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Growth, the Environment, and Development in the Anthropocene

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Since World War II, the way developing countries have dealt with the dilemma of balancing economic growth and the environment has evolved. The initial focus was purely on increasing national income, but over time the need to take social and ecological concerns into account became increasingly evident. If we accept that human society is now in the Anthropocene—the age of a great acceleration of human influence on the earth and the environment—and is living far beyond its limits, we must radically change our approach to this dilemma.

The idea of “the limits to growth” was introduced in a 1972 book of that title by a group of scientists who warned that growing economies, population, and pollution threatened to exhaust the earth’s resources. The key overarching dilemma today is whether the capitalist model of growth-led development is compatible with development that is both inclusive and sustainable. Sustainable development aims at addressing social, economic, and ecological concerns; but in practice, trade-offs are most often made in favor of economic growth.

In contrast, inclusive development emphasizes the goal of social well-being as well as ecological issues. While the limits to growth hypothesis addressed the relationship between growth and resources, inclusive development calls not just for balancing this dynamic but also for equitable sharing of the earth’s resources and sinks (the carrying capacity of the planet; for example, there is a limit to the amount of greenhouse gases that

may be emitted into the atmosphere without causing major disruptions to the earth’s climate). This challenges status quo politics and economics.

The question of whether growth can lead to sustainable and inclusive development becomes all the more pressing in light of the compromises reached in the formulation (and financing) of the United Nations’ Sustainable Development Goals, adopted in September 2015. The goals acknowledge the need to redesign societies based on notions of inclusiveness and ecological limits, but they are weighed down by the paradigm that promises limitless growth and jobs for all. Most of the goals focus on the symptoms of the problem and not its root cause, the underlying discourses.

In the developing world, meanwhile, China and India are taking pragmatic but differing approaches to finding their own answers to these questions. Others are coming up with alternative counter-narratives.

CHANGING PRESCRIPTIONS

The idea of a linear path that leads from underdevelopment to development drove many of the earlier growth theories. They focused on explaining how pre-agricultural societies could gradually mature into developed societies—a maturation process that was believed to correspond to some extent with demographic transitions.

Later, the focus shifted to tracking development trajectories along the inverted U-shaped environmental Kuznet’s curve: According to this theory, as societies industrialized and became richer, their pollution levels would increase, but beyond a certain point they would start to invest in protecting the environment. The curve is now seen as valid with respect to urban pollution, but not emissions that have a global impact, like greenhouse gases.

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In the latter case, the curve takes an inverted N shape or becomes simply a diagonal line, which implies that an ever-increasing amount of emissions accompanies economic growth unless major policy interventions are adopted. Another U-shaped curve is now being documented by researchers studying deforestation. They have shown how societies move from protecting pristine forests to cutting them down to make way for agricultural and other land uses, and then gradually back to replenishing and stabilizing forest levels.

Scholars and policy makers have offered changing prescriptions for growth over the past several decades. First, in the 1950s, they focused on increasing gross domestic product. In the 1960s, the focus shifted to employment and the balance of payments. The consensus priorities changed to boosting per capita GDP in the 1970s, then in the next decade to enhancing macroeconomic stability and fiscal discipline, along with addressing individual environmental problems like air pollution or the protection of species. In the 1990s the new emphasis was on human development and enhancing capabilities and freedom; promoting sustainable development became the predominant theme of the next decade.

These constantly changing policy prescriptions have led to growing frustration and fundamental questions about the nature of development: whether there are indeed simple, instrumental approaches to triggering development, whether there are limits to development, and even whether developed countries themselves have a long way to go before they, too, reach some kind of healthy balance. Southern authors like Arturo Escobar, Amartya Sen, Vandana Shiva, and Anil Agarwal have criticized the dominant definitions of development and the dominant instruments for promoting it. Legal scholars affiliated with the Third World Approaches to International Law (TWAAIL) group have questioned the design of the global economic, security, and environmental order, arguing that equal rules in an unequal world freeze status quo relationships.

