
A User's Guide to the Century

Author(s): Jeffrey D. Sachs

Source: *The National Interest*, Jul./Aug. 2008, No. 96 (Jul./Aug. 2008), pp. 8-15

Published by: Center for the National Interest

Stable URL: <https://www.jstor.org/stable/42896168>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



is collaborating with JSTOR to digitize, preserve and extend access to *The National Interest*

JSTOR

A User's Guide to the Century

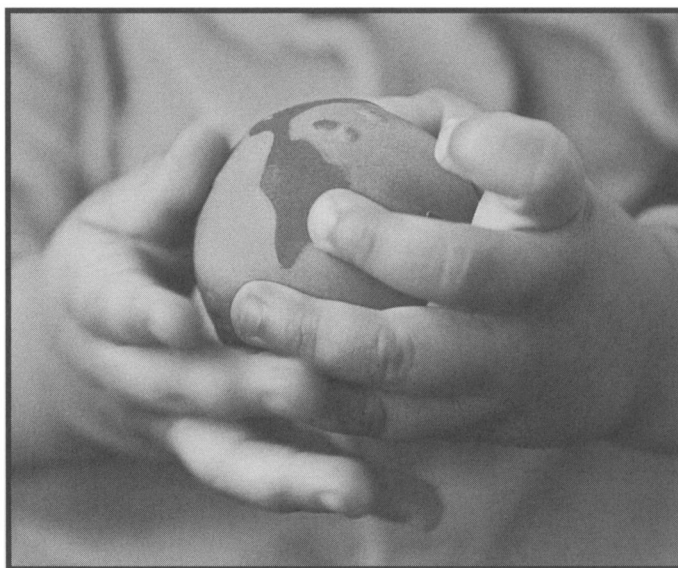
—Jeffrey D. Sachs

THE “NEW world order” of the twenty-first century holds the promise of shared prosperity . . . and also the risk of global conflict. This is the paradox of our time. The scale of human society—in population, level of economic production and resource use, and global reach of production networks—gives rise to enormous hopes and equally momentous challenges. Old models of statecraft and economics won't suffice. Solutions to our generation's challenges will require an unprecedented degree of global cooperation, though the need for such cooperation is still poorly perceived and highly contested by political elites and intellectuals in the United States and elsewhere.

Jeffrey D. Sachs is the director of the Earth Institute at Columbia University and author of *Common Wealth: Economics for a Crowded Planet* (Penguin, 2008).

Our world is characterized by three dominant patterns: rapid technological diffusion, which creates strong tendencies toward technological and economic convergence among major regions of the world; extensive environmental threats resulting from the unprecedented scale of global economic activity and population; and vast current inequalities of income and power, both between and within countries, resulting from highly diverse patterns of demography, regional endowments of natural resources, and vulnerabilities to natural and societal disruptions. These characteristics hold the possibilities of rapid and equalizing economic growth, but also of regional and global instability and conflict.

THE ERA of modern economic growth is two centuries old. For the first one hundred years, this was a strong *divergence* in economic growth, meaning a widening gap



in production and income between the richest regions and the rest of the world. The dramatic divergence of per capita output, industrial production and living standards during the nineteenth century between the North Atlantic (that is, Western Europe and the United States) and the rest of the world was accentuated by several factors. The combination of first-mover industrialization, access to extensive coal deposits, early development of market-based institutions, military dominance resulting from vast industrial power, and then colonial dominance over Africa and Asia all contributed to a century of *economic divergence*, in which the North Atlantic greatly expanded its technological lead (and also military advantage) vis-à-vis the rest of the world. The apogee of “Western” relative dominance was roughly the year 1910. Until the start of World War I, this economic and technological dominance was nearly overpowering.

The period 1910–1950 marked a transition from global economic divergence to economic convergence. Most importantly, of course, was Europe’s self-inflicted disaster of two world wars and an intervening Great Depression, which dramatically weakened Europe and proved to be the downfall of the continent’s vast overseas empires. Below the surface, longer-term forces of convergence were also stirring. These deeper forces included the global spread of literacy, Western science, the modern technologies of transport and communications, and the political ideas of self-determination and economic development as core national objectives.

