Ten

THE VOICELESS DYING:
AFRICA AND DISEASE

I had never been to sub-Saharan Africa before 1995. After working in every other part of the world, I felt an increasing urgency to understand the development challenges in the world’s most distressed region. What I found was a crisis much more severe than I had expected, with causes quite different from what is commonly assumed. A decade of work in Africa has taught me a considerable amount about extreme poverty, the power and limits of globalization, and the indomitable strength of the human spirit in the face of adversity.

By the time I had begun to work in Africa, I was prepared to see things more clearly than I would have a few years earlier. An intensive decade of economic advising from 1985 to 1995 taught me something of the art of differential diagnosis, so I could better appreciate how Africa’s development crisis reflected the interactions of history, geography, domestic policies, and geopolitics. These interactions had left Africa stuck in a poverty trap. Worse, as of the mid-1990s, Africa was careening headlong into an HIV/AIDS pandemic, one of the most ferocious disease contagions in history.

LOOK WHO’S LECTURING WHOM ON GOVERNANCE

The outside world has pat answers concerning Africa’s prolonged crisis. Everything comes back, again and again, to corruption and misrule. Western officials, including the countless “missions” of the IMF and World Bank to African countries, argue that Africa simply needs to be

have itself better, to allow market forces to operate without interference by corrupt rulers. An American talk show host, Bill O’Reilly, reflected a common view when he recently declared that Africa “is a continent in chaos. We can’t deliver a lot of our systems that we send there. Money is stolen. Now when you have a situation like that, where governments don’t really perform consistently, where there’s just corruption everywhere, how can you cut through that?”

Western governments enforced draconian budget policies in Africa during the 1980s and 1990s. The IMF and World Bank virtually ran the economic policies of the debt-ridden continent, recommending regimens of budgetary belt tightening known technically as structural adjustment programs. These programs had little scientific merit and produced even fewer results. By the start of the twenty-first century Africa was poorer than during the late 1960s, when the IMF and World Bank had first arrived on the African scene, with disease, population growth, and environmental degradation spiraling out of control.

When it comes to charges of bad governance, the West should be a bit more circumspect. Little surpasses the western world in the cruelty and depredations that it has long imposed on Africa. Three centuries of slave trade, from around 1500 to the early 1800s, were followed by a century of brutal colonial rule. Far from lifting Africa economically, the colonial era left Africa bereft of educated citizens and leaders, basic infrastructure, and public health facilities. The borders of the newly independent states followed the arbitrary lines of the former empires, dividing ethnic groups, ecosystems, watersheds, and resource deposits in arbitrary ways.

As soon as the colonial period ended, Africa became a pawn in the cold war. Western cold warriors, and the operatives in the CIA and counterpart agencies in Europe, opposed African leaders who preached nationalism, sought aid from the Soviet Union, or demanded better terms on Western investments in African minerals and energy deposits. In 1960, as a demonstration of Western approaches to African independence, CIA and Belgian operatives assassinated the charismatic first prime minister of the Congo, Patrice Lumumba, and installed the tyrant Mobutu Sese Seko in his stead. In the 1980s, the United States supported Jonas Savimbi in his violent insurrection against the government of Angola, on the grounds that Savimbi was an anticommunist, when in fact he was a violent and corrupt thug. The United States long backed the South African apartheid regime, and gave tacit support as
that regime armed the violent Renamo insurrectionists in neighboring Mozambique. The CIA had its hand in the violent overthrow of President Kwame Nkrumah of Ghana in 1966. Indeed, almost every African political crisis—Sudan, Somalia, and a host of others—has a long history of Western meddling among its many causes.

The one thing that the West would not do, however, was invest in long-term African economic development. The die was cast in the 1960s, when senior U.S. policy makers decided that the United States would not support a Marshall Plan type of policy for Africa, even though such an effort was precisely what was needed to build the infrastructure for long-term growth. It was not that U.S. officials rejected the diagnosis—they knew it was needed—but the political leadership was not willing to pay the price.

