

*Review Article*

# A Common Future or Towards a Future Commons: Globalization and Sustainable Development since UNCED

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As the World Summit on Sustainable Development approaches, it is timely to assess our actions on behalf of a more ecologically viable world and the barriers that remain to our realization of this goal. *Globalization* and *sustainable development* have emerged as key discourses to evaluate our social and environmental prospects. On the critical issue of limiting trade and economic growth, we find that globalization and sustainable development are not the polar opposites they are frequently depicted to be. Rather, both discourses share a common emphasis on development and efficiency as tools of sustainability. The convergence of the two discourses has placed both in opposition to the arguments of ecological justice. In the evaluation of our performance since UNCED, a pressing task is to bring the insights of ecological justice to bear on efforts to address our interrelated environmental and social conflicts.

*Keywords:* Ecological justice, global commons, globalization, sustainable development, trade, and environment.

The tenth anniversary of the United Nations Conference on Environment and Development (UNCED) is upon us, and the World Summit on Sustainable Development (WSSD) is slated to consider directions for the next decade. Thus, it is timely to assess our actions on behalf of a more ecologically viable world.

This review seeks to describe how theories and research on two key ideas *globalization* and *sustainable development* may contribute to that assessment. An effort is made to document the basic positions on each idea and to consider areas of conflict and synergy between the agendas of globalization and sustainable development. As would be expected in the case of powerful ideas such as these, a very large number of policies (both national and international) are affected by them. Because it is impossible to discuss the full range of policy conflicts at issue, we have selected a key debate that we believe illustrates the strengths and limits of current globalization and sustainable development research, namely, the conflict over free trade and the environment. Hopefully, this strategy serves to place the issue in a concrete form. Certainly, the many trade and environment conflicts that have appeared since UNCED in 1992 raise concerns about the adequacy of our theories and research to guide us toward a sustainable future in a globalized world.

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## 1. Overview

Evidence abounds that economic and technological change is occurring rapidly and that the old industrial geography from the last millennium is fading. It is also evident that these changes are not readily governed at the “local” or “community” level alone. Many analysts (e.g., Ohmae 1990, 1995) suggest that this *globalization* is all to the good. Some assert that globalization will spread economic prosperity (Bryan and Farrell 1996; Thurow 1999); others conclude that it will improve lives, especially in the form of better health care and greater access to new technology (Wildavsky 1995); and still others believe that it will promote cultural exchange (Thomas Friedman 2000). A number of researchers and theorists even propose that our natural environment will benefit as sophisticated technology is able to rapidly diffuse throughout the world, replacing or “leapfrogging” over the polluting technologies that dominated the industrial era (e.g., Brown 2001; Flavin and Lenssen 1994; World Bank 2000). While environmental status is not the central focus of the globalization discourse, there is an accumulating belief that global markets, technology, and information can favorably affect the health of our ecosystems.

A more explicitly “environmentalist” agenda of *sustainable development* is also widely regarded as providing guidance for building our future. Theory and research on this idea are less about our destiny (which appears to be the object of globalization discussions) than about our challenge. Those engaged in the sustainable development debate are concerned that our social activities are built on dynamics of endless growth that defy the limits of our non-growing, fixed, and finite ecosystems (Daly 1991, 1996; Meadows et al. 1972, 1992). Yet, those contributing to this research are often convinced that new technology and markets, if properly designed and managed, can be harnessed to reverse the current tendency toward an unsustainable future (e.g., Brown 2001; Hawken et al. 1999; and von Weizsacker et al. 1997). In this respect, while globalization may not be its central concern, the discourse of sustainable development has at least some adherents who regard ecological viability and the spread of global social and economic systems as compatible. Indeed, so-called “ecological modernists,” including researchers convinced of the existence of an environmental Kuznets relationship (see below), are confident that environmental improvement will depend upon globalization (of a well-managed kind, of course).

These hopeful portraits of our future have their doubters. First, numbers of analysts are persuaded that, far from elevating the value of our cultural, economic, and political diversity, globalization will erode our capacity to appreciate differences. Homogenized, standardized, “one-dimensional” humanity is predicted (Marcuse 1964), as largely Western, and specifically, American values, politics, and economics are feared to dominate current evolution (e.g., Bello 1994; Mander and Goldsmith 1996). The Global Era, by this account, will be hegemonic rather than progressive in its outcomes. Second, on the environmental front, the empowered logic of efficiency in economics and technology is seen as threatening environmental values and ecological health, because action to avert harm can cut into profits (Sen and Grown 1987; Shiva 1988, 1991, 1997).

Issues within this debate are manifested across the globe. As revealed by the UN’s Human Development Index, economic development has been highly uneven across human society. In fact, in the Global Era, unprecedented prosperity has been experienced, but almost exclusively in the developed world, while a number of the world’s poorest nations have grown poorer (UNDP 2000). Global indices

of environmental conditions reflect mounting problems, led by the continuing rise in greenhouse gases and an uninterrupted loss of biodiversity (Starke 2002; UNDP et al. 2001). Resources and ecosystem services on which societies depend are in declining abundance, as global consumption of water, timber, paper, fossil fuels, and precious metals increase, and waste production (including toxic wastes) expands (UNDP et al. 2001). In the same period, prospects for many of the world's indigenous peoples have continued to decline.

