The new millennium opened on a hopeful note. The world survived the widely feared Y2K computer crisis without incident. Celebrations the world over went off without a hitch. The U.S. economy continued to surge ahead. Economic progress in China, India, and finally even Russia gave the sense that globalization might yet fulfill its promise. The IT boom was still in its full glory. We marveled at the dizzying progress of the new Internet age, the new global interconnectedness, and the seemingly endless flow of new products, new ways of organizing business, and new ways of linking people and production systems around the world. Although Africa remained a place of unrelieved crisis, even there the spread of democracy and the possibility of mobilizing new technologies to fight AIDS, malaria, and other diseases gave hope.

Perhaps the most vivid geopolitical reflection of this hope was the Millennium Assembly, which took place at the United Nations in September 2000. It was the largest gathering of world leaders in history. One hundred forty-seven heads of state and government came to New York, and did more than create a colossal traffic jam. At their historic UN meeting, the world leaders convincingly expressed a global determination to end some of the most challenging and vexing problems inherited from the twentieth century. They conveyed the hope that extreme poverty, disease, and environmental degradation could be alleviated with the wealth, the new technologies, and the global awareness with which we had entered the twenty-first century.

For the occasion, Secretary-General Kofi Annan presented the world with a remarkable document. We the People: The Role of the United Nations in the 21st Century reflected the secretary-general’s strong conviction that the UN represents not only its 191-member governments but also the peoples of the world as individuals, who are endowed with rights and responsibilities that have a global reach. We the People laid out a discerning view of the great challenges facing global society: extreme poverty, pandemics, disease, environmental harm, war and civil conflict. The document moved from a panoramic view of these great challenges through a powerful diagnosis of their root causes to a set of recommendations on how these challenges could be met through regional cooperation and action.

The document became the basis for an important global statement, the Millennium Declaration, adopted by the assembled leaders. It is worthy and important reading for all of us. Despite our travails in the intervening years, the Millennium Declaration still inspires hope that the world, complicated and divided as it is, can come together to take on great challenges. The Declaration, like the secretary-general’s report, surveys the issues of war and peace, health and disease, and wealth and poverty, and commits the world to a set of undertakings to improve the human condition. Specifically, it sets forth a series of quantifiable and time-bound goals to reduce extreme poverty, disease, and deprivation.

These goals were subsequently excerpted from the Millennium Declaration to become the eight Millennium Development Goals, or MDGs.

Table 1 lists the eight goals and eighteen targets that are bold commitments to achieve sustainable development for the world’s poorest

<table>
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<th>Table 1: The Millennium Development Goals</th>
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<tr>
<td>1. Eradicate extreme poverty and hunger</td>
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<tr>
<td>- Halve, between 1990 and 2015, the</td>
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<tr>
<td>proportion of people whose income is</td>
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<tr>
<td>less than one dollar a day</td>
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<tr>
<td>- Halve, between 1990 and 2015, the</td>
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<tr>
<td>proportion of people who suffer from</td>
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<tr>
<td>hunger</td>
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<tr>
<td>2. Achieve universal primary education</td>
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<tr>
<td>- Ensure that by 2015 children everywhere, boys and girls alike, will be able to complete a full course of primary schooling</td>
</tr>
<tr>
<td>3. Promote gender equality and empower</td>
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<tr>
<td>women</td>
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<tr>
<td>- Eliminate gender disparity in primary</td>
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<tr>
<td>and secondary education, preferably by</td>
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<tr>
<td>2005, and to all levels of education no</td>
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<td>later than 2015</td>
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<tr>
<td>4. Reduce child mortality</td>
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<tr>
<td>- Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate</td>
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people. The first seven goals call for sharp cuts in poverty, disease, and environmental degradation. The eighth goal is essentially a commitment of global partnership, a compact of rich and poor countries to work together to achieve the first seven goals. The Millennium Development Goals widely recognize that extreme poverty has many dimensions, not only low income, but also vulnerability to disease, exclusion from education, chronic hunger and undernutrition, lack of access to basic amenities such as clean water and sanitation, and environmental degradation such as deforestation and land erosion that threatens lives and livelihoods.

