants of Brazil's Amazon who make their living harvesting latex from rubber trees that grow wild in the rain forests have become the forest's most ardent defenders. Many have given their lives to the cause. Their activities simultaneously preserve the natural state and diversity of the rain forests, make them economically productive, and save Brazil millions of dollars in foreign exchange otherwise needed to import rubber.

However, traversing the jungles to collect latex from scattered native rubber trees is not as economically efficient as harvesting it from the plantations of hybrid rubber trees that have displaced large areas of natural rain forest in Southeast Asia. Consequently, natural Brazilian rain forest rubber cannot compete with imported estate-produced rubber in an open market.

Trade liberalization treaties now being implemented threaten to put the Brazilian rubber tappers out of business because the price of their rubber internalizes the costs of maintaining the natural rain forest, while the price of imported rubber does not. Trade liberalization advocates claim that Brazilian consumers will save some $40 million a year. No mention is made, however, of how Brazil will earn the foreign exchange to pay for these purchases (how much rain forest timber will Brazil have to sell, for instance?), or what the costs to humanity will be of losing the Brazilian rain forests that the rubber tappers' labors help to protect.

Another important reason why the terms of North-South trade are stacked so heavily both financially and environmentally against the South is because of the North's monopoly in technology. The export earnings of Southern countries are heavily dependent on exporting commodities with a high environmental resource content (the prices of which, as noted above, tend to be driven down in competitive markets). By contrast, the Northern countries export many products that have a high technical or information component relative to their environmental resource content. These products are able to command premium prices, in part because international patent agreements limit the number of suppliers.

It is not surprising that the Northern countries are so committed to including the protection of intellectual property rights in the new GATT accords. It is extremely hypocritical, however, for the Northern countries to demand free-market competition in the sale of primary resources while at the same time demanding the granting of monopoly ownership rights to holders of intellectual properties. The logic of sustainable development argues that higher prices should be paid for natural resources to assure their frugal use, while technology should be shared to enhance human well-being with the least possible environmental cost.

*For the Common Good: Redirecting the Economy Toward Commu-*

*nity, the Environment and a Sustainable Future* by Herman E. Daly and John B. Cobb, Jr., presents an excellent analysis of why policies aimed at integrating the world economy are in fundamental opposition to the requirements of sustainable development. Daly and Cobb wrote their book to and for economists to encourage a rethinking of economics as a discipline in light of the need to make concern for ecology and community central to economic analysis. The economics profession has responded with an echoing silence, demonstrating once again the durability of its assumption that existing theory and practice already take adequate account of the social and ecological interest. Social and environmental activists the world over have become its avid readers, however, and the Washington-based publication *New Options* named it the best political book of 1989.

Daly and Cobb argue that conventional trade theory is founded on three increasingly questionable assumptions: that trade is between national economies; that the factors of production—specifically capital and labor—are confined within national boundaries; and that trade between the participants is balanced such that imports equal exports. Under these conditions, if a country lacks a comparative advantage in one product, capital and labor shift to another product in which the country has an advantage. Thus, so the theory goes, trade is not a zero-sum game, but to the advantage of all who partake in it.

Under the conditions of an integrated world economy, however, in which capital flows freely across national borders to the locality offering the highest, quickest profits, capital transnationalizes; capital loses its national identity, and trade theory does not apply. Less attractive localities face a rapid and self-reinforcing drain of capital, while more attractive ones find their economies superheated by investors seeking quick speculative returns. Similarly, production facilities move to the locality or country offering the lowest overall production costs.

Under such conditions, localities no longer share control over trade and capital with the firm.[14] Instead, control rests almost exclusively with firms that have only limited local attachment. Thus, the logic that all participants gain from an open trading system breaks down. For example, if there is a surplus of labor, as there is in the globalized economy, the power balance between labor and capital shifts in favor of capital. Wages are bid down toward subsistence, while the returns to the firm increase. We see the results in the current worldwide growth in the income gap between the rich, who control capital and technology, and the poor, who sell their labor.

Similarly, the power balance between capital and governments also shifts.

Today the most intense competition in the globally integrated market is not between gargantuan oligopolistic transnational corporations. It is between governments that find themselves competing with one another for investors by offering the cheapest and most compliant labor; the weakest environmental, health, and safety standards; the lowest taxes; and the most fully developed infrastructure. Often governments must borrow to finance the social and physical infrastructure needed to attract private investors.