Some have characterized the conflict as being between social recognition of ecological limits and the insatiable demand for economic growth. Under the globalist vision, the future lies in development largely free of restraint, whether economic, political, ecological, or cultural. But the theory of sustainable development emphasizes contradictions between economic optimality and the needs of the living earth, and counsels the acceptance of restrictions in the interest of an equitable and ecologically viable future. Wolfgang Sachs (2000, 4) suggests that the contest has "acquired a clearer form over the past three decades," and that "[t]he outcome of this struggle will decide the shape of the new century."

As befits a question of this magnitude, there is a large and burgeoning body of literature covering complex matters of theory and practice. Here, we can only hope to sketch some of the major themes of the issues that are involved and to draw upon only a fraction of the published work.

## **2. Globalization**

### ***2.1. The phenomenon and a working definition***

Globalization is tied to many salient features of modernity. Driven by capitalism, it carries forward the alliance of modern science, technology, and markets in shaping society. It particularly affects economic relationships, which a few statistics can demonstrate. Thus, Brown (1998, 3; 2001, 5) reports that global output of goods grew in value from \$6 trillion in 1950 to \$43 trillion in 2000,<sup>1</sup> with growth during the seven years from 1991 to 1997 matching cumulative growth from 1950 to 1990. In part, this production is reflected in trade: world exports were 7 percent of global output in 1950, rising to 17 percent today; trade as a proportion of gross domestic product (GDP) in developed nations rose continually; and the number of countries trading increased through the last century, reaching 66 percent of the maximum possible in 1990 (Held et al. 1999, 167–168).

Several powerful institutions foster the goals of globalization. Key amongst these have been the International Monetary Fund (IMF), which has promoted free trade around the world since 1944, and the World Bank, which assists developing nations' integration into the world economy and the transformation of national economies into ones with a greater market orientation. Other institutions, such as the World Economic Forum (WEF) and the World Trade Organization (WTO), promote economic globalization through their programs and expanding legal and regulatory reach.

Other measures, including the growth of information and communication networks, the use of telephone and computing services, and activity on the Internet, illustrate globalization's evolving cultural influence (French 2000; Held et al. 1999). Indeed, some would argue that globalization is a

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<sup>1</sup> All dollar amounts in U.S. currency.

process that fashions a complementary culture and consciousness that, in turn, facilitates the acceleration of the phenomenon.

Definitions of globalization vary considerably. We propose a definition that is synthetic in many respects but, finally, is our own: namely, that globalization is the erosion of the barriers of time and space that constrain human activity across the earth *and* the increasing social awareness of these changes. Accordingly, globalization involves an increasing diffusion and penetration of global connections into social life, about which we are becoming more and more self-aware in the “every day” of life.

## **2.2. Three major perspectives on globalization**

### **• Globalization’s advocates: the neoliberal-cornucopian consensus**

A large number of positivists concentrate on globalization’s economic benefits and technological imperatives. Thinkers such as Lester Thurow (1999) point to the extraordinary growth in world wealth, the rapid improvement of technology, and the spread of democratic institutions, in concert with the extension of free trade, the reduction of state planning of national economies, and the rising importance of science and technology, as evidence of globalization’s beneficial impact. Much of orthodox economic thought is firmly behind globalization and sees its success as justification for closing the debate over free trade that divided the discipline for much of the last century. Gilpin (2000, 293) notes that “[A]lmost all economists and other proponents of free markets believe that globalization promises a world of increasing prosperity and international cooperation; they argue that no obstacles should be allowed to prevent the free flow of goods, services, and capital.” For this posture, international trade, production, and finance are making nation states redundant, and for some, markets are, in effect, “supplying” governance and authority (Ohmae 1990, 1995).

Essentially, the theoretical position of free trade-motivated globalization retains the traditional position of economics, complete with the concept of comparative advantage. However, this economic doctrine was supplemented in the second half of the twentieth century by suggestions that globalization carries an array of non-economic benefits, notably, an accelerated transition towards democratization. The alliance of liberal democracy and market economics, especially in the area of development theory and policy, gave rise to a neoliberal strategy that concluded that less government and more market power would inspire an era of global prosperity (Milton Friedman 1962). An additional partner emerged from what Dryzek (1997) and others have termed the “cornucopian” position on environment-economy relations. In this addendum, not only democracy but also environmental restoration is stimulated by a global market. Simon and Kahn (1984), Simon (1981, 1995), and Beckerman (1974, 1995) emphasize the abundance of resources available for social use, with the only relevant restraint being human intelligence and political commitment.

Seen with the benefit of the lens furnished by the neoliberal-cornucopian consensus, traditional center-periphery economic relationships are supposed to be replaced by complex and diffuse economic interactions. Local and national destinies are subsumed by the global economy, but this is welcomed

because of the openness and individual freedom promised by the era. And environmental problems are projected to fade with the accelerated use of new, cleaner technologies as a result of free trade.

- **Reform-minded skepticism**

Those who regard globalization skeptically do so for a variety of reasons. Some challenge the “global” character of globalization, pointing to the fact that the majority of global economic activity involves North America, Western Europe, and the Asia-Pacific region; only marginal economic roles are available to Africa, Asia, and Latin America. Further, globalization is seen as producing a differential shaping of national and regional economies, favoring particular sectors and activities that benefit the West, adding further to claims against its universalism.

Hirst and Thompson (1999) reject the advocates’ perspective on globalization on the basis of the strengthening position of the major trading blocks and the simultaneous reinforcement of the nation state. Nations states, they argue, enable and facilitate international economic activity, making markets dependent upon powerful states. Callinicos (1994) and others take this notion further, portraying expanding world markets as the outcome of continued Western imperialism and monopoly capitalism, facilitated by nation states.