In April 1965, the director of the Central Intelligence Agency submitted a National Intelligence Estimate on the “Problems and Prospects in Sub-Saharan Africa.” The estimate accurately concluded the following about Africa’s growth prospects:

Economic growth in most areas will be very slow; indeed, setbacks are probable in a number of countries. There is a desperate shortage of virtually all kinds of technical and managerial skills; indeed, the basic institutions and staff for economic development are often inadequate or absent. Moreover, it is highly unlikely that most African countries will obtain external assistance or investment on anything approaching the scale required for sustained economic development. (Emphasis added.)

As a National Security Council staffer noted in June 1965 in briefing McGeorge Bundy, President Lyndon Johnson’s special assistant for national security affairs, the president’s mandate to the State Department “cautions that substantial increases in U.S. foreign assistance expenditures [to Africa] are not envisaged.”

**DEEPER CAUSES OF AFRICAN POVERTY**

Both the critics of African governance and the critics of Western violence and meddling have it wrong. Politics, at the end of the day, simply cannot explain Africa’s prolonged economic crisis. The claim that Africa’s corruption is the basic source of the problem does not withstand practical experience or serious scrutiny. During the past decade I witnessed close at hand how relatively well-governed countries in Africa, such as Ghana, Malawi, Mali, and Senegal, failed to prosper, whereas societies in Asia perceived to have extensive corruption, such as Bangladesh, India, Indonesia, and Pakistan, enjoyed rapid economic growth. Table 1 compares the Transparency International “corruption perception” rank for these African and Asian countries and their respective economic growth rates. We see that African countries lag behind in economic growth even when they are perceived to be less corrupt than their Asian counterparts. Using formal statistical tests, it turns out that Africa’s per capita economic growth is significantly lower, by around 3 percentage points per year, than in other developing countries with comparable levels of corruption and income.

<table>
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<tr>
<th>Table 1: Corruption and Economic Growth</th>
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<tr>
<td><strong>Corruption Perception Rank</strong></td>
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<td>Bangladesh</td>
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At the same time, Africa’s harsh colonial legacy and the West’s very real deprivations in the postcolonial period also do not explain the long-term development crisis. Other regions of the world that are now growing rapidly also experienced severe damage from decades or centuries of colonial rule and postcolonial meddling. Vietnam is a case in point, a country that had to fight for independence for decades and yet emerged from that brutal experience to achieve very rapid economic growth.

In sub-Saharan Africa, therefore, a good differential diagnosis is urgently needed. The political story lines of both the left and the right re-
flect platiitudes and prejudices, with little explanatory power about economic development. I was intent on finding a better approach. My work in Africa has been both an intellectual as well as a human adventure, and I think the effort has paid off in helping to uncover some of the deeper roots of Africa’s predicament, as well as some promising solutions.

FIRST ENCOUNTERS

From my first drive across the border from Zimbabwe into Zambia, and during innumerable visits since, what has impressed me most is the distinctive physical ecology, and how it has helped to shape Africa’s recent economic history. The great biologist E. O. Wilson is correct, I believe, when he argues that human beings are “hard-wired” to feel a special resonance (“biophilia”) with the African savannah, the place where our species arose some 150,000 years ago. Yet however captivating these savannas are, they pose innumerable and unique challenges for modern economic development: disease, drought, and distance from world markets, to name just three. Adam Smith, I noted earlier, had already pointed out the third of this trilogy in The Wealth of Nations, when he observed in 1776 that Africa had been poor from time immemorial because it lacked the navigable rivers and natural inlets that afford the benefits of low-cost, sea-based trade.