Having pushed almost the entire social and environmental costs of production onto the community, many firms are able to turn a handsome profit. Having bargained away their tax base and accepted low wages for their labor, many communities reap relatively few benefits from the foreign investment, however, and are left with no evident way to repay the loans contracted on the firms' behalf. Moreover, the firms remain free to move to a more attractive location if taxes, wages, or health and environmental standards rise. "Free traders, having freed themselves from the restraints of community at the national level and having moved into the cosmopolitan world, *which is not a community*, have effectively freed themselves of all community obligation," Daly and Cobb observe.[15]

These dynamics are not limited to Southern countries. The devastating consequences of economic integration are being felt in all societies, including those of the North. It is no longer evident that the average American benefits from policies aimed at increasing the global competitiveness of corporations that happen to have their headquarters in the United States but pay few U.S. taxes and locate their jobs and production facilities abroad to escape from U.S. labor and environmental standards. A recent article in *The Nation* discusses the experience of Moore County, South Carolina, which benefited handsomely when large manufacturers fled the unionized Northeast in the 1960s and 1970s, lured south by promises of tax breaks, lax environmental regulations, and compliant labor. A few years ago Moore County floated a $5.5 million bond to finance sewer and water hookups for the expansion of a Proctor Silex plant, even though nearby residents were living without tap water and other basic public services. Late last year, NACCO Industries, the parent company of Proctor Silex, decided to move its assembly lines to Mexico, eliminating the jobs of 800 workers and leaving behind drums of buried toxic waste and the public debts the county incurred on its behalf.[16]

When such issues are placed in a global perspective, we see an interesting shift emerging in the nature of North-South relations. As the integration of the global economy progresses, power has been shifting from community and nation to transnational capital, increasing the gap between rich and poor in both Northern and Southern nations. Increasingly, North-South is defined by class rather than geography. North no longer stands for a group of nations, but for the classes aligned with transnational capital who see the consolidation of its power over the world economy as the measure of economic success. The South is comprised of those—be they in New York or Nigeria—who are being pushed ever further toward the margin by this process. Ultimately, both will be losers in a world of disintegrating ecological and social structures. But until the privileged Northern classes come to recognize this inescapable truth, it is in the common interest—and within the reach—of the Southern classes and the growing number of their enlightened Northern allies to assume the leadership in moving the world toward sustainable development.

Daly and Cobb's most pointed argument regarding the conflict between sustainability and a globally integrated economy comes in their discussion of what economists call "market imperfections." They begin the discussion by identifying six socially essential functions that unrestricted markets cannot fulfill—but that are, paradoxically, essential to the market's own efficient operation:

*Fair Competition*. There is a natural tendency for successful corporations to grow and gradually gain market dominance. To maintain a competitive market, these corporations must be broken up into smaller competitors through trust busting, which is "practically a forgotten word in the current age of mergers, takeovers, and misguided efforts to reestablish international competitiveness by allowing gargantuan expansion in the vain hope that economies of scale have not given way to diseconomies of scale."[17]

*Moral Capital*. While the market is driven by individualistic self-interest, its efficient function depends on values such as honesty, initiative, and thrift. The tendency of the market to reward individualistic behavior over all others works to deplete this moral base. The U.S. savings and loan crisis and the looming crises in the banking and insurance industries are but two examples of the dangerous and far-reaching consequences of the depletion of moral capital.

*Public Goods*. Many goods, such as scientific knowledge, highways, and national defense, are essential to society and to business but will not be supplied by the market because, once produced, they are freely available for use by everyone. This is such a basic and widely recognized principle of market economics that the provision of public goods, in particular human capital and physical infrastructure, is the one governmental function that the World Bank strongly and consistently endorses in *WB 1991*.

*Externalities*. Those who choose to engage in market transactions seldom bear the full costs of the transactions. Many of the real costs of market transactions, such as the costs of pollution and destruction of the ozone layer, are routinely passed on to the community; they are externalized, rather than being included in product prices.

*Just Distribution*. Markets do not automatically provide employment at a liveable wage to all who need it or provide for the needs of those unable to work.

*Ecological Sustainability*. The market has no way of determining the optimum scale of the economic system relative to the ecosystem. It responds only to the absolute depletion of resources by transferring an ever greater share of the available resources to the economically powerful.

The market produces socially optimal outcomes *only* when some other institution, usually the government, is empowered to correct for these six market imperfections. With the advent of an integrated global economy, governments have become increasingly enfeebled in the face of the march of the market.

Daly and Cobb observe that it becomes difficult, if not impossible, for governments to perform their essential nonmarket functions when economic power is centralized at the global level, while political power is decentralized to national and local levels. For the system to function in the interests of the community, economic and political power must be in balance at any given system level.

At first sight this appears to leave only two current choices — either centralize political power in a global government or decentralize the economy and thus make economic actors once again more accountable to local and national concerns and authorities. The first option is undesirable because it would lead to a disturbing concentration of unaccountable power. On the other hand, economic decentralization is complex and difficult to achieve, particularly given current trends. This dilemma can only be resolved by recognizing that we do not face an either/or choice. The one-world society that now exists must develop democratically controlled institutions at the global, national, and local level that are equipped to create a decentralizing frame for economic activities that returns institutional control to people, roots economic interests in local soil, and reestablishes some sense of human community. This will require restoring a degree of integrity to national and local markets by strengthening the ties of capital to locale and keeping trade between localities in reasonable balance.