The Millennium Development Goals could, no doubt, engender some cynicism as well as hope. In many cases, the goals repeated long-held commitments of the international community that had not been fulfilled in the past. After all, one of the famous commitments of the past century was the international community’s 1978 pledge of "Health for All by the Year 2000." Yet the world arrived in 2000 with the AIDS pandemic, reurgent TB and malaria, and billions of the world’s poor without reliable, or sometimes any, access to essential health services. At the World Summit for Children in 1990, the world pledged universal access to primary education by the year 2000, yet 150 million or more primary-aged children were not in school by then. The rich world had famously committed to the target of 0.7 percent of GNP devoted to official development assistance (ODA), direct financial aid to poor countries, yet the share of financial aid as a proportion of rich-world GNP had actually declined from 0.3 to 0.2 percent during the 1990s.

Still, when the world leaders adopted the Millennium Declaration, and the Millennium Development Goals within the Declaration, there was a palpable sense that this time—yes, this time—they just might be fulfilled. The world felt that with the strength of the ongoing economic boom, the vast new power of modern technologies, and the uniqueness of our global interconnectedness, this time we would follow through.

How quickly that optimism was shattered. There were small things that dented the optimism—the U.S. trauma of a tied national election,
the end of the stock market boom, and a spate of high-profile corporate scandals, but these look insignificant now in the shadow of September 11. Much changed that day, partly because of the unwise ways in which the U.S. government reacted. More than ever, we need to return to the purpose and hope of the Millennium Development Goals.

As it has for almost everyone else in the world, 9/11 remains as vivid to me as if it were just moments ago. The way I experienced that morning continues to imprint on me the nature of our global society. I was in my office at Harvard University, on a live videoconference feed to South Africa, giving a lecture on AIDS to a group of community leaders and business people in Durban. As I was speaking, I saw the people at the podium in South Africa begin whispering to each other. I was shocked when the person turned to the video camera and said, “Professor Sachs, I regret to inform you that your country is under attack and we have to end this conference immediately.” With that, the transmission went down, and I walked out of the room to see dozens of shocked and dazed colleagues milling in the halls. People congregated in front of a giant television screen in the central foyer. Within minutes, we watched in horror as the towers collapsed before our eyes.

For all of us, those are events that we will not forget. The meaning of those events, however, remains to be decided. Within hours it became the immediate presumption in the United States that everything had changed, that what we experienced that day was a great turning point in history. One of the leading journalists in the United States, Thomas Friedman, immediately declared that September 11 was the start of World War III, a notion that found widespread resonance among the horrified American population. President Bush himself said then, and many times since, that September 11 changed everything about his view of his job, the United States itself, its vulnerabilities, and its place in the world. Indeed, September 11 marked the start of the Bush administration’s self-proclaimed war on terrorism. The president declared that hereafter his whole presidency would be devoted to the extirpation of terror. The ease with which the pundits talked about World War III stunned me deeply. They were playing with fire, or much worse, with the destruction of our world in a new conflagration. Were they not aware, I asked myself, of the way that World War I had destroyed globalization a century before? In that case, too, the pundits had been only too happy to see the soldiers march off to war, sure that that tidy affair would be wrapped up in a month. The demons unleashed by that war, however, walked the planet until the end of the twentieth century, having their hand in the Great Depression, World War II, the Bolshevik revolution, and much more.

For me, the 9/11 attacks were harrowing events, but they did not change everything—unless the United States acted recklessly in response. After all, Americans had experienced terrorist acts before, and will experience them again. We have seen repeated terrorist acts throughout the Middle East, in Kenya and Tanzania, and on U.S. soil at the World Trade Center in 1993 and in Oklahoma City in 1995. Terrorism is a scourge that can be fought, but it cannot be eliminated entirely, just as the world will not eliminate entirely the scourge of infectious disease. President Bush made the same point during the 2004 election campaign—“I don’t think you can win it [the war on terrorism], but I think you can create conditions so that those who use terror as a tool are less acceptable in parts of the world”—but then reversed himself the next day.

Terrorism is not the only threat that the world faces. It would be a huge mistake to direct all our energies, efforts, resources, and lives to the fight against terrorism while leaving vast and even greater challenges aside. Almost three thousand people died needlessly and tragically at the World Trade Center on September 11; ten thousand Africans die needlessly and tragically each day—and have died every single day since September 11—of AIDS, TB, and malaria. We need to keep September 11 in perspective, especially because the ten thousand daily deaths are preventable.

Moreover, terrorism has complex and varying causes, and cannot be fought by military means alone. To fight terrorism, we will need to fight poverty and deprivation as well. A pure military approach to terrorism is doomed to fail. Just as a doctor fights disease by prescribing not only medication, but also by bolstering a person’s immune system through adequate nutrition and by encouraging a healthy lifestyle for his patient, so, too, we need to address the underlying weaknesses of the societies in which terrorism thrives—extreme poverty, mass unemployment, need for jobs, incomes, and dignity; and the political and economic instability that stems from degrading human conditions. If societies like Somalia, Afghanistan, and western Pakistan were healthier, terrorists could not operate so readily in their midst.