Others identify concomitant cultural disintegration accompanying globalization, thereby contesting claims made for the integrative capacity of strengthening economic relationships across the globe. Instead of a global civilization, cultural and ethnic blocks are seen as emergent (e.g., Barber 1996; Huntington 1996). Cerney (1999) advances this one more step in arguing that globalization is reducing the opportunities for democracy and leading to increasing economic inequality and the fragmentation of governance.

While many in the skeptical camp would be equally wary of reforming globalization, there is a significant number who recognize the contrary evidence and deploy it to re-think the neoliberal-cornucopian claims. Many are institutional stakeholders in globalism, such as the World Bank and United Nations bodies (e.g., the World Commission on Environment and Development). With theorists such as Giddens (2000), Held et al. (1999), and Huntington (1996), these voices suggest that globalization is hardly the utopia acclaimed by the neoliberals and cornucopians. However, this group agrees that through institutional reform, the global economy can become an agent for prosperity, while observing ecological carrying capacities. Replacing “free trade” with “fair trade,” “liberal democracy” with “democratic participation,” and “optimality” with “sustainability,” these reformers seek to turn the failures of globalization into projects for better, more sensitive, management of the global pathway (e.g., Johnson 2001).

- **Global justice**

While it may be assumed that conflicts between globalization’s advocates and reformers will control the debate in the near term, it is likely that the postulate’s more severe critics will influence its long-term fate. Such critics include Bello (2000) and Castells (1996, 1998) who acknowledge that nation states and their populations are having to respond to unprecedented global processes of change in economics, politics, and culture. Long-standing social conceptions of space and territory are being transformed,

making well-established geographical distinctions of “local” versus “regional” versus “international” increasingly problematic.

Still, the authors offer analyses of globalization’s political, economic, and cultural failings that are not regarded as correctible simply by improving system management. Instead, the exploitative and volatile features of the industrial era are found to persist in globalization, albeit in new forms. Thus, while industrial class structure is conceded as losing a measure of its potency, a digitized version is argued to be evolving in modern networks of power. Supposedly “post-industrial” institutions like science and technology, the media, and the Internet are seen as functioning along lines that deepen existing inequalities and create new ones.

As well, researchers such as Khor (2001a, 2001b), Bello (2000), Bello et al. (1982), and Sachs (1992, 1993, 1999, 2000, 2001) assert that the North-South divisions of old, while changing, continue to trap whole societies in second-class statuses amid globalization. In their analyses, Southern restructuring of economies and governments has only quickened the pace of economic dependency in Asia, Africa, and Latin America. While perhaps the technology base of the South appears to be more “scientific” and the region’s markets seem more “competitive,” aggressive purposes and destructive results continue to accompany the activities of the Northern hosts of globalization. In this regard, globalization is seen less as a description of a desirable or objective trend, than as an indicator of the loosening of the spatial and cultural barriers to multinational corporate control.

Specific work on globalization’s implications for indigenous cultures (e.g., Peet and Watts 1996), environmental quality (e.g., Agarwal et al. 1999), and civil society (e.g., Escobar 1988) underscores the continuation of patterns of unequal development, environmental deterioration, and hegemonic cultural influence. Appeals are made for social movements to organize political opposition within and beyond national boundaries to globalization’s agenda of free trade and market restructuring. A counter agenda is proposed for globalizing demands for social justice (and, increasingly, environmental justice) that would return a measure of power to communities and elevate “lifeworld”<sup>2</sup> values (Habermas 1974) above those of the “gospel of efficiency” (Sachs 1999).

### **3. Sustainable development**

#### **3.1. Origins of the concept**

Developing and refining the “sustainable development” concept is a comparatively recent project dating back to the early 1970s (e.g., Adams 1990; Dobson 1996; Lafferty 1999; Meadows et al. 1972; Mitlin 1992; Reid 1995; WCED 1987). By convention, the Club of Rome’s *Limits to Growth* (Meadows et al. 1972) marks the popularization of the concept (although versions of the concept existed earlier). Under its innovative projections of resource consumption in an early computer-based model, this project sought to establish the earth’s carrying capacity for several critical parameters, and demonstrate that

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<sup>2</sup> Habermas uses the term lifeworld to encompass the shared values and meanings for social life itself to exist (see his 1974 book on theory and action and his two-volume work on communicative action, 1984 and 1987). We would expand the definition to include ecological values and meanings.

human development was environmentally constrained. Many key resources were forecast to be exhausted by the middle of this century.

Resource limits and the “carrying capacity” concept were extended by the International Union for the Conservation of Nature (IUCN) in its *World Conservation Strategy* (IUCN 1980). Whereas the Club of Rome dealt with resource availability for human use, the IUCN articulated a vision for conservation that recognized human activity in an ecological setting. Conservation, therefore, meant that other species, ecosystems, and ecosystem services had to be protected as well.