Since 1950, we have entered into an era of global convergence, in which much of the non-Western world is gradually catching up, technologically, economically, geopolitically and militarily. The North Atlantic is losing its uniquely dominant position in the world economy. The technological and economic catching-up, most notable of course in Asia, is facili-

tated by several factors—the spread of national sovereignty following European colonialism; vastly improved transport and communications technologies; the spread of infectious-disease control, mass literacy and public education; the dissemination of global scientific and engineering knowledge; and the broad adoption of a valid “catch-up model” of economic development based on technology imports within a mixed public-private system. The system was modeled heavily on the state-led market development of Japan, the only non-Western country to succeed in achieving modern industrialization during the nineteenth century. Japan’s economic development following the Meiji Restoration in 1868 can indeed be viewed as the invention of “catch-up growth.”

The modern age of convergence, begun with Japan’s rapid rebuilding after World War II, was extended in the 1950s and 1960s by the rise of Korea, Taiwan, Hong Kong and Singapore, all built on an export-led growth model using U.S. and Japanese technologies and institutions. Convergent economic growth then spread through Southeast Asia (notably Indonesia, Malaysia and Thailand) in the 1970s and 1980s, again supported by Japanese and U.S. technologies, and Japanese aid and development concepts. The convergence patterns were greatly expanded with the initiation of rapid market-based growth in China after 1978 (which imitated strategies in East and Southeast Asia) and then India in the 1980s (and especially after market-based reforms initiated in 1991). In the early twenty-first century, both Brazil and Mexico are similarly experiencing rapid technological catch-up.

In economic terms, the share of global income in the North Atlantic is now declining quickly as the emerging economies of Asia, the Middle East and Latin America grow rapidly. This is, of course, especially true when output and income

are measured in purchasing-power-adjusted terms, thereby adding weight to the share of the emerging economies. By 2050, Asia will be home to more than half of global production, up from around 20 percent as of 1970. In geopolitical terms, the unipolar world of the North Atlantic is over. China, India, Brazil and other regional powers now fundamentally constrain the actions of the United States and Western Europe. This shift to multipolarity in geopolitics is bound to accelerate in the coming decades.



MODERN ECONOMIC growth did not end humans' dependence on their physical environment, contrary to the false impressions sometimes given by modern urban life. Our food still comes from farms, not from supermarkets and bakeries. Our crops still demand land and water, not simply microwaves and gas grills. Our industrial prowess has been built mainly on fossil fuels (first coal, then oil and natural gas), not merely on cleverness and efficiency. Our food production demands enormous inputs of energy and water, not only high-yield seeds. The bottom line is that the growth of the world economy has meant a roughly commensurate growth in human impacts on the physical world, not an escape from such impacts. These anthropogenic impacts are now so significant, and indeed threatening to the sustainable well-being of humans and other species, that Nobel Laureate Paul Crutzen (a codiscoverer of the human-induced loss of stratospheric ozone) has termed our age the Anthropocene, meaning the geological epoch when human activity dominates or deranges the earth's major biogeophysical fluxes (including the carbon, nitrogen and water cycles, among others).

The world economy is now char-

acterized by 6.7 billion people—roughly ten times more than in 1750—producing output at a rate of roughly \$10,000 per person per year in purchasing-power-adjusted prices. The resulting \$67 trillion annual output (in approximate terms, as precision here should not be pretended) is at least one hundredfold larger than at the start of the industrial era. The human extent of natural-resource use is unprecedented—indeed utterly unrecognizable—in historical perspective, and is now dangerous to long-term well-being. While the typical economist's lighthearted gloss is that Malthusian resource pessimism was utterly and fully debunked generations ago—overcome by human ingenuity and technical know-how—it is more correct to say that the unprecedented level of global human output has been achieved not by overcoming resource constraints, but by an unprecedented appropriation of the earth's natural resources.