The appropriate response to September 11 was therefore two tracks, not one. Civilized nations needed surely to take up the challenge to cripple the networks of terrorism that carried out the attacks. The financial...
controls and direct military actions against Al-Qaeda were a necessary re-
response, but hardly sufficient. In addition, we needed to address the
deep roots of terrorism in societies that are not part of global prosper-
ity, that are marginalized in the world economy, that are bereft of hope,
and that are misused and abused by the rich world, as have been the oil
states of the Middle East. The rich world, starting with the United States,
nEEDED to commit its efforts even more to economic development than
to military strategies.

The great allied leaders of the fight against fascism in World War II
understood that success in the war effort also required success in win-
ning the confidence and trust of the world. Franklin Delano Roosevelt
led the United States into World War II on the basis of defending four
freedoms, not just the freedom from fear, but also the freedom of speech
and belief and, crucially, the freedom from want. His stirring words resonate today:

In the future days, which we seek to make secure, we look forward
to a world founded upon four essential human freedoms. The first
is freedom of speech and expression—everywhere in the world.
The second is freedom of every person to worship God in his
own way—everywhere in the world.
The third is freedom from want, which, translated into world
terms, means economic understandings, which will secure to every
nation a healthy peacetime life for its inhabitants—everywhere in
the world.
The fourth is freedom from fear, which, translated into world
terms, means a worldwide reduction of armaments to such a point
and in such a thorough fashion that no nation will be in a position
to commit an act of physical aggression against any neighbor—any-
where in the world.

When Roosevelt and British Prime Minister Winston Churchill met to
announce the Atlantic Charter, the joint statement of the war aims of
the United States and the United Kingdom, they, too, put the focus on the
hopes of the world for shared prosperity as one of the critical goals.
These war aims proved to be much more than empty rhetoric. They
were also the successful bases for a peaceful postwar world. The United
Nations was founded in 1945 to provide an institutional framework for

global cooperation. The Marshall Plan proved the U.S. commitment to
freedom from want, and that tradition was carried on in other develop-
ment programs in Asia and Latin America. Over time, that effort has
corporated; U.S. aid fell from more than 2 percent of GNP during the
heyday of the Marshall Plan to less than 0.2 percent of GNP today.

Soon after September 11, I made these points in an article for The
Economist, "Weapons of Mass Salvation." My point was that one cannot
fight a war against weapons of mass destruction through military means
alone. The weapons of mass salvation that I referred to—anti-AIDS
drugs, antimalarial bed nets, borewells for safe drinking water, and the
like—can save millions of lives and also be a bulwark for global security.

That fall it seemed that the Bush administration would pursue more
than a military approach. In November 2001, it promoted the launch
of a new global trade round, in Doha, Qatar. The resulting Doha Declara-
tion placed emphasis on reform of the trading system in order to meet
the needs of the poorest countries. An even more important event fol-
lowed in March 2002, in Monterrey, Mexico, at an international confer-
ence on financing for development. This conference dedicated itself to the
challenge of providing the financial means for economic progress.
The Monterrey Consensus that emerged from the conference usefully
highlighted both the role of private investment and official develop-
ment assistance.

The Monterrey Consensus made clear that the poorest countries
cannot really be expected to receive large inflows of private capital be-
cause they lack the basic infrastructure and human capital that can at-
tract international and even domestic private investment. On the other
hand, for countries that are much further along in economic develop-
ment—the so-called emerging markets—aid may play a small role,
whereas private capital can fuel a great deal of development. The Mon-
terrey Consensus put this way:

Official development assistance (ODA) plays an essential role as a
complement to other sources of financing for development, espe-
cially in those countries with the least capacity to attract private di-
rect investment... For many countries in Africa, least developed
countries, small island developing States and landlocked develop-
\ling countries, ODA is still the largest source of external financ-
ing and is critical to the achievement of the development goals and

targets of the Millennium Declaration and other internationally agreed development targets.

The United States and the other signatories agreed to something much more dramatic in the following paragraph of the Monterrey Consensus, to “agree all developed countries that have not done so to make concrete efforts toward the goal of 0.7 percent of gross domestic product as official development assistance.” As of 2002, aid equalled $53 billion, just 0.2 percent of rich-world GNP. If rich countries met that target, aid would reach $175 billion per year, equal to 0.7 percent of the $25 trillion rich-world GNP in 2002. For the United States, foreign aid would rise from around $15 billion per year in 2004 (0.14 percent of GNP) to around $75 billion (0.7 percent of U.S. GNP). Here, indeed would be a breakthrough.