It was under the World Commission on Environment and Development (WCED) that “sustainable development” was coined as a key concept for our age. Drawing on a consultation process that included governments, experts, and industries from nations around the world, the WCED supplied the most often quoted definition: “Humanity has the ability to make development sustainable—to ensure that it meets the needs of the present without compromising the ability of the future generations to meet their own needs.” (WCED 1987, 8). The Commission’s report attacked many common myths, and plotted an alternative path for future global development. It called for cooperation between government and business, and for the use of technology to address the pressing problem of balancing social and economic needs with those for healthy ecosystems. A new era of economic growth was projected *if* economic and technological development would shift direction and become less resource-intensive. Equally important for the WCED, global planning and legal systems would need attention to ensure effective global management of society-ecology interactions. If we would follow the new path, the Commission was confident that humanity could reverse the antagonism between economic growth and the environment, remove the threat of poverty, and satisfy both North and South interests.

In many ways, the task, scope, and process of the WCED were unprecedented. Despite the number of initiatives in this field since the WCED, and the criticisms that its proposals have received, *Our Common Future* (1987) represents a remarkable effort in global consensus-building.

### **3.2. Three competing perspectives on sustainable development**

- **Advocates of growth—within limits**

In many respects, sustainable development has been a highly successful concept, taken up by governments and other institutions around the world since the 1992 “Earth Summit.” Sustainable development planning has become a routine part of government operations as programs for national action are embraced under the guidance of the Summit’s Agenda 21 task (Lafferty 1999). Commissions and councils to promote the concept are embedded in the institutional fabric of Northern and Southern countries. In brief, a rhetoric of “sustainable development” is widespread.

Central to the support of sustainable development is the belief in the mutability of existing institutions and economic practices to signals and directives based on environmental circumstances and values. Many advocates of sustainable development find great encouragement in “ecological modernization”—a reform of economics, institutions, and technologies in response to ecological needs that is based on the idea of a “green” society, realized by the application of appropriate legal, policy, and management tools (Gore 1992; Hajer 1995; WCED 1987).

Ecological modernization addresses the functioning of market economics and liberal democratic politics on a global scale. As to the former, the modernist formulation of sustainable development maintains the need for economic growth—the lubricant of globalization. But advocates also recognize that global growth must be tempered by international, national, and local regulation to minimize its tendencies to create social inequalities and ecological harms. Democratic guidance is sought to keep markets from reproducing unsustainable patterns of consumption and production (Brown 2001; Paehlke 1989; Weale 1992).

When the two strands are fused, sustainable development becomes a reform of state and corporate activity within a *regime of market liberalization*. Hawken (1993), Hawken et al. (1999), and others have identified the myriad ways in which market signals can be applied to the task of environmental protection and the observance of carrying capacities. This work builds on the landmark contributions of Repetto and Magrath (1989), Ayres (1996), and Costanza et al. (1997). Because environmental limits are largely unrecognized by traditional economic markets, reform is necessary in which nature's "ecological services," as well as its resources, are valorized (see especially Costanza et al. 1997). In this way, ecologically modern sustainable development seeks to realize the much-desired harmonization of economy and environment—the coexistence of market-driven growth, and democratically applied, ecologically sensitive brakes.

- **Skeptics: beyond growth**

Sustainable development has wide but, many believe, thin support (e.g., Lafferty 1999). The difficulties of making sustainable development a reality are a key source of concern. But as Meadowcraft notes (2000, 373): "Sustainable development was not formulated as either a logical construct or an operational maxim—but rather as a potentially unifying political meta-objective, with a suggestive normative core." It is this "normative core" that has vaulted the idea into the policy arena.

For an important minority, the normative commitment of sustainable development raises serious doubts about its efficacy and value. Led by Herman Daly (1991, 1996), an objection has emerged to the continued reliance by the sustainable development camp on a rhetoric and practice of pro-growth economics. How can ecological limits be accurately observed, it is asked, while sustaining an indefinite commitment to economic growth? Efforts to justify continued expansion of the global economy on the grounds that only such a commitment can give hope for a resolution of North-South inequity is unconvincing to these skeptics. For example, Daly argues that this appeal is false because it repeats the "angelized" view of GNP increase that drew us into the era of unequal development that now defines the world economy (Daly 1990). If we truly value equity, the North must make an unqualified commitment to have and use less.

A parallel concern is raised by Dryzek (1996), Eckersley (1992), and others that sustainable development seeks management solutions to political problems. Because current nation-state based political systems cannot, or will not, be forced by their citizens to observe ecological limits, these skeptics suggest that a panacea is sought in supra-national form; the "planet's future" obligates action that currently is politically unpalatable. In retort, Dryzek (1996, 1999) proposes redress in politics



directly, calling for an “ecological democracy” movement that pressures the state and the international community to demand action beyond the boundaries of corporatist and liberalist reform.

Instead of the institutional repairs and win-win strategies favored by champions of sustainable development like the WCED (1987), the World Bank (2000), and the World Business Council for Sustainable Development (Schmidheiny 1992; WBCSD 2001), Daly pushes for population and resource use policies that adhere to the measured carrying capacities of our earth’s ecosystems. The aim is to realize a “steady-state” social order in which economic activity is held in check (Daly 1996), rather than giving businesses “incentives” to make money on a “greener” future (Rich 1994). Similarly, Dryzek (1996, 1999) espouses a political movement that is clear-minded about the normative choices facing us, so that the idea of democracy is revised to require a synchronous relation between ecological health and political development.