This is definitely not to argue for autarky, or the closing of national economies to international exchange and influence. A broad range of possibilities exists between closing national borders, as some countries have chosen to do to their extreme detriment, and the elimination of national economic borders, which seems to be the current policy rage. Neither of these two extremes works in the human interest. As will be elaborated later, the appropriate goal is not free trade, but rather balanced and mutually beneficial trade between strong, self-managing, self-reliant economies.

## International Assistance

It is hardly surprising that many of those whose livelihoods depend on salaries, grants, and contracts provided by the foreign aid establishment—which includes most of us who write on the subject—have a considerable faith in the value of increasing international assistance expenditures. Of the sources reviewed here—even those highly critical of foreign aid—all but one, Daly and Cobb, call for significant increases in foreign assistance and lending.[18] Berg and Gordon denounce calls for cutting foreign assistance as isolationism and a disavowal of the responsibility of the rich to aid the poor, dismissing them as "fringe perspectives."

International assistance has made important contributions in many areas. It has been critical in improving the health and education of many of the South's poor and in building modern institutions, particularly institutions of research and higher learning in developing countries. It is not evident, however, that current assistance efforts are on balance contributing to a resolution of the pressing social and ecological crises of recipient countries.

Calling attention to the small portion of assistance allocated to those activities considered of highest priority to the poor—primary health care, basic education, family planning, and rural water supply—*UNDP 1991* suggests that *how* aid is allocated may be more important than *how much* aid is allocated. *UNDP 1991* argues that Southern countries could meet a major portion of their human development needs by restructuring existing budgets and policies so as to reduce military expenditures, subsidies to state-owned enterprises, debt service, and other nonproductive items. This could free up an estimated $50 billion for human development priorities[19]—a sum equal to nearly the total sum for international assistance in 1988. Furthermore, *UNDP 1991* identifies numerous ways to reallocate funds from services that benefit the few, such as higher education and hospitals, to those that meet the needs of the many, such as primary education and primary health care. So long as the priorities of both donors and recipient countries are strongly biased against the needs of the poor, as the UNDP analysis suggests, the argument that increases in foreign assistance are needed to assist the poor has a hollow ring.

Daly, Cobb, and others with an intimate knowledge of the foreign assistance system and a genuine concern for the poor are coming to the painful conclusion that "very little of First World development effort in the Third World, and even less of business investment, has been actually beneficial to the majority of the Third World's people." They suggest that this "investment and aid have destroyed the self-sufficiency of nations and rendered masses of their formerly self-reliant people unable to care for themselves."[20] The key elements of the anti-aid argument are:

- Many projects funded with foreign assistance have been excessively costly, have not worked at all or worked badly, and have had unfavorable environmental and social consequences, particularly for the poor.
- The model of development that assistance agencies are promoting often works actively against the interests of the poor and the environment for reasons elaborated throughout this essay.
- Aid has tended to support and provide patronage to authoritarian governments and political leaders who have ruthlessly deprived the poor of their basic rights and resources.
- A considerable portion of aid has been in the form of loans that have added substantially to the debt burden of poor countries. The borrowing mentality created by international assistance has also encouraged reckless and irresponsible commercial borrowing. In order to meet their debt payments, countries have had to implement severe cutbacks in social services, expropriate and sell natural resources, and suppress workers' rights and wages to attract foreign investment.

There is much merit to the argument that if given the choice between the present system of international assistance and no assistance at all, the Third World's poor would be better off with none. What of the plea that more assistance must be provided to Southern countries to help them address their environmental crisis? The need for stronger environmental action is clear, and the environment is currently in donor favor. There is, however, good reason to doubt the ability of existing agencies, especially the multilateral development banks, to be effective in providing such assistance.[21]

Many donor-funded projects—including some that have been billed by their sponsors as "environmental" projects—have had dismal social, environmental, and economic records. Two other issues, however, are more fundamental: the deeply flawed development model advanced by most donor agencies, and the way in which official assistance contributes to the economically, environmentally, and socially crippling debt of recipient countries.

In 1981 there was a positive net capital flow of $43 billion from North to South. By 1989 this had reversed to a net outflow of $50–60 billion from South to North (a figure roughly equivalent to new aid flows).[22] The total debt-service payments of Southern countries were $170 billion in 1989; if existing debt were eliminated, this would immediately make available to Southern countries foreign exchange resources more than three times current aid levels.

However, nearly every source reviewed called for debt relief combined with significant increases in loan-funded international assistance. Daly and Cobb attribute this seeming contradiction to the growth logic of orthodox economics:

> The "solution" to the debt crisis offered by the orthodox economist has been a further dose of growth. The way to grow is to invest, and the way to invest is to borrow. The solution to the debt is to increase the debt! Just why it is believed that this new debt will be used so much more productively than the older debt is never explained.[23]

The multilateral banks are among the leading beneficiaries of this debt pyramiding scheme. The larger the debt, the greater the justification for their own increased funding to maintain net positive flows—adding even further to their own economic and political clout.