In fact, the current rate of resource use, if technologies remain constant, is literally unsustainable. Current fossil-fuel use would lead to the imminent peak of oil and gas production within years or decades, and of conventional coal deposits within decades or a century or two. We would see dangerous human impacts on the global climate system, and hence regional climates in all parts of the world, through greenhouse-gas emissions. The appropriation of up to half of the earth's photosynthetic potential, at the cost of other species, would occur. There would be massive deforestation and land degradation as a result of the increasing spatial range and the intensification of farming and pasture use; massive appropriation of freshwater resources, through depletion of fossil aquifers, diversion of rivers, melting of glaciers, drainage of wetlands,

destruction of mangroves and estuaries, and other processes. And, an introduction of invasive species, pests and pathogens through a variety of human-induced changes.

The mistaken belief that we've overcome "similar" resource constraints in the past is no proof that global society will do it again, or at least do it successfully without massive economic and social upheavals, especially in view of the fact that our earlier "solutions" were rarely based on resource-saving technologies. Indeed, most earlier "solutions" to resource constraints typically involved new ways to "mine" the natural environment, not to conserve it. This time around,



human societies will have to shift from resource-using technologies to resource-saving technologies. Some of the needed technologies are already known but often not widely used, while others will still have to be developed, demonstrated and diffused on a global scale.

Human pressures on the earth's ecological systems are bound to increase markedly in the years ahead. The global economy has been growing between 3 and 5 percent per year, meaning the economy will take fourteen to twenty-three years to double. Thus, the intense environmental and resource pressures now occurring will increase markedly and in short order. The catch-up growth of the largest emerging markets—Brazil, China and India, with around 40 percent of the world's population—is based squarely on the adoption and diffusion of resource-intensive technologies, such as coal-fired power plants and standard internal-combustion-engine vehicles.

THE AGE of convergence offers the realistic possibility of ending extreme poverty and narrowing the vast inequalities within and between countries. The catching-up of China and India, for example, is rapidly reducing the national poverty rates in both countries. Other regions will also experience rapid declines in poverty rates. Yet the actual record of poverty reduction and trends in inequality leave major gaps in success. There are many parts of the planet where the numbers, and sometimes even proportions, of people in extreme poverty are rising rather than falling. Even more generally, the gaps between the rich and poor within nations seem to be widening markedly in most parts of the world.

Significant regions of the world—including sub-Saharan Africa, Central Asia, and parts of the Andean and Central American highlands—have experienced increasing poverty during the past generation. These places left behind by global economic growth tend to display some common infirmities. For example: long distances from major global trade routes, landlocked populations, heavy burdens of tropical diseases, great vulnerabilities to natural hazards (such as earthquakes, tropical storms and the like), lack of nonbiomass energy resources, lack of low-cost access to irrigation, difficult topography (e.g., high elevations and steep slopes), widespread illiteracy and a rapid growth of population due to consistently high fertility rates.

These conditions tend to perpetuate extreme poverty, and often lead to a vicious circle in which poverty contributes to further environmental degradation, persistence of high fertility rates, and social conflicts and violence, which in turn perpetuate or intensify the extreme poverty. These vicious circles (or "poverty traps") can be broken, but to succeed often requires external financial and technological assistance. Assistance like

building infrastructure raises productivity and thereby controls the interlocking problems of transport costs, disease, illiteracy, vulnerability to hazards and high fertility. Without the external assistance, a continuing downward spiral becomes much more likely. The adverse consequences can then include war, the spread of epidemic diseases, displaced populations and mass illegal migration. On top of this can be the spread of illicit activities (drug trafficking, smuggling, kidnapping and piracy) and continued serious environmental degradation with large-scale poaching, land degradation and rampant deforestation, to name a few.