- **Ecological justice**

A third group in the debate singles out the preoccupation with development—either of the growth or steady-state variety—as the basic flaw in the sustainable development position. Critics such as Khor and Lin (2002), Sachs (1999, 2000), Sachs et al. (1998) and Shiva (1991) challenge the view that development is a remedy for poverty and environmental degradation. Instead, this camp anchors the challenge of sustainability in the achievement of social and environmental justice, and emphasizes the recognition of the *commons* character of ecosystems, in contrast to the development approach, which invariably results in commodifying and capitalizing these systems (Escobar 1995; O’Connor 1994). This work offers a variety of critiques of sustainable development, which together reject its “development” focus and aim to transform the debate into one centered on ecological justice.<sup>3</sup>

A core theme for this approach returns to one of the original problems of sustainable development—the commons and their management. While the conventional and reform versions of sustainable development cede control of the commons to the forces of economic development, critics have sought to reinforce models of community-based commons governance where they are still flourishing, and to explore the application of commons strategies for new settings and problems (e.g., Buck 1998; *The Ecologist* 1993; Goldman 1998; Khor and Lin 2002). In contrast to Hardin’s argument that the commons are a source of social and environmental “tragedy” (Hardin 1968), this research suggests that commons-style governance can produce solutions to the causes of degradation, most notably in the cases of such global commons as biodiversity (e.g., Shiva 1993, 1997) and climate (e.g., Agarwal and Narain 1993).

Ecological justice movements are highlighted in this position as the means to understand and act on a wide variety of environmental conflicts (e.g., Guha and Martinez-Alier 1997; Peet and Watts 1996; Sachs 1993). These social movements are increasingly effective in pressing governments and challenging corporations to adopt alternative approaches for a “just” use and management of ecosystems. International institutions have also become the focus of protest over their support of individual projects, usually large in scale and in impact, to more general protests held at the sites of their international meetings.<sup>4</sup>

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3 For a review, see Byrne, Martinez, and Glover 2002.

4 Notably, the meetings of the World Economic Forum and WTO.

The ecological justice position points to the inadequacies of the liberal democratic state and its foundation in individualism and anthropocentric attitudes towards the environment (e.g., Byrne and Yun 1999). With environmental problems—especially those affecting climate and biodiversity—appearing to transcend the abilities of liberal democratic governance and developmentalism to respond adequately, these participants in the sustainable development debate argue for a greater role for civil society and for commons-focused agendas to realize a sustainable future.

#### **4. A policy case study: free trade and ecological limits**

The different schools of globalization and sustainable development have influenced every major environmental policy debate—from climate change, biodiversity loss, and endangered species, to air and water pollution, and deforestation; all are issues that attract the attention of contesting views on globalization and sustainable development.

To illustrate their policy impact, and mindful of the WSSD's aim to distill international discussion and criticism into a meta-policy framework for the next decade, we have selected the trade and environment debate for further analysis. Our choice of this policy issue is based on two factors. First, it concerns a core conceptual conflict: namely, that between economic growth (the centerpiece of globalization) and ecological limits (the key idea underlying policymaking for sustainable development). Second, it is widely assumed that a policy favoring free trade and one favoring carrying capacity-based limits are incompatible, just as it is expected that globalization and sustainable development are inescapably in conflict. Thus, a trade and environment case study allows one to discern fundamental challenges to policymaking and, at the same time, to test conventional wisdom that policy action is stymied by the conflict that exists between globalization and sustainable development.

The issue of policy-imposed ecological limits to economic growth generally, and free trade specifically, has yielded three basic positions: (1) the neoliberal-cornucopian consensus which advocates free trade without ecological limits; (2) a limited “limits to growth” position that joins the skepticism of globalization with the ecological modernization position in sustainable development discussions; and (3) a political ecology critique that regards globalization and sustainable development as formulas for ecological injustice.

##### **4.1. Free trade without apology**

Neoliberals and cornucopians dominate the free trade debate. Their position sets the “terms of reference,” and most participants are forced to respond to the unapologetic advocacy of free trade. Proponents confidently favor economic globalization to end poverty, see environmental benefits eventually resulting from open markets (or at least consider the environmental costs of growth as minor), and champion free trade policy as the linchpin for world progress in social and ecological affairs. While acknowledging physical resource limits, free traders do not see the need to inhibit the potential for economic growth, since rising wealth can, in effect, furnish the cure—namely, more than enough capital to repair whatever damage requires remediation.

Historically, this position derives from some of the classic problems addressed by the fathers of economics and their early propositions on resources and population (e.g., Jevons 1865; Malthus 1798), and most of its contemporary proponents are economists or draw heavily from mainstream economic scholarship. A considerable range of opinion exists, from laissez-faire cornucopians to the somewhat more moderate free market environmentalism of the World Business Council for Sustainable Development, which acknowledges that markets can make mistakes. For the latter, such mistakes are repairable when business is challenged by the right incentives to maintain ecosystem health...and make money. All are nevertheless unified by a belief in the primacy of the market to shape economic affairs, and endorse globalization. Together, they reject ecological limits and regard globalization's and sustainable development's skeptics as needlessly glum.

A key argument of the neoliberal-cornucopian consensus is that free trade creates private wealth and government tax revenues which can then be invested in resolving environmental problems (Bhagwati 1993a, 1993b). Economists recognize market failure in environmental values and advocate institutions to internalize externalities, so that markets can identify economically "optimal" levels of pollution and ecological losses (e.g., Anderson and Leal 1991; Meiners and Yandle 1993; and the classic Pearce et al. 1989 plan for "green taxes").