Daly and Cobb identify another economic trap that international foreign assistance helps to create. Irrespective of whether it comes in the form of a grant or a loan, international assistance essentially provides the recipient with a source of foreign exchange beyond that generated by its own exports; the assistance encourages a country to gear its economy to importing beyond its own means. In the case of a loan, the recipient country builds up a long-term foreign earnings liability vis-à-vis the lending country or institution. Conversely, the donor country gears up its economy and labor force to produce beyond the level of its own needs—while accumulating claims to the future earnings of the borrowing country. Both countries may well feel they benefit from this arrangement; the donor increases its level of employment while the recipient receives unearned imports.

When the debt comes due, however, the whole process reverses. The debt can be repaid only if the net importer becomes the net exporter and vice versa. If the amounts are significant, the consequent adjustments can be wrenching for economies conditioned to exactly the opposite relationship. The debtor nation is likely to find that it must sell its environmental assets and labor at bargain-basement prices to meet its debt payments. As the lending country substitutes foreign-made for domestically produced goods, employment contracts and wages fall.[24]

It is seldom noted that the Marshall Plan, which financed the rebuilding of Europe after World War II and is often touted as a model for international development assistance, was predominantly funded by grants. Grants were chosen over loans specifically because the United States did not want to face the prospect of European competition in the U.S. market as Europe struggled to repay large loans.[25] Grant-funded foreign assistance also creates imbalances, but the roles of the two economies need not actually reverse, so the adjustment is likely to be less wrenching.

Though seldom described in these terms, the major intention of the structural adjustment programs imposed by the World Bank and the IMF on Southern debtor countries has been to move them from an import-surplus to an export-surplus condition. The unstated aim has been to reverse the direction of imbalance in their net financial flows so they can service their debts. Viewed from this perspective, the current net financial flows from South to North can be taken as demonstrating the "success" of structural adjustment. The fact is that if the borrowing countries had not been encouraged by official lenders and others to borrow heavily in the first place, and thereby gear their economies to an import surplus, they would not have had to make this particular "adjustment" and bear all the pain that it has entailed.

The appropriate course of action is not more new borrowing, but rather to move toward a model based on balanced trade and on countries living within their respective sustainable means. This means virtually eliminating long-term international borrowing and investment—and the primary function and rationale for the existence of the international development banks. It means that poor countries must forgo illusory dreams of instant prosperity based on foreign financial inflows and focus their attention on building their own capacities to make more effective, efficient, and sustainable use of their own resources to meet the needs of their choosing. Such a path is a slow one that requires significant discipline. It is, however, the only path to truly sustainable development.

It should not be surprising that the multilateral banks have been slow to come to terms with the full implications of our global dilemma. It may be that their most important contribution to sustainable development would be to phase themselves out of existence in an orderly manner.

Does this mean that the wealthy countries of the North have no obligation to help the poor of the South? To the contrary—they have an enormous obligation, as elaborated below, but not to exacerbate the problem with self-serving aid programs disguised as charity.

## New Realities

The current dilemma of human society is defined by 5 billion people, destined within the next century to become at least 12.5 billion, competing for a finite ecological space. In *State of the World*, Alan Durning roughly divides the current 5 billion into three socioecological classes—overconsumers, sustainers, and marginals.

The world's one billion overconsumers—those of us who travel by car and plane, eat lots of meat, and use a variety of disposable products—are responsible for the vast majority of the earth's ecological damage. Though some of the most conspicuous cases of overconsumption are found in the geographical South, the vast majority of overconsumers are found in the industrial North. Among the industrial nations, the United States sets the extreme standard for wasteful overconsumption, with each American on average accounting for the consumption of nearly his or her weight in basic materials each day.

By contrast, the one billion marginals live at or below subsistence levels, often driven to the fragile periphery of the earth's ecosystem by the demands of the overconsumers. They travel by foot; have poor, meatless diets; drink contaminated water; produce virtually no wastes; and may lack even basic shelter.

In between the overconsumers and the marginals are 3 billion sustainers who travel by bicycle and public transportation; eat healthy diets of grains and vegetables supplemented by small amounts of meat; drink clean, unbottled water; and recycle most of their wastes. They live in basic harmony with the earth's ecology. They are also the targets of a multibillion-dollar advertising industry devoted to convincing them to adopt the life-styles of the overconsumers in the name of economic progress.

It is sobering to realize that for each of the earth's overconsumers, there is one marginal—a human counterpart who in a finite world bears the cost of the overconsumer's profligacy. In our current full-world economy, as the rich get richer, the poor are indeed getting poorer. Here we see a stark but often neglected reality. Southern poverty is not caused by the insufficiency of financial charity from the North. The problem is the North's extraction of real resources from the poor of the South to support its own extravagance.