Driving past the adobe huts in sparsely populated rural areas of southern Zambia, I was struck by the extreme economic isolation of these rural households, even those relatively close to the paved road on which we drove. The settlements were typically a few huts circled around an area for chickens and some fuel wood. The settlements had no electricity or telecommunications, but more than that, there was no motorized transport whatsoever or even animal-drawn carts. The low population densities reflected the meager yields of the farms, the food output of which could support only a small population. (And this region was one of relatively stable rainfall and reasonable soils; other parts of Africa that I visited soon thereafter were even more disadvantaged.) The soils of these farms were depleted of nutrients, I would come to learn, and the homesteads were too disconnected from organized markets to sell crops or buy fertilizers. My detailed understanding of these problems, though, was still years away, and I certainly did not glean that knowledge from economics commentaries!

I came to appreciate that isolation and lack of basic infrastructure are the prevailing conditions of most of rural Africa, and that rural Africa is where most Africans live. Perhaps these facts should have been obvious to me from the start. Relevant information on population densities, roads, motor vehicles, access to electricity and telecommunications, and the like was certainly available from published data. But without the benefit of visiting Africa’s rural communities, I would not have known what to look for in the data, or what the data really meant.

By the time I reached Lusaka on that first visit to Africa, I knew that things were very different, but I still did not begin to fathom just how different. One omnipresent force, which would overwhelm me for the coming decade, had still not made its presence felt. I was in the Bank of Zambia on the second or third day after my arrival, when my colleague from Harvard University explained to me that a Zambian coworker in the financial reform project had recently died. “How old was he?” I asked. “Oh, our age,” came the reply. “But why?” I asked. “AIDS, Jeff, AIDS.”

That was my firsthand introduction to the realities of AIDS in Africa. A team at Harvard had been leading a project for the past three years to help Zambia get back on its feet after a disastrous financial crisis. Sadly, Zambians were not getting back on their feet at all; instead, they were dying in remarkable numbers, including the highly trained Zambians in the project. This project was meant to be “capacity building,” but Zambia was clearly losing trained capacity much faster than it was being gained.

AIDS was already relentless by the mid-1990s, but much worse was yet to come: endless work absences, funerals, and hushed conversations. Death was at the door. AIDS was not alone in its devastating impact on African society. Soon I became vividly aware of another insidious killer: malaria. At first I thought malaria was little more than a concern to be addressed with my once-a-week dose of mefloquine. Then I slowly grew aware of the obvious. Every African colleague, almost without exception, lost a few days per year to a flulike spell of malaria. Every now and then I would hear that one of our African graduate students who had returned to his country for a visit had come down with a much more serious bout of malaria. Several ended up in the hospital, some near death. What surprised me most, though, was malaria’s grip on children. Everyone’s children—rich and poor alike—contracted malaria. And all risked grave complications.

Married to a doctor, I have grown accustomed to frequent discus-
sions about disease. But beyond anything I had experienced or could imagine, disease and death became the constant motif of my visits to Africa. Never, not even in the highlands of Bolivia, where illness is rife, had I confronted so much illness and death. India had never evoked the same sense of death in the air. By the turn of the new millennium, sub-Saharan Africa’s life expectancy stood at forty-seven years, more than two decades lower than in East Asia (sixty-nine years) and thirty-one years lower than the average age in developed countries (seventy-eight years). In parts of Africa life expectancy was plummeting by almost twenty years as a result of the spread of AIDS. The worldwide map of life expectancy in map 8 highlights Africa’s unique and extraordinary situation.

I began to suspect that the omnipresence of disease and death had played a deep role in Africa’s prolonged inability to develop economically. The unsolved challenge for development economists is to understand why economic development in Africa has been so hard to achieve, not just in modern times but for centuries, and not in some places but in virtually all of tropical Africa (not including the five countries of North Africa or South Africa). Even before the Industrial Revolution, Africa had the lowest urbanization rate of any part of the world, and apparently the world’s lowest living standards on the eve of the era of modern economic growth. According to economic historian Angus Maddison, Africa’s growth rate has been among the lowest of any world region during each major subperiod since 1820. That includes a long stretch before Africa fell to European colonial rule in the 1880s and the period since independence. Could the exceptional burden of illness be a significant reason?