For example, there is the “free rider” problem in the context of global climate change. A free rider is a country or person who benefits from the policies of others but does not contribute to addressing the problem they all face. If the international community must reduce its greenhouse gas emissions to address the problem of climate change, there are different options to achieve

that goal. The first is that everyone agrees to reduce their emissions, irrespective of their varying starting points. A more complex option would be to make the marginal costs of reducing emissions the same for all countries. The third option is to require those who have polluted the most, and have the most capacity, to be the first to reduce their emissions.

Although this last principle was adopted in the 1992 UN Framework Convention on Climate Change, the United States, which was then the world’s largest emitter, has refused to accept legally binding emission reduction targets. (All other developed countries agreed to do so, though Canada abruptly withdrew from the Kyoto Protocol in 2011). Had the United States agreed to adopt legally binding targets as laid down in 1997 in the Kyoto Protocol, there would have been demonstrable pathways to a low-carbon future available for all to emulate: Fossil fuel producers and consumers worldwide would have been on notice that the age of oil was coming to an end, and the developing countries would have received a clear and uncontroversial message that they too, in turn, would have to phase out fossil fuels. Instead we have seen 25 years of disputes over the identity of the biggest free rider in global climate politics, the United States or China—which are in no way comparable in terms of their development trajectories.

If politicians do not act, this question could be decided by the courts. A 2015 Dutch court ruling held that whatever other countries do, industrialized states like the Netherlands must accept responsibility for climate change and not hide behind the free rider argument. The Dutch state has challenged this judgment on the grounds that only the government has authority to make such political decisions.

SHARING THE PIE

Developing countries have faced a number of economy-versus-ecology dilemmas. How to modernize without Westernization—in other words, how to ensure a modernization process that is compatible with a country’s ecological, social, and cultural circumstances? How to escape the poverty cycle without destroying the very resource base (forests, for example) that permits growth? How to empower the private sector to address public problems, such as providing water and sanitation services that are environmentally sustainable and yet affordable for the very poorest? How to meet short-term domestic economic interests with-

out compromising on long-term developmental interests? How to ask for assistance from developed countries without losing control of natural resources and getting deep into debt? How to unite the coalition of developing nations represented by the Group of 77 without falling back on lowest-common-denominator compromises?

There are corresponding dilemmas in the North, especially in relation to climate change: Is it better to act earlier or wait until technological solutions become viable? How to transform into a low-carbon society without compromising on growth? How to phase out existing dirty industries without stranding valuable resources? How to assist developing countries in order to preempt their demands for compensation for ecological damage? How to ensure environmental rights without infringing excessively on property rights?

Many of these dilemmas need to be completely redefined in the context of the Anthropocene. In this era, we will have limited resources and sinks in the short to medium term. The amount of land and fresh water is more or less fixed but decreasing on a per-capita and per-use basis, creating many new conflicts of the sort that inevitably arise among humans and wildlife that share the same territory. In many cases, land and water are used not just by local people and wildlife, but to produce goods for export. Liberalization of land and water ownership rules allows foreign companies to control these resources. Many strategic minerals and metals vital for food production or for technology components have physical, economic, and/or geopolitical limits, and their availability is dwindling.

To ensure the health of ecosystems, we must recognize limits to how much we can pollute the environment or emit greenhouse gases. Ecosystems provide vital services, such as recycling nutrients like phosphorus, regulating the climate and floods, and yielding timber and food.

To address climate change, 60 to 80 percent of available oil and gas resources will have to be left in the ground—which raises the question of who should be allowed to take the share that can safely be extracted. TWAIL scholars believe that colonial patterns of exploitation will be repeated through an environmental regime that they see as a tool to limit the global South's right to development.

These global limits suggest that the solution is to “share the pie.” However, latecomers to development will demand more pie from the first comers, and the first comers may invoke an array of property rights—physical, geographical, intellectual, and technological—to block such transfers. The gap between latecomers and first comers will inevitably shrink, but there can be no Eldorado of continuing economic growth (as currently defined) for all without potentially catastrophic consequences for the climate.