Demonstration of the environmental benefits of free trade and economic growth is often argued with empirical reference to time-series indicators of environmental conditions (Easterbrook 1995; Lomborg 2001; Simon 1981, 1995; Simon and Khan 1984). These indicator studies can be coupled with analyses of the so-called "environmental Kuznets curve" (EKC).<sup>5</sup> Under this hypothesis, there is an inverted U-shaped response of pollution to trade and economic growth.<sup>6</sup>

A review of EKC studies shows that some environmental indicators improve as income rises,<sup>7, 8</sup> but other indicators can worsen with income (e.g., Ekins 1997; Stern et al. 1996). Explanations of the EKC effect have been generally attributed to changes in the composition of economic output. Such reasoning has become widespread and underpins much policy development by national and international institutions, and forms much of the economic orthodoxy on the relationship between free trade, economic growth, and environmental policy. For example, the World Bank's world development reports have come to interpret these findings as necessitating open markets and income growth to ensure environmental protection (e.g., World Bank 1999, 2000).

#### **4.2. Free trade within limits**

Although the high-water mark of the limits debate occurred in the 1970s, and then retreated in the wake of criticism by Cole (1973), Simon (1981, 1995), and others, it has recently returned to be an important influence on trade and environment discussions. A "space" for limits-based policy was

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5 Named after the U.S. economist, Simon Kuznets, who, in the 1950s, described a similar association between economic growth and income inequality.

6 Pioneering research includes that of Grossman and Krueger (1992, 1995) Seldon and Song (1994), and Shafik and Bandyopadhyay (1992).

7 Variables responding most clearly to rising incomes include SO<sub>2</sub>, NO<sub>2</sub>, suspended particulates, sanitation, and water quality.

8 Often overlooked by interpreters of these studies is a cyclical phenomenon, a so-called "N-shaped" curve, whereby pollution again increases with income following an initial period of decline (e.g., Seldon and Song 1994).

created with the diffusion of the idea of sustainable development. The concept's flexibility in application to many scales, locales, and problems encouraged its adoption where the limits agenda had earlier stalled.

Ecological modernization is the operational form of sustainable development in the free trade debate; it suggests the need for regulation of free trade to protect ecosystems. Trade and open markets are accepted as vital tools to improve economic and social welfare, but the presence of "market failures" in ecological matters leads proponents to favor the sparing use of regulatory constraints on trade. A "natural capitalism" (Hawken et al. 1999) is anticipated as an ecologically-sensitive (mostly) free trade spreads the promise of globalization.

Rather than rejecting or downplaying environmental problems, as neoliberals and cornucopians have done, this policy proposal accepts them as important challenges to orthodox economic thinking. Central to this proposal is the rejection of sustainable economic growth as an "impossibility theorem" (Daly 1990). Indeed, Daly specifically questions the WCED's anticipation of a global economy five to ten times larger than the present one, and concludes that the current circumstance, in which one-quarter of the world's net primary productivity is currently directed towards human use, is unsustainable (see also Wackernagel and Rees 1996 on this point). Analyzed in this light, free trade contradicts the aim of sustainability, as it fosters continued over-consumption in wealthy countries. In place of free trade-driven globalization, Daly offers the "steady-state economy" (Daly 1973, 1991, 1996).<sup>9</sup>

Daly's arguments have contributed to a new intellectual movement—ecological economics.<sup>10</sup> Arrow et al. (1995) identify a key tenet of the movement in their critique of the neoliberal-cornucopian assumptions about economic growth, by asserting that economic activity requires a healthy environment. Ayres is more blunt, concluding that the notion that economic growth is good for the environment is "false and pernicious nonsense" (Ayres 1995, 97; see also Ayres 1998).

While not contesting improvements in selected environmental variables, this group rejects free trade as a panacea, finding fault with its logic, methods, and interpretations. First, free trade, by the accounts of its own advocates, initially jeopardizes environmental quality. Its potential benefit appears only indirectly and subsequently, if income gains are applied to remediate the initial damage. Second, some environmental improvements resulting from free trade may occur through transfer of industries, polluting activities, or wastes to other jurisdictions or nations, so that local improvements do not reflect net gains in environmental quality. Third, ecosystems do not respond to income in the same manner as pollutants; many ecosystems can suffer permanent or long-term harm, which cannot be reversed by technology or institutional changes. Fourth, repairs to degraded environments can themselves involve deleterious effects to social groups, other nations, or future generations. Finally, most environmental improvements strongly depend upon political and governance factors. While higher income may furnish the means for clean-up actions, policy change is invariably needed to ensure that the new prosperity is dedicated, in some measure, to the improvement of environmental quality. The neoliberal-cornucopian

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9 As Daly has acknowledged, the steady-state economy builds upon the work of Nicholas Georgescu-Roegen (1976), who in turn follows the "energy economists" from the turn of the 20<sup>th</sup> century, such as Wilhelm Ostwald (1907).

10 Ecological economics examines the relationships between economic systems and ecosystems, a field in which neither resource economics nor ecology have made great contributions. See Robert Costanza's (1989) article that opened the journal, *Ecological Economics*, entitled "What is ecological economics?" See also Martinez-Alier (1987).

premise advances no explanation of the political and governance factors needed to realize the commitment to healthy environments. Indeed, this position includes in its core theory the proposition that governmental processes produce mostly undesirable social consequences.