This pattern is now being ever more deeply institutionalized by the current integration of the world economy. Integration facilitates the concentration of economic power in stateless corporations, giving them free rein to roam the world in search of exploitable resources to feed the wasteful life-styles of the earth's fortunate few with minimal regard for the broader social and ecological consequences of their actions. A body of economic doctrine with a remarkable disregard for reality legitimates their extravagance, hailing it as ultimately beneficial to the poor.

Most official aid programs and institutions—either by intention or default—are actively engaged in strengthening and extending this unbalanced, unaccountable, and extractive system of economic relationships. Unless and until aid-administering agencies commit themselves to dismantling this system, which in some instances may mean phasing themselves out of existence, foreign aid will remain an important part of the problem.

The sustainable development agenda for Southern countries, as growing numbers of Southern grass-roots organizations are coming to realize, is to regain control of its remaining ecological resources to meet domestic needs—beginning with food, clothing, shelter, and basic social services. With few exceptions, it is within the means of the Southern countries to meet these needs for their own people—if their resources are properly organized and used.

This will require reducing dependence on conventional forms of aid; eliminating long-term international borrowing; reducing export dependence, military spending, and arms imports; demanding free access to beneficial technologies controlled by the North; repudiating odious debts that involved fraud and the misuse of public funds for private gain or shifting the repayment of obligations to the individuals who benefited;[26] negotiating a significant reduction or cancellation of remaining long-term debt; and radically reforming the allocation of available resources and assets.

The North has an obligation, as well as a basic survival need, to facilitate these adjustments. This will involve changes far more difficult and wrenching than those required of the South. First and foremost the North must dramatically reduce its dependence on the South's ecological resources and learn to live within its own means. This will require a restructuring of the international trade and financial system to put Southern countries back in control of their own economies and to assure that the North pays full value for those resources it does continue to buy from the South. The North cannot return to the South the natural wealth it has already consumed. It can make partial restitution, however, by relinquishing its monopolistic control of technology.

The North and South must also make a concerted and cooperative effort to eliminate simultaneously both overconsumption and population growth. If we fail on either or both, we should expect that at least half the world's population will be living in absolute poverty in the mid-21st century, including many direct descendants of today's overconsumers.[27]

Mainstream development thought and policy remain captive to a growth-centered vision that is deeply inimical to people-centered sustainable development. We have yet to accept that no amount of fine-tuning of the growth engine will make growth—as presently defined and measured—sustainable. The first step on the path toward sustainable development involves dispelling the deep-seated myths regarding growth, trade, and international assistance that sustain our present folly.

Eliminating growth in the physical throughput of society's economic system need not mean an end to human progress—only an end to wasteful and unnecessary physical consumption. Substantial progress is being made toward defining the elements of a sustainable, people-centered alternative to the growth-centered vision that dominates current development thought and policy. In general the recommendations for change fall into three broad categories: melding economics and ecology into an integrated discipline called ecological economics; creating a decentralized global eco-economy that reestablishes local control and democratic accountability; and reallocating space and resources consistent with a broadened definition of human well-being and development.[28]

*Ecological Economics.* In *State of the World 1991*, Lester Brown calls attention to the perceptual gap that exists between those who follow the financial and economic indicators found in the business weeklies and those who follow the environmental indicators found in the scientific and environmental journals. The financial world knows no natural limits and sees only favorable long-term trends. The natural world knows many limits and sees many alarming trends that bring into question the future viability of human life and civilization. "These contrasting views of the state of the world have their roots in economics and ecology—two disciplines with intellectual frameworks so different that their practitioners often have difficulty talking to each other," according to Brown.[29]

In "Building on Brundtland," Robert Costanza observes that neither economics nor ecology provides an answer to the human dilemma. Conventional economics is unmindful of nature and its role as the foundation of all economic activity. Conventional ecology is equally unmindful of the special needs and potential of people. Costanza describes the emergence of a new discipline of ecological economics that recognizes that the human economic system is embedded in the earth's natural ecosystem. Such a synthesis is an essential step toward achieving a sustainable economy in which human society has a balanced relationship with the earth's ecosystem and yet human needs are adequately provided for.

In a sustainable economy, business firms would still be responsible for the production of the wide variety of goods and services needed to meet human needs. But they would also have to manage their production processes in such a way that each product cycle—from basic inputs to ultimate disposal—minimizes the overall net reduction in the natural wealth available to future generations. Some firms in Sweden have already begun work on rethinking and redesigning their product cycles in such a way with support from Sweden's scientific community.[30]

The firm, however, is necessarily defined by its own products and assets and responds primarily to market forces. It cannot assume responsibility for performing nonmarket functions—such as maintaining an overall ecological balance within a geographically defined area, assuring a just and sustainable allocation of natural stocks, or representing the community interest—and remain competitive with other firms that do not choose to internalize ecological and social costs in their product pricing.