I decided to take on the question of Africa’s lack of economic development in a series of research projects and advisory roles. Part of the answer, to be sure, lay in the governance choices made by African regimes. I visited Zimbabwe several times, and saw Robert Mugabe’s depredations firsthand. Zimbabwe is a case where the traditional explanation of miserable rule is a sufficient explanation for a country’s ills (although the nation no doubt also suffers from other serious problems as well). In 1997, I was invited to address a national forum in Harare, Zimbabwe, the only foreign speaker invited for the occasion. I gave a firm warning that Zimbabwe was veering off a cliff financially. Fittingly, perhaps, the lights promptly went out in the hotel and convention center. I descended seventeen flights of stairs by candlelight when the backup gener-
vatization, budget deficits, or trade policy? To understand—and overcome—such crises, it would be necessary to unravel the interconnections between extreme poverty, rampant disease, unstable and harsh climate conditions, high transport costs, chronic hunger, and inadequate food production. My first foray into this complex mix was via disease—mainly AIDS and malaria—which I began to study in detail in 1997. More recently, especially in the context of the UN Millennium Project, I have also focused my attention on the issues of infrastructure and increased food production.

The Malaria Mystery

I had a lot to learn about disease and public health. It took me a while to understand the dire state of affairs. I still remember asking, “What do you mean they are not going to doctors? They have AIDS but they are not seeing doctors? Their children suffer from malaria-induced anemia but are not treated? How can this be?” “You know, there are treatments for AIDS and malaria,” I sputtered. “What do you mean, there are no medicines here? What do you mean, there’s no treatment program? What do you mean, USAID is doing nothing? What do you mean that the World Bank hasn’t had an AIDS or malaria program in this country for years?” These were basic questions that I had never asked before coming to Africa. Strangely, neither had other economists, including those leading the IMF and World Bank missions to Africa.

Malaria became my first target of study. Malaria is a potentially fatal protozoan disease transmitted by a specific kind of mosquito, the genus anopheles. Malaria is utterly treatable, yet, incredibly, it still claims up to three million lives per year, mostly young children, about 90 percent of whom live in Africa. The rest of the deaths occur in tropical regions of the Americas and Asia. In fact, there are four types of human malaria. The malaria caused by the pathogen Plasmodium falciparum is by far the most lethal variant and is responsible for the vast proportion of malaria cases in Africa. The malaria due to P. vivax is very widely distributed in tropical and subtropical regions outside of Africa and is much less lethal. It is worth restating the central fact: malaria is utterly treatable, yet it still claims around three million lives per year, overwhelmingly in Africa. Low-cost treatments exist, but they do not reach the poor. These statistics boggled my mind, as does the current estimate that malaria causes up to five billion clinical cases per year. Virtually everybody in tropical Africa contracts the illness at least once a year. In some places, the entire population lives year-round with the malaria parasite in their bodies (although without clinical symptoms much of the time).

I overlaid two world maps, one of low GDP per capita and one that shows malaria transmission at three points in time: 1946, 1966, and 1994 (one can see the areas where malaria has been eliminated during those fifty years). The poor regions were largely the same as malarious ones, as shown in maps 9 and 10. This prompted four questions: First, does malaria contribute to poverty, or does poverty cause higher malaria incidence, or is it both? Second, why was the malaria situation so much worse in Africa? Third, what was being done to break the malaria-poverty linkage? And fourth, of course, what more could be done? Addressing these questions opened my eyes to a host of issues that I had hardly imagined in the mid-1990s. They led me from malaria to AIDS to public health, and then to the Millennium Development Goals.