Several proposals have been advanced for the institutionalization of an alternative ecological economy. These include Jacobs' approach to reconcile economics with sustainable development (Jacobs 1991), and the formation of an economic system where resources and energy are used more efficiently and fewer wastes are generated (Hawken 1993; Hawken et al. 1999; von Weizsacker et al. 1997). Recently, Brown (2001) proposed the "eco-economy," in which taxes and subsidies are deployed towards environmental goals in order to re-structure national economies on an environmentally sustainable basis. In all of these proposals, trade is regulated by policies and institutional mechanisms that "level the playing field" by requiring the inclusion of negative and positive externalities in economic decision-making.

Interestingly, the political motivation for installing the steady-state economy is only partly its environmental commitments. Daly, von Weizsacker et al., and Hawken et al. also justify their plans on the grounds of improved efficiency and a qualitatively better development path. In this respect, the regulated trade position retains the belief that trade policy should be expected to produce efficient and developmentally advanced, as well as environmentally sound, outcomes. The centrality of efficiency and development to the "trade with limits" alternative underscores the existence of common theoretical ground with the neoliberal-cornucopian consensus. This is not said to diminish the importance of the antagonism that *also* exists between the two positions. Rather, it is presented to explain our assessment that advocates and skeptics in the globalization and sustainable development debates have overlapping policy commitments—despite their differences. The challenge of development and the ideal of efficiency constitute unifying themes that link mainstream and reform discussions of trade and environment issues.

### **4.3. Political ecology<sup>11</sup>**

By contrast, the political ecology position (described below) breaks with the free trade and regulated trade approaches on the role of development and efficiency. To preview this position's assessment of the matter, development and efficiency are found to be the principal sources of social and ecological problems, not tools for solution as claimed by those in the free and regulated trade camps.

Political ecology opposes globalization and eco-modernization, because both presume that trade is essentially an economic issue. Instead, analysts of this school situate trade within a political debate and substitute justice for efficiency as the measure of performance. While there is an appearance of common ground with the "trade within limits" position on the matter of ecological limits in global economic policy, political ecologists interpret the meaning of limits quite differently and reject attempts to accommodate the limits arguments within existing global markets and market activity more generally.

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<sup>11</sup> This phrase is used to denote an integration of strands of political economy and ecology to address persistent problems of social and environmental justice. For a review of these matters, see Byrne, Martinez, and Glover (2002).

For a number of political ecologists, global trade evokes specific concerns, such as waste exports to the developing world, the effects of the “green revolution” and other technology transfer programs associated with open trade, the expansion of the geography and pace of the exploitation of natural resources, and the spread of a politics of privatization-deregulation. “Southern” views have greater representation within the political ecology discourse on trade (e.g., Agarwal et al. 1999; Bello 2000; Bello and Rosenfeld 1990; Khor 2001a, 2001b; Shiva 1988, 1991, 1993, 1997, 2000).

Shared with the regulated trade group is the acceptance of the reality of environmental problems, the need for ecological limits to economic activity, and the rejection of the idea of sustainable economic growth. But whereas many reformers’ views can be accommodated within basic features of the capitalist global economy (economic growth notwithstanding), few within political ecology find its basic assumptions acceptable. Rather, adherents of political ecology place the matter of trade in a more overtly political frame that represents a contest between what are seen as “commons” and “commodity” interests.

Political ecologists explicitly charge that sustainable development is the agenda of the wealthy world (Sachs 1993, 1999), designed to ensure its political dominance and the growth of its corporate sector. Sustainable development, therefore, is not at odds with globalization, but part of a program that enhances its prospects (i.e., sustainable development is seen as being concerned mainly with the viability of the global economic system [see O’Connor 1994]). Sustainable development is seen as an effort to develop markets for environmental attributes and services which can “compete” with traditional methods of wealth creation.

Political ecology, therefore, levels the same charge at neoliberal and cornucopian economics, as at ecological economics: in each, environmental problems are constructed as development and efficiency problems. Reforms to capitalist economies along the lines of the “eco-economies” of Daly, von Weizsacker et al., Hawken et al., and Brown do not satisfy the critique of this group, who seek a more fundamental transformation of global economic relations. Recourse to an ecologically inspired “precautionary principle”<sup>12</sup> can add a cautionary dimension to trade policy, but provides little more, in this view, than a risk management strategy, and thereby deflects deeper questioning of extant economic practices. Applications of “clean” technology, ecological democracy, and “green” markets are likewise regarded as essentially temporary repairs to a flawed global economic system.

The movement to “green the GATT” (Esty 1994, 1999) and other initiatives to “ecologize” global trade agreements are evidence for political ecologists of the cooptation of environmentalism by the development-efficiency paradigm shared by free traders and trade regulators alike. It is well known to the participants of the “free versus regulated” trade debate that multinational corporations (MNCs) dominate the trade sector. In fact, the corporate elite are sufficiently self-conscious of their status to realize that lobbying on behalf of open trade needs to embrace at least the rhetoric of environmentalism (e.g., WBCSD 2001; WRI et al. 2002). The recognition of the central position of MNCs in sustainable

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12 Usually taken to mean that in the face of uncertainty, decisions should be made so as to avoid possible undesirable outcomes, and sometimes interpreted in policy settings as the rationale for decisions already justified on other grounds. Considerable literature exists on the theory and practice of the principle and it is widely applied, such as in the UN Framework Convention on Climate Change.

development discussions and their power to largely determine the effectiveness of trade agreements explains why UNCED champions economic growth and trade (with limits) as tools to address global environmental problems (Chatterjee and Finger 1994). As policy proposals, globalization and sustainable development have worked in concert for the benefit of MNCs, who could both offer their services to promote sustainable development and simultaneously argue convincingly for the necessity of freer trade.