The global forces of demographic change, economic convergence and global production systems are also apparently contributing to rising inequalities within societies. Technological advances favor educated workers and leave uneducated workers behind. The entry of China and India into the global trading and production system, similarly, has pushed down the relative wages of unskilled workers in all parts of the world. Geography has played a key role, favoring those regions and parts of countries which are most easily incorporated into global production systems and which are well endowed with energy, fertile land, water and climate conducive to food production. Rapid population growth in rural and poverty-stricken regions (sub-Saharan Africa) has dramatically lowered well-being in these places. In general, urban dwellers have done better than rural dwellers in the past twenty years in almost all parts of the world.

Even relatively homogeneous societies are facing major challenges of social stability as a result of massive changes in demographic patterns and economic trends across ethnic, linguistic and religious com-

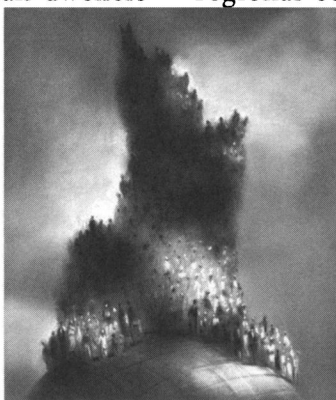
munities. By 2050, roughly half of the U.S. population will be “white, non-Hispanic,” down from around 80 percent as of 1950. This trend reflects both the differential fertility rates across different subpopulations as well as the continued rapid in-migration of Hispanics into the United States. Such large demographic changes can potentially create major fissures in society, especially when there have been long histories of intercommunal strife and suspicion.

THE NEW world order is therefore crisis prone. The existence of rapidly emerging regional powers, including Brazil, China and India, can potentially give rise to conflicts with the United States and Europe.

The combination of rapid technological diffusion and therefore convergent economic growth, coupled with the natural-resource constraints of the Anthropocene, could trigger regional-scale or global-scale tensions and conflicts. China’s rapid economic growth could turn into a strenuous, even hot, competition with the United States over increasingly scarce hydrocarbons in the Middle East, Africa and Central Asia. Conflicts over water flow in major and already-contested watersheds (among India, Bangladesh and Pakistan; China and Southeast Asia; Turkey, Israel, Iraq and Jordan; the countries of the Nile basin; and many others) could erupt into regional conflicts. Disagreements over

management of the global commons—including ocean fisheries, greenhouse gases, the Arctic’s newly accessible resources, species extinctions and much more—could also be grounds for conflict.

The continuation of extreme poverty, and the adverse spillovers from laggard regions, could trigger



mass violence. Local conflicts can draw in major powers, which then threaten expanded wars—as in Afghanistan, Somalia and Sudan. When poverty is combined with rapid population growth and major environmental shocks (such as prolonged droughts in the Sahel and the Horn of Africa) there is a distinct likelihood of mass population movements, such as large-scale illegal migrations of populations escaping hunger and destitution. Such movements in the past have contributed to local violence, as in South Africa of late, and even to war, as in Darfur.

These intersecting challenges of our crowded world, multipolarity, unprecedented demographic and environmental stresses, and the growing inequalities both within and between countries, can trigger spirals of conflict and instability—disease, migration, state failure and more—and yet are generally overlooked by the broad public and even by many, if not most, foreign-policy analysts. The instability of the Horn of Africa, the Middle East and Central Asia has been viewed wrongly by many in the U.S. public and foreign-policy community mainly as the battleground over Islamic extremism and fundamentalism, with little reflection on the fact that the extremism and fundamentalism is often secondary to illiteracy, youth unemployment, poverty, indignation, economic hopelessness and hunger, rather than religion per se. The swath of “Islamic” extremist violence across the African Sahel, Horn of Africa, and into the Middle East and Central Asia lies in the world’s major dryland region, characterized by massive demographic, environmental and economic crises.

The security institutions—such as ministries of defense—of the major powers are trained to see these crises through a military lens, and to look for military responses, rather than see the underlying demographic, environmental and economic drivers—and the corresponding

developmental options to address them. Genuine global security in the next quarter century will depend on the ability of governments to understand the true interconnected nature of these crises, and to master the scientific and technological knowledge needed to find solutions.