For these reasons, the management of a sustainable economy cannot be left only to market forces and functionally defined business firms. There must be a multilevel system of strong territorially defined governmental units responsible for performing these essential nonmarket functions in the community interest. In its haste to be "market-friendly," much of current economic thought and policy seriously neglects the essential role of governments at all levels.

The founders of the modern science of economics chose the firm, not the household, as the basic unit of economic analysis, and the implications of this choice weigh heavily on human society to this day.[31] Much of the current economic thinking and policy seriously neglects the essential importance of the household and the community. This is especially ironic given that the word economics is derived from the Greek *oikonomia*, which means the management of household assets to maximize the long-run benefits of all the household's members.[32]

The firm and the household often have quite different interests and perspectives. For example, the household values the wages of its members as a benefit and seeks to maximize them. The firm views the wages of its employees as a cost to be minimized. The household seeks to maximize well-being while the firm seeks to maximize profits and market share. The aggregation of household interests gives a reasonable approximation of the community or collective interest. The aggregation of the interests of the firms operating in a geographical area, however, represents only an aggregation of the interests of those who own and control capital (which must not be confused with the broader community interest). Because it views the world from the perspective of the firm, conventional economic theory tends to place the interests of the firm ahead of those of the household or community.

Ecological economics must be predominantly an economics of household and community. It must take into account the wide range of needs of community members, including opportunities for satisfying and useful work, secure access to biological and social necessities, stable relationships, intellectual stimulation, and a sense of being part of a thriving and vital community.[33] It thus seems appropriate for ecological economics to return economics to its original conceptual roots by taking the household and community as its basic units of analysis and to be quite explicit in measuring the performance of the firm against its contribution to the well-being of the whole.

*A Sustainable Global Ecoeconomy*. It is far beyond the scope of this essay to propose a detailed model of a sustainable global economy. Broad principles will have to suffice, along with an acknowledgment that we are dealing with a need for radical and complex changes, not all of which have been completely worked out.

There is a broad consensus among alternative thinkers that decentralization and local accountability must be the key features of a sustainable eco-economy. This means that the larger global economy must be divided into a system of interrelated local economies that are for the most part self-reliant. Each local economy must come under the jurisdiction of a democratically accountable governmental unit. The local economies and their administering units may or may not coincide with existing national boundaries depending on local circumstances. In many instances units that are larger or smaller than existing countries may be appropriate. The goal in the management of these local economies should be sustainable improvement in human well-being—not economic growth.

Each locality should aim to manage its own resources in ways that provide for the basic needs of its own people on a sustained, largely self-reliant basis. Localities could expand their ecological means relative to their population through measures such as increasing forest cover and seeking negative population growth rates.

Preferential treatment would be given to smaller, locally owned firms, and antitrust provisions would be strictly enforced at national and international levels through multilateral agreements. Broad and localized ownership of productive assets would be encouraged by promoting small family businesses, cooperatives, and worker-owned enterprises.

Responsibility for managing relationships among local economies would be vested in a multilevel structure of territorially defined governmental units in which the mandate of each higher-level unit is to enable the local economies within its jurisdiction to become more self-reliant and conserving.[34] The responsibilities of these units would include assuring appropriate investment in natural capital stocks, managing the relationship between human and ecological systems, setting rules for the market aimed at full-cost pricing and virtual 100 percent recycling of waste products, maintaining competitiveness in local markets, managing trade relations with other regional economies, maintaining the link between asset ownership and control, and otherwise assuring the performance of nonmarket functions.

Exchanges of goods and physical resources between local economies should be oriented to compensating for differences in their respective natural resource endowments. The primary principles governing such trade would be fairness and balance. Exchanges of goods and physical resources should be oriented to compensating for differences in resource endowments among localities. The primary principles governing trade between local economies would be fairness and balance. It would probably be desirable to impose modest uniform tariffs on the movement of goods and capital and to reduce the quantities of commodities and manufactured goods moving across international borders from current levels. This would reduce the energy costs of unnecessary transport and yield other benefits as well.

As noted earlier, this is not a proposal for autarky. To the contrary, the movement toward a sustainable global eco-economy will probably require that the overall level of exchange between countries increase significantly. The desired exchange, however, will center on the free flow of ideas, information, and technology as countries work together to solve common problems, including how best to manage the available ecological resources. International agreements would seek to assure every locality full access to and control over beneficial technologies for local application.

It is worth noting that contemporary alternative economic thinking generally rejects the extremes of both socialist and capitalist economics and is not readily classifiable along a left-right continuum. While there is a strong commitment to social justice and community accountability, the principles of competitive markets, private ownership, and international trade are also recognized as essential.