Some reformers (e.g., Daly 1996) may express ambivalence over the performance of world financial institutions, such as the GATT, IMF, World Bank, WEF, and WTO, but by and large, the environmental agenda under the guidance of their thinking will not interrupt MNC dominance. Neither free nor regulated trade offers tools to alter significantly the role of MNCs in globalization. For political ecologists, silence on the MNC question is indicative of the failure of the dominant positions in the trade and environment debate to recognize the core problem of ecological injustice. Free or regulated trade delivered by an elite of immensely powerful corporations means that exploitative commodity interests govern the valuation of ecosystems and social systems alike (e.g., Bello 1994, 2001; O'Connor 1994; Shiva 1991, 1997). The questions of whose landscapes and whose cultures are empowered by trade policy animate political ecology and, on this score, proponents find ample evidence that the practices and norms of commons-based communities are not tolerated, either by the aggressive free traders or the advocates of trade within environmental limits (Bello 2001; Escobar 1995; Khor 2001b; Mander and Goldsmith 1996; Martinez-Alier 1996, 2000; Peet and Watts 1996; Sachs 1993; Shiva 1991, 2000).

More broadly, researchers in this school are alarmed that commodity valuation is now being pursued for climate and biodiversity (e.g., Glover 2002). Proposals to trade carbon emission permits and authorize intellectual property rights over nature's seeds, cells, and organisms suggest that even such archetypes of a global commons may not be long off-limits to the "propensity to truck, barter, and exchange" (Smith 1776). Global-scale replacement of commons values by free or regulated trade regimes with those of commodity is seen as leading to a pervasive "environmental colonialism" (Agarwal and Narain 1993) and "biopiracy" (Shiva 1997, 2000).

For this reason, some in political ecology argue for a recovery of commons values in society-nature relations (e.g., *The Ecologist* 1993; Khor and Lin 2002; Low and Gleeson 1998, 2002; Mander and Goldsmith 1996). Policies that empower community-scale decisions regarding ecosystem access and use, that retain community governance of social and economic actions in relation to commons resources, and deny commodity valuation of, particularly, global commons systems, are favored by several in this school (especially Agarwal et al. 1999; Mander and Goldsmith 1996). Such an agenda intends to preempt the development and efficiency commitments of free or regulated trade, and encourage, instead, commitments to the restoration of sustainable commons systems and the pursuit of ecological justice.

## 5. Conclusion

Crutzen and Stoemer (2000) have advanced the concept of the "anthropocene" to depict our current epoch as one in which human activity is the principal determinant of the world's condition. Importantly, the theoretical and policy formulations of globalization and sustainable development have converged on

this point. Both agree on the necessity for international ecological management in order to sustain global ecology, human society, and economic activity.

On the critical issue of limiting free trade and economic growth, we find that globalization and sustainable development are not polar opposites, as frequently depicted. Rather, both discourses share many common positions, notably, in relation to the role for business, nation states, and the acceptance of the diffusion of market relations around the world. At least the moderate voices of globalization recognize the need for a measure of environmental regulation, and most proponents of sustainable development accept the essential rationale of the expanding global economy. In this sense, globalization and sustainable development have evolved as two sides of a common vision of our future.

UNCED's great achievement in promoting sustainable development was to link ecological and economic health in a manner that the world's governments found unassailable. But this linkage may also be seen as the Achilles' heel of global policy, for the more pressing task now appears to be action on the insights of ecological justice and its critique of the consequences of globalization and sustainable development. If the WSSD is to effectively energize a new campaign to resolve the world's problems of environmental decline and social deterioration, it will almost certainly have to address a goal that is more controversial and problematic than UNCED's aim of sustainable development—namely, the goal of ecological justice.

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Commons: Globalization and Sustainable Development since UNCED. John Byrne and Leigh Glover. As the World Summit on Sustainable Development approaches, it is timely to assess our actions on behalf of a more ecologically viable world and the barriers that remain to our realization of this goal. Globalization and sustainable development have emerged as key discourses to evaluate our social and environmental prospects. The tenth anniversary of the United Nations Conference on Environment and Development (UNCED) is upon us, and the World Summit on Sustainable Development (WSSD) is slated to consider directions for the next decade. Thus, it is timely to assess our actions on behalf of a more ecologically viable world. [1] J. Byrne, L. Glover, A common future or towards a future or towards a future commons: Globalization and sustainable development since UNCED, *International Review for Environmental Strategies* 3 (2000) 5-25. Abstract: Equal Channel Angular Extrusion (ECAE) has become a very popular tool for studying the evolution of microstructure and properties under severe plastic deformation. It is believed that the stress-strain characteristics are uniform in a cross-section of the billet and this uniformity of the stress-strain distribution ensures the uniformity of microstructure and mechanical properties in ECAE processed billet. Globalization and sustainable development have emerged as key discourses to evaluate our social and environmental prospects. On the critical issue of limiting trade and economic growth, we find that globalization and sustainable development are not the polar opposites they are frequently depicted to be. Rather, both discourses share a common emphasis on development and efficiency as tools of sustainability. The tenth anniversary of the United Nations Conference on Environment and Development (UNCED) is upon us, and the World Summit on Sustainable Development (WSSD) is slated to consider directions for the next decade. Thus, it is timely to assess our actions on behalf of a more ecologically viable world.