President Bush himself came to Monterrey to announce a surprising and welcome increase of U.S. foreign assistance in a new project known as the Millennium Challenge Account, or MCA. He pledged that the United States would increase its foreign assistance to countries that demonstrated the will and the capacity to use that increased funding effectively. He promised $10 billion over the coming three fiscal years, in increments of $1.5 billion, $3.2 billion, and $3 billion, respectively. When word of the MCA program first spread among the conference participants, U.S. Ambassador to the UN John Negroponte came over to me, patted me on the back, and whispered in my ear, “You’re getting what you’ve asked for.”

For a brief moment, I was optimistic. Yes, I knew that the promised increase in U.S. foreign aid was really quite small relative to the size of the U.S. economy, so small that U.S. aid would remain less than 0.2 percent of U.S. GNP even after the first three years of the Millennium Challenge Account. While hardly a concrete step toward 0.7 percent of GNP, I thought it was just possible that the Bush administration would see in the tragedy of September 11 the need for a new relationship with the world, one in which the United States once again was an active champion of the quest to eliminate extreme poverty. Even if the challenge account was small at the start, I told myself, it could still grow to the 0.7 percent target to which the United States had agreed.

Also, my hopes were deflated just a few months later. Once again, the world leaders had assembled for an international conference, this time in Johannesburg, South Africa, at the World Summit on Sustainable Development. The Summit was the tenth anniversary of the Rio Earth Summit, at which critical decisions had been taken to protect the world’s environment in the face of growing man-made threats. Most important, the Rio Summit had adopted the United Nations Framework Convention on Climate Change (UNFCCC), in which the world’s governments committed to take steps to curb the emission of harmful greenhouse gases contributing to long-term global warming and other threatening climatic changes. The UNFCCC was the basis for negotiating the Kyoto Protocol to limit greenhouse gas emissions.

Ten years had not been kind to the Rio Summit. The Kyoto Protocol remained unratified and the Bush administration had walked away from the Kyoto agreement in its first months in office, an act that carried with it a special irony given that the first President Bush had originally signed the UNFCCC. Still, when the world assembled in Johannesburg, there were lingering hopes that just as in Monterrey, the world would get back on track with a clear global and U.S. commitment to the environmental agenda.

This was not to be the case. The Bush administration’s neglect of this agenda and its waning interest in the overall development agenda made vivid in Johannesburg in deeply ironic ways. First, President Bush skipped the meeting. More materially, just as the world gathered to take up the challenges of the global environment, the United States used the occasion to launch the public campaign for a war with Iraq.

As I stood in the press room in Johannesburg, all eyes were on the television screen, watching Vice President Dick Cheney, ten thousand miles away, speaking to the 105th National Convention of the Veterans of Foreign Wars. This was the famous speech in which Vice President Cheney erroneously claimed that “there is no doubt that Saddam Hussein now has weapons of mass destruction. There is no doubt he is trying to use them against our friends, against our allies, and against us.” This new U.S. drumbeat of war immediately drained the attention, from Johannesburg and marked the end of the two-track approach to fighting terrorism. From that point on, the United States put virtually all its emphasis, political energies, and finances behind the military approach.

In the month that followed Johannesburg, President Bush and his senior advisors gave literally hundreds of speeches, interviews, and presentations on Iraq, but they uttered few, if any, words about the challenges of extreme poverty, the message of Monterrey, and the commitments to the new Millennium Challenge Account. The sole ex-
ception to this abrupt change in focus was the president's State of the Union address in January 2003, in which the president announced his intention to scale up U.S. contributions to the fight against AIDS in Africa, an important and worthy initiative. I was pleased to hear the figure of $12 billion over five years—$2 billion per year—which was exactly the estimate that I had given to the White House in early 2001 (and which had been met with huge skepticism at the time). Otherwise, official Washington was completely focused on war rather than on development, the environment, and other issues of pressing human concern around the globe.