IN THE United States, I propose a new Department for International Sustainable Development, which would oversee U.S. foreign assistance and initiatives related to sustainable development in low-income countries, including water, food production, disease control and climate-change adaptation and mitigation.

I propose five major guideposts for a more-functional foreign policy in the coming years. First, we will need, on a global scale, to develop and diffuse new sustainable technologies so that the global economy can continue to support broad-based economic growth. If we remain stuck with our current technologies, the world will face a zero-sum struggle for increasingly scarce resources across competing regions. The new sustainable technologies will not arise from market forces alone. All major technological advances, such as the introduction of large-scale solar or nuclear power, will require massive public-sector investments (in basic science, demonstration projects, diffusion of proven technologies and regulatory framework) alongside the R&D of private markets. These public investments will be global-scale, internationally cooperative efforts.

Free-market ideologues who are convinced that technologies emerge from market forces alone should think again. They might compare the successful government-led promotion of nuclear power in France with the failure of the private-sector-led nuclear-power industry in the United States, which failed because of a collapse in U.S. public confidence in the safety of the technology. Similarly, they

can examine the highly successful public-private partnerships linking the public-sector National Institutes of Health with the private-sector pharmaceutical industry, or the public-sector investments that underpinned the start-up of computer and Internet technologies.

Second, we will need to address the still-rapid rise of the world's population, heavily centered in the world's poorest countries. Sub-Saharan Africa is on a trajectory that will expand its population from around 800 million to 1.8 billion by 2050, according to the medium-fertility forecast of the United Nations Population Division. Yet that extent of population increase, an added 1 billion people, resulting from Africa's very high fertility rates, would actually be a grave threat to Africa's economy, political stability and environment, and would inevitably spill over adversely into the rest of the world. Rapid and voluntary fertility reduction in Africa is possible, if girls can be encouraged to stay in school through the secondary level; if family planning and contraception are made widely available; if child mortality is reduced (giving confidence to parents to reduce fertility rates); and if women are economically empowered.

Third, the world will need to address critical failings in the management of the global commons, most importantly, by restricting greenhouse-gas emissions, protecting the oceans and biodiversity,

and managing transnational water resources sustainably at the regional level. Of course several global treaties have committed the world's nations to do just this, but these treaties have yet to be implemented. Three treaties of overriding importance are the UN Framework Convention on Climate Change, the UN Convention on Biological Diversity and the UN Convention to Combat Desertification. If these treaties are honored, the global commons can be sustainably managed.

Fourth, we will need to take seriously



the risks of impoverished "failed states," to themselves, to their neighborhoods and to the world. The poorest and least-stable countries are rife with risks to peace and avoidable human tragedies like the 10 million children each year who die tragically and unnecessarily before their fifth birthday, largely the result of extreme poverty. Darfur, the Horn of Africa, Yemen, Afghanistan, Pakistan, Sri

Lanka and elsewhere are places trapped in vicious cycles of extreme violence and poverty. These poverty-conflict traps can be broken, most importantly if the donors of the G-8, the oil-rich states in the Middle East, and the new donors in Latin America and Asia will pool their efforts to ensure the success of the Millennium Development Goals in today's impoverished and fragile regions.

Fifth, and finally, we require a new

analytical framework for addressing our generation's challenges, and a new governmental machinery to apply that framework. Traditional problems of statecraft—the balance of power, alliances, arms control and credible deterrence—certainly will continue to play a role, but we need to move beyond these traditional concepts to face the challenges of sustainable development ahead. Will our era be

a time of wondrous advances, based on our unprecedented scientific and technological know-how, or will we succumb to a nightmare of spreading violence and conflict? We face world-shaping choices. Our global challenges are unique to our generation, in scale and character. Vision, leadership and global cooperation will be our most-important resources for ensuring our future well-being. □