Many reject the idea of sharing the pie because it raises the specter of distributive bargaining, in which one party wins and the other loses. Instead, they advocate looking for ways to redefine the pie so that there are more pieces to share. For example, if the world largely replaces fossil fuels with renewable sources of energy, presumably it will not be necessary to debate how to allocate greenhouse gas emission quotas among countries. This view is encapsulated in the notion of an equitable right to sustainable development.

Developing countries cannot follow the North's path—they must drastically deviate from it.

TRIANGULAR TRADE-OFFS

The dominant rhetoric today in UN circles is that of sustainable development, which can be depicted as a triangle connecting economic, ecological, and social elements. The idea is to find the optimum set of trade-offs among these three elements. The search must also take a temporal perspective, because sustainable development has a present-versus-future component. Many in the global South would argue that it has a past component as well, since advanced countries industrialized much earlier.

The difficulties in finding an optimum balance among these three elements have led to new discourses. The green economy or ecological modernization discourse focuses on one side of the triangle—between economic growth and environmental protection—and can take positions anywhere on that spectrum from incremental progress to structural change based on environmental limits. The inclusive growth discourse focuses on balancing economic growth and social concerns. The discourse of inclusive development, by contrast, focuses on social and ecological issues, aiming to redefine development by counterbalancing the persistent emphasis on growth.

The UN declaration adopting the Sustainable Development Goals in September 2015 shows

that the growth ideology has not been shaken off. Although it is meant to be a new charter calling on the world to fight inequality, reduce poverty, and increase poor people's access to resources and services—for example, water and improved sanitation—and do all this within ecological limits, the document repeatedly uses the phrase “economic growth.”

The UN's Third International Conference on Financing for Sustainable Development, held in July 2015, made this even clearer. Although the conference communique reiterates that developed countries should meet a long-standing UN target by contributing 0.7 percent of their national income as aid to developing countries, it makes no mention whatsoever of the “new and additional” resources to be made available for pursuing the ecological goals. This phrase was chosen very carefully by the drafters of the Climate Convention and other environmental agreements to avoid any reference to the issue of compensation for those developing countries that may suffer as a consequence of Northern overuse of global ecological sinks, as with climate change.

Furthermore, the document emphasizes national responsibility and the need for multinational corporations, banks, and other actors to promote and support sustainable development initiatives. Why these large private-sector institutions should be given responsibility for providing global public goods is not clear; given that their key mandate is to satisfy their shareholders, they will want to increase their access to the pie, not decrease it. Such statements have obfuscated the very real tension between growth in a capitalist context and inclusive development. Efficiency in itself will not solve the global sharing problem.

The Climate Convention has focused primarily on the sources of emissions, which is to say it has taken a symptomatic approach. It has explicitly stated the principle that “the Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development.” In other words, it seeks to ensure the sustainability of economic growth instead of defining sustainable development as something different. By taking this stance, it essentially says, “Hands off existing production and consumption patterns and the ideologies driving the system.” To the extent that it focuses on adaptation to climate change, this approach emphasizes end-of-pipe

solutions, rather than addressing the fundamental cause of the problem.

The bottom line is that tinkering with sources of emissions can either proceed incrementally or lead to a sharing-the-pie approach. Incrementalism will not solve the problem, but sharing the pie is not politically palatable. To borrow the terminology of organizational theory, we have to go beyond single-loop learning (making marginal changes to routines), through double-loop learning (making links to other issues and reconsidering how issues are framed) to triple-loop learning, which involves rethinking the underlying ideologies.

NEW IDEAS

Unlike the developed world, which is locked into its production-, consumption-, and infrastructure-intensive lifestyles, the developing countries still have multiple options. They face great challenges, but some of them are coming up with new ideas.

In its transition from old-style communism to a modern hybrid, China has always been skeptical about whether capitalism is compatible with addressing environmental and social issues. China's fairly recent entry into the World Trade Organization and its massive engagement in global trade has brought it wealth but also extreme environmental degradation. In June 2015, China stated its commitment to reduce its greenhouse gas emissions per unit of GDP by 60-65 percent, compared with 2005 levels, by 2030. It also aims to boost its usage of non-fossil fuel energy by increasing its reliance on renewable sources. Beijing has invested in clean development and is increasingly making renewable energy use compulsory. The state is also promoting a change in lifestyle with slogans exhorting the people to embrace a “low-carbon life” and “low-carbon days.”