In the lead-up to the war, I wrote and spoke widely about my feeling that U.S. policy was veering wildly off track, that war in Iraq could not accomplish anything of lasting value but could do grave damage. Here is what I wrote in the New Republic on the eve of the war:

[A conventional army on the ground cannot suppress local uprisings or guerrilla warfare without tremendous bloodshed and years of agony. For decades, the British could not suppress the Irish Republican Army in Northern Ireland. The vast military might of Israel cannot suppress the Palestinian uprising. The Russians could not suppress the mujahedin in Afghanistan in the 1980s or the Chechens in the 1990s. The United States took casualties and quickly departed from both Lebanon and Somalia and even now is struggling to gain control in Afghanistan outside of Kabul. Under much worse circumstances, the United States is about to insert itself for years into the vicious interethnic struggles of Iraq, where tens of thousands of angry young men will be keen to pick off the occupying force. Our smart bombs won’t prove as helpful as ground-level as they do at 55,000 feet.

I warned, too, about the illusions of a self-financing war:

The Bush administration and many Americans seem to expect that Iraq’s oil will pay for posture occupation, reconstruction, and more—that there will be reconstruction contracts to tender, new reservoirs to develop, and lower world oil prices on the way. If only it were so. Iraq’s new oil fields will take years to renovate and expand, probably under contentious political and security conditions. Iraq’s existing creditors hold claims for more than $1 trillion. They will certainly insist on their place in the queue.

I concluded with another plea for the second track in the war against terrorism:

In addition to our military power, therefore, we have to translate our economic wealth and technological prowess into a different kind of power—the power to help shape the global cooperation institutions on which we will depend for our livelihoods and our long-term prosperity. The much-maligned United Nations, the very institution we are doing so much to threaten by our current unilater- alism, remains the single best hope for shaping a world to our liking in the twenty-first century. Through the United Nations and specialized agencies, such as the World Health Organization, UNICEF, or the Food and Agriculture Organization, we could deploy our economic strengths to overcome poverty, deal with climate-change problems, and fight debilitating diseases. We could help rid the world of the poverty that provides fertile ground for upheaval, dislocation, and terrorism. Over the long run, we would build international goodwill and shared values that would diminish the anti-American fury that threatens our lives and economic well-being. War with Iraq will, tragically, do the exact opposite.

The war in Iraq began on March 20, 2003, seven months after Cheney’s speech in Nashville. The costs of that misadventure have been huge—at least $1 trillion or so in direct military costs in the first eighteen months, more than a thousand (and rising) U.S. lives lost, thousands of civilian dead in Iraq, and a devastation of U.S. credibility around the globe. All of these costs have been dramatically amplified by the lack of the second track of U.S. foreign policy. The war has been viewed worldwide as an unwieldy aggression, especially since the heated claims of Saddam’s imminent threat to the world and his vast stockpiles of weapons of mass destruction proved to be completely wrong. The costs continue to mount, at roughly $5 billion a month, compared with just $1 billion for the Millennium Challenge Account for all of 2009.

From September 11 on, I was determined to redouble my own efforts to help preserve the spirit of global cooperation in any way that I
could. I was nearing the end of the work of the Commission on Macroeconomics and Health, with just two months left in the project. In that context, I had spoken frequently with Secretary-General Kofi Annan. In late 2001, I asked the secretary-general how I might assist him in his increasingly threatened and complex task of helping to lead the world in fulfillment of the hopes of the new millennium. He came back to me with the idea that I could play a role as his special adviser on the Millennium Development Goals themselves, and give him and the UN system advice on what actions to take to meet those goals. Specifically, he asked me not only to advise him on what needed to be done, but also to help lay out an operational plan in which the UN system, participating governments, and civil society could all contribute to the fulfillment of these bold objectives. I was honored and thrilled by this invitation to help the United Nations and especially the secretary-general in this moment of global peril, and immediately accepted his invitation to serve as his special adviser, and to launch a new UN Millennium Project, devoted to laying out a global plan for meeting the goals.

The secretary-general was interested in results. I think he was keenly aware of the fact that the United Nations system is much better at articulating goals than actually fulfilling them. He asked me to think out of the box. To do that, I drew upon the experience of the Commission on Macroeconomics and Health, but now in the context of a set of objectives that were even broader in range and more complex in their interconnections, and involved a greater extent of financial and global cooperative effort.

Analytical deliberation—the process of finding a cooperative approach to complex problems by building a consensus around a shared vision and understanding of the challenges—lies at the core of the UN Millennium Project. The Commission on Macroeconomics and Health had brought leaders and experts from many different perspectives around the table, and through a detailed process of debate, discussion, fact-finding, and research, had reached a consensus. In the same way, the UN Millennium Project was to bring the major policy makers and practitioners involved in poverty reduction around the table to search in a fact-filled process for a similar kind of consensus. This time, however, the number of challenges was simply too great for one table, so we organized our work into ten task forces that covered the very wide range of problems embodied in the Millennium Development Goals.