Alternative economics also calls, however, for a fundamentally different stance than currently prevails toward transnational corporations. The advancement of corporate interests would no longer be a central goal of international economic policy. It would be recognized that most transnational corporations do not create jobs so much as move them around the world in an effort to push down wages and health, safety, and environmental standards. The responsible transnationals that perform useful functions in the areas of technology transfer and trade would continue to have a role, but their size and power would likely be significantly curbed. To restore public accountability, competitive markets, and meaningful private ownership, forceful international antitrust agreements will be required to break up global monopolies and oligopolies and create more opportunities for locally owned small and medium-sized enterprises. International agreements will also be required to assure that transnational corporations comply with local laws and health, safety, and environmental standards.

To govern the global economic system, a new set of international institutions would be required. This suggests a need for a radical reform of the existing Bretton Woods institutions to make them more accountable and dedicated to true sustainability as their chief mission. There is no immediately evident role in such a system for public organizations such as the World Bank and its regional counterparts whose primary business is to commit nations to long-term foreign debt. The funding and influence of these banks must be sharply reduced and the possibility considered that they should be dismantled altogether.

By contrast, IMF- and GATT-type institutions concerned with international trade and finance will have important roles in a sustainable global eco-economy, but with vastly different mandates and governing structures than they have now. An IMF-type institution would be responsible for mediating and enforcing agreements regarding financial transactions among nations or economies, and a GATT-type institution would have similar responsibilities regarding trade. A third institution would be created to regulate transnational corporations and assure enforcement of international antitrust agreements.

The Bretton Woods institutions would no longer define their goals in terms of increasing international trade and investment. Their new goals would be to assure that trade, financial, and investment relations are fair and balanced, and in accord with international agreements encouraging local economic control, self-reliance, and environmental protection. The new GATT might also be charged with assuring the widest possible access to technologies that are socially and environmentally beneficial.

*Reallocating Space and Resources.* Each Worldwatch annual *State of the World* report provides a useful guide to the numerous opportunities to transform the ways in which we use technology and allocate physical space and natural resources. The following examples from the 1991 edition serve to illustrate the many areas in which action has been far from adequate to date:

- Give high priority to converting the global economy to primary reliance on solar energy, our only constantly renewing energy source.
- Eliminate unnecessary products; reduce the material content of necessary products; repair and reuse existing products; and recycle materials from discarded products.
- Improve land-use planning to increase urban density; bring work, home, and recreation nearer to one another; and improve public transit.
- Reduce forest harvest by changing building practices, reducing packaging, recycling paper, and increasing harvesting and processing efficiency. Introduce an international moratorium on logging in primary forests.
- Provide ready access to a range of family planning services, including abortion, to greatly reduce current fertility rates while simultaneously improving the health and status of women.
- Make demilitarization a high priority so as to eliminate the egregious environmental costs of militarism.

Many of the necessary life-style changes are likely to involve less sacrifice than we might presume and may even create attractive benefits. The New Roadmap Foundation in Seattle has demonstrated that by eliminating wasteful and unnecessary consumption, people can drastically reduce their income needs and thereby have more time to devote to those activities that bring real happiness—including family, friends, and voluntary community service.[35] Frugality, properly practiced, can become liberation.

This conclusion is supported by other studies indicating that once a person is above the poverty level, there is little relationship between increased consumption and increased happiness. Happiness is more closely related to satisfaction with family life, work, leisure, and friendships.[36] In our modern society we tend to subordinate these to our drive for material success. The result is a sense of social, psychological, and spiritual emptiness that multitudes of advertisers assure us will be satisfied by the purchase of one more gadget or status symbol.[37]

Our species has had a decided competitive advantage over other forms of life on this planet in the competition for ecological space. This has bred in us a blinding and potentially fatal arrogance—a belief that we are the masters of nature and beyond the reach of natural law. This is not the first time that human arrogance has led to a fundamental misreading of reality.

At one time the prevailing scientific wisdom maintained that all the heavens revolved around the earth. The discovery of the humbling truth of our insignificant position in the cosmos liberated us from a variety of constraints that had stifled human progress, opening the door to the age of modern science. We now need a revolution in thinking no less profound than the Copernican revolution.

Willis Harman has written that "the Copernican revolution amounted to a successful challenge to the entire system of ancient authority."[38] The ecological revolution presents a similar challenge to what have arguably become the most powerful institutions of contemporary authority—the institutions of transnational capital. It is not surprising that these institutions have remained resolutely committed to the system of beliefs underlying their authority. In the end, however, they cannot survive the destruction of the society on which they depend any more than that society can survive the destruction of the ecosystem on which it depends.

Ordinary people in localities throughout the world are awakening to the reality that their social and ecological systems are collapsing around them. These are people who find themselves deprived of their means of livelihood in the name of development and efficiency; see their own and their children's health destroyed by poisons left in the soil, air, and water in the name of progress and modernization; and experience the disruption of their local economies and communities by capricious flows of rootless capital.