China is clearly struggling with the question of whether it should play the global trade game and try to score within its rules, or whether it should go its own way. Some Chinese scholars, trying to find a shortcut to sustainable development, are discussing how China can identify and secure the resources it needs to enable a transition to low-carbon pathways. At the same time, these scholars emphasize that financing such a shortcut requires reconsidering the differing responsibilities of the global North and South. In particular, they argue that the North has not been able to convincingly demonstrate that it can decouple growth from emissions, even with

all its wealth and expertise, leaving the burden on the South to find a low-carbon development path.

In 2008, another Southern giant, India, adopted a different approach known as co-benefits, and applied the concept in its National Action Plan on Climate Change and its latest five-year economic plan. The idea is to adopt measures that have both developmental and environmental benefits, such as increasing energy efficiency in order to reduce costs, which also leads to lower energy demand and hence less pollution. These co-benefits are sought in growth, the local environment, and carbon mitigation, and preferably in multiple areas simultaneously. Ahead of the Paris climate negotiations, India pledged in October 2015 that it would adopt a “cleaner path” by producing 40 percent of its electricity from non-fossil fuel sources, reducing its emissions per unit of GDP by 33-35 percent, compared with the level in 2005, and adding enough tree cover to provide an additional carbon sink that could absorb 2.5 billion to 3 billion tons of carbon dioxide equivalent—all by 2030.

Unlike China’s unitary and dictatorial governing system, which can move quickly to implement its policies, the Indian federal democratic system is organized in such a way that water, energy, and the environment are not considered federal issues, which makes central steering of new policy ideas very difficult. But at least an effort to identify options is beginning. The notion of limits and the need for redistribution, however, has yet to enter the discussion. While different initiatives aim to enhance forest cover, expand agriculture, build large solar installations, and make space for 100 “smart cities” (with technology to monitor and manage the use of resources), it is unclear how land will be redistributed to meet all these goals.

Argentina voluntarily proposed an emissions-reduction target for itself in the late 1990s, but a financial and political crisis in 2002 dampened those aspirations to deal with ecological issues, and economic growth was given higher priority again. Instead of focusing on emissions of greenhouse gases, government officials now stress the country’s vulnerability to climate change, especially through its impacts on the agricultural and energy sectors. The pressure to achieve growth

has led officials to adopt rhetoric highlighting the global North’s ecological debt and insisting on the right of the South to development. The dilemma is evident in the inability of the state to prioritize environmental issues, although a law adopted in 2006 sets a target of generating 8 percent of the nation’s electricity from renewable energy by 2016, which can be seen as anticipating the new Sustainable Development Goal for “substantially” increasing the share of renewable energy.

Other countries are developing alternative visions of development. Bhutan has adopted the concept of gross national happiness as a way to promote future development with a more comprehensive, holistic, and spiritual basis, emphasizing respect for nature. Regarding climate change, Bhutan claims that it already sequesters more carbon than it emits.

In a similar vein, some Latin American countries are exploring the notion of *buen vivir* as

a means of developing a broader concept of well-being. For Ecuadorians, *buen vivir* includes the values of social equality, universal rights, harmony with nature, cooperative coexistence, and deliberative democracy. These

concepts are being integrated into national laws. Meanwhile, African NGOs promote the similar idea of *Ubuntu*, which emphasizes humaneness and freedom.

While most developing countries are still on a business-as-usual path, experimentally minded governments and thinkers are exploring alternative development ideas and gauging how intensively these new models use resources and sinks. They are moving toward the realization that developing countries cannot follow the North’s development path and instead must drastically deviate from it—and that the North itself has to reinvent its own path. But this will not happen smoothly.

The realization that the world faces resource and sink limits leaves us with two contrasting basic approaches: sharing the pie or redefining the pie to open up a new eco-friendly path to social well-being. Both options should be simultaneously pursued in the coming decades—the former to create at least the impression of a just world, and the latter to ensure enduring sustainability. ■

Constantly changing policy prescriptions have led to growing frustration and fundamental questions about the nature of development.