Each of these task forces brought together major thinkers, practitioners, policy experts, and other stakeholders to undertake that cooperative, intense, challenging deliberative effort. With ten task forces and roughly 25 members in each task force, we had an instant worldwide network of 250 central participants in this pathbreaking process. But that was not all. Facing a challenge of such enormous scale and requiring such complex interactions, our project engaged the entire UN system through a United Nations experts group composed of representatives of the leading specialized UN agencies—the World Health Organization, the Food and Agriculture Organization, UNICEF, the United Nations Environment Program, and so forth. That UN experts group ensured a connection between our deliberations and the actual, on-the-ground work of the United Nations around the world.

We similarly engaged with increasing intensity the UN country teams within several developing countries. In almost any part of the world, the poorest countries have a significant presence of experts from the specialized UN agencies advising on issues of health, water, sanitation, environmental management, agricultural productivity, and the like. Those UN experts sit together in a UN country team, which is led by a resident coordinator who in turn becomes a liaison for us between our New York-based effort and the on-the-ground realities of UN engagement within the developing countries.

In short, the secretary-general invited us to think big—and we did—by creating a global-scale effort that could begin to get its collective reach around problems of enormous scope and complexity. Through that process, we have been able to make great advances in analysis and a business plan for meeting the Millennium Development Goals that I describe in chapter 15.

No sooner had I begun the UN assignment than I received another call from New York, this time from Columbia University. Columbia President George Rupp and colleagues had heard about the UN work and were interested in exploring whether I might simultaneously take on the leadership of a major institute devoted to the challenge of sustainable development, Columbia’s Earth Institute. Upon meeting with Rupp, I learned more about Columbia’s bold and innovative initiative linking many major scientific departments at the university to take on the interconnected challenges of climate, environmental management, conservation, public health, and economic development.
By the end of two engaging hours of discussion, I had accepted Columbia's offer to become director of the Earth Institute, pending a discussion with incoming President Lee Bollinger. Bollinger later shared with me his vision that Columbia University would lead the way in the United States to become a truly global university. I was convinced. So ended thirty-two years of learning and teaching at Harvard University, and so began a new chapter in New York City with exciting new responsibilities at Columbia and the United Nations. I loved Harvard, but to combine these two activities and take on this new direction was incredibly good fortune.

All of the UN Millennium Project work has depended utterly on the Earth Institute. Fundamentally, progress on the MDGs rests on thorough scientific understanding of the underlying challenges of disease, food production, undernutrition, watershed management, and other related issues. These, in turn, require specialized expertise. Modern science has given us technological interventions, or specific techniques for addressing these problems, such as antimalarial bed nets or antiretroviral drugs. To name just a few examples, the Earth Institute is:

- pioneering the use of geographic information systems (GIS) in rural Ethiopia to monitor, predict, and respond rapidly to malaria epidemics;
- using specially programmed cell phones in remote rural Rwanda to provide real-time health data to the Ministry of Health;
- introducing new agroforestry techniques to triple food crops in the nitrogen-depleted soils of Africa;
- designing new efficient and low-cost battery devices to power lightbulbs in villages too poor and remote to join a power grid in the near future;
- demonstrating how high-tech forecasting of El Niño fluctuations can be put to use in impoverished countries in the timing of crop planting and harvesting, the management of water reservoirs and fisheries, and in other ways;
- applying state-of-the-art hydrology, geochemistry, and public health to devise solutions to the crisis of arsenic poisoning in Bangladesh's water supply.

The Earth Institute provides a unique academic base for garnering the science-based, cross-disciplinary understanding needed to confront the practical challenges of sustainable development. The institute is built on five clusters—earth sciences, ecology and conservation, environmental engineering, public health, and economics and public policy. By joining these disciplines under one roof, the Earth Institute can better connect the sciences with public policy to find practical solutions to problems at all scales, from local villages to global UN treaties. Bringing these five clusters together makes possible the kind of rigorous thinking about the challenges of the Millennium Development Goals that otherwise rarely takes place, even in partial perspective. One of the remarkable and deeply heartening aspects of directing this unique institute has been the enthusiasm with which the scientists have rallied to the cause of fighting extreme poverty. Their eagerness to use cutting-edge scientific knowledge to solve some of the most pernicious problems facing the most vulnerable people on the planet is inspiring.