All around the world such people are organizing to regain control over their lives and local economies. Fragmented, dispersed, and narrowly focused though such individual initiatives may be, melded into national and international movements they can bring about the literal disintegration of the most powerful and oppressive of human institutions—as has been demonstrated in Eastern Europe and the former Soviet Union.

Of course, our current goal is transformation, not disintegration. We must seek to channel the powerful social forces being unleashed by the processes of a transnationalizing civil society so as to accomplish transformational changes of a magnitude that established institutions, left to their own devices, are unlikely even to contemplate.

Those who see all too clearly the reality of our world and the direction in which we are headed have every reason for despair. There is also reason, however, to view this as a moment of historic opportunity to set the stage for the next major step in the evolutionary history of a small yet still vital planet. The emerging transnationalization of civil society into a global people's movement is one key to that next transformation.

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## Notes

[1] Those who want a more detailed discussion of environmental limits should see Robert Goodland's chapter in Robert Goodland, Herman Daly, and Salah El Serafy, eds., "Environmentally Sustainable Economic Development: Building on Brundtland," working paper (Washington, DC: Environment Department, World Bank, July 1991), and the Worldwatch Institute's annual *State of the World* reports.
[2] World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987), p. ix.
[3] In support of this conclusion, the World Bank cites progress among the industrialized countries in reducing energy consumption and sulfur oxide emissions per dollar of GNP between 1970 and 1987. The more relevant fact that both total and per-capita carbon emissions have continued to rise in the North is not mentioned.
[4] United Nations Development Programme, *Human Development Report 1991* (New York: Oxford University Press, 1991), p. 14.
[5] From discussions with the staff of the United Nations Development Programme.
[6] "Building on Brundtland" (fn. 1), p. 2.
[7] *Ibid.*, p. 6.
[8] *Ibid.*, p. 24.
[9] *Ibid.*, pp. 3-4.
[10] Lester R. Brown, et al., *State of the World 1991: A Worldwatch Institute Report on Progress Toward a Sustainable Society* (New York: W. W. Norton & Co., 1991), p. 160.
[11] *Ibid.*, p. 44.
[12] *Ibid.*, pp. 132–52.
[13] "Building on Brundtland" (fn. 1), p. 31.
[14] Gerald Epstein, "Mortgaging America," *World Policy Journal*, Vol. 8, No. 1 (Winter 1990–91), pp. 27–59.
[15] Herman E. Daly and John B. Cobb, Jr., *For the Common Good: Redirecting the Economy Toward Community, the Environment and a Sustainable Future* (Boston, MA: Beacon Press, 1989), p. 234.
[16] Andrew Cohen, "The Downside of 'Development,'" *The Nation*, November 4, 1991, pp. 544–46.
[17] Daly and Cobb (fn. 15), pp. 49–50.
[18] Though *WB 1991* had relatively little to say about international assistance beyond a brief discussion of debt relief initiatives, *WB 1990* called for an increase of two to three times the current assistance levels.
[19] UNDP (fn. 4), p. 5.
[20] Daly and Cobb (fn. 15), pp. 289–90.

[21] See Bruce Rich, "The Emperor's New Clothes: The World Bank and Environmental Reform," *World Policy Journal*, Vol. 7, No. 2 (Spring 1990), pp. 305–329.
[22] UNDP (fn. 4), p. 80.
[23] Daly and Cobb (fn. 15), p. 232.
[24] See Epstein (fn. 14).
[25] See Cheryl Payer, *Lent and Lost: Foreign Credit and Third World Development* (London: Zed Books, 1991), pp. 19–22.
[26] See Patricia Adams, *Odious Debts: Loose Lending, Corruption, and the Third World's Environmental Legacy* (London: Earthscan Publications, 1991).
[27] Brown (fn. 10), p. 148.
[28] A number of the ideas presented here are developed in David C. Korten, *Getting to the 21st Century: Voluntary Action and the Global Agenda* (West Hartford, CT: Kumarian Press, 1990).
[29] Brown (fn. 10), p. 5.
[30] The framework being applied is discussed by Karl-Henrik Robert, "Educating a Nation: The Natural Step," *In Context*, No. 28 (Spring 1991), pp. 10–15.
[31] I am indebted for insights on this choice to personal conversations with Sixto K. Roxas, who is working on the development of an applied economics of community.
[32] Daly and Cobb (fn. 15), p. 138.
[33] *Ibid.*, p. 135.
[34] See James Robertson, *Future Wealth: A New Economics for the 21st Century* (London: Cassell Publishers, 1989).
[35] Brown (fn. 10), p. 167.
[36] *Ibid.*, pp. 162, 153–54.
[37] Paul L. Wachtel, *The Poverty of Affluence: A Psychological Portrait of the American Way of Life*: (Philadelphia: New Society Publishers, 1989).
[38] Willis Harman, *Global Mind Change: The Promise of the Last Years of the Twentieth Century* (Indianapolis: Knowledge Systems, Inc., 1988), p. 7.