The first finding I tried to establish was whether malaria and poverty were intertwined because poor countries lacked the means to fight malaria, or also because malaria contributes to extreme poverty. The evidence suggests both directions of causation. Poverty certainly exacerbates malaria by leaving impoverished households and governments without the financial means to fight the disease. Richer households and governments can afford to spray homes with insecticide, a highly effective intervention in many contexts; they can afford to install screen doors and windows to help keep the mosquitoes from entering the houses in the first place; they can afford insecticide-treated bed nets, which can substantially reduce the transmission of malaria in a village; and they can ensure access to health care and effective medications when the need arises.

Yet malaria also causes poverty, and for reasons that go well beyond the obvious ones of causing absenteeism from work and school. It is worth remembering how malaria and yellow fever delayed the construction of the Panama Canal for more than thirty years. The first attempt, led by the great French engineer Ferdinand de Lesseps, ended in tragedy when these two mosquito-borne diseases struck down the workforce. Only after the United States invested heavily in a mosquito-control effort guided by Colonel William C. Gorgas was the canal constructed. Malaria to this day can stop a good investment project in its tracks, whether a new mine, farm region, or tourist site.

Malaria also has extremely pernicious effects on the investments in
human capital. Children who suffer repeated bouts of malaria can suffer lifetime ill effects caused by chronic anemia and the aftermath of complicated cases. With so many repeated disease episodes, they may drop out of school early because of poor attendance and a poor ability to learn. But there is an even deeper, if indirect, channel straight to poverty. In highly malarious regions, malaria impedes the demographic transition and the investment in human capital. When children die in large numbers, parents overcompensate and have more children, with devastating results. Too poor to invest in the education of all of their children, the family might educate just one child, usually the eldest son. If children in malarious regions manage to survive, they enter adulthood without the proper education they need to succeed.

Why, though, was Africa so much more vulnerable to malaria than other regions? I was frequently asked how it was that malaria had not crippled the United States, which had had malaria until the 1940s (as map 10 showed), whereas it arguably had crippled Africa. It took me a while to understand some basic disease ecology, but once I did, the answer became clear. Malaria in the United States, and indeed in every other place in the world outside of Africa, was easier to control. Africa had it the worst, not because of poor governance and lack of public health services, but because of a unique disease environment. Malaria had coevolved with humans in Africa, and the result was a special intensity of transmission unequalled in any other part of the world.

I learned that malaria is transmitted when a female anopheles mosquito takes a blood meal from somebody already infected with malaria. After being ingested by the mosquito, the parasite finds its way to the mosquito’s gut. There it undergoes a life-cycle transformation, after which the parasite migrates back to the mosquito's salivary glands, where it can be injected into another victim. But here is the catch. The life-cycle change, called sporogony, takes about two weeks, roughly the life span of the mosquito itself. If the mosquito dies before sporogony is completed, the mosquito never becomes infective. The central ecological point is that the warmer the temperature, the faster the sporogony—and the more likely it is that the mosquito will live to become infective. Malaria is largely a tropical disease, and if warm weather is a prerequisite, Africa has it!

Another important point is that some types of mosquitoes prefer to bite people, whereas others feed off cattle. Transmitting malaria requires two consecutive human bites: the first for the mosquito to ingest the parasite and the second for the mosquito to infect another person, roughly two weeks later. If the mosquito feeds frequently on cattle rather than on people, the odds are that at least one of the two bites, if not both, will be taken from cattle. In India, for example, the predominant type of anopheles tends to bite humans about one third of the time, and cattle the rest. Africa, sadly, has another predominating mosquito type which prefers human biting nearly 100 percent of the time. Mathematically, the chance that an Indian mosquito will feed off two humans in a row is about one out of nine, whereas in Africa it’s about one out of one, or nearly certain. The force of transmission of malaria in Africa is therefore roughly nine times that of India because of the difference of mosquito species.

Thus Africa is really unlucky when it comes to malaria: high temperatures, plenty of breeding sites, and mosquitoes that prefer humans to cattle. When all these factors were put into a formal mathematical model, map 11 emerged. The darker shades in Africa signify that the disease transmission is higher simply because of the ecology. Africa’s crisis is unique, with only a few other scattered parts of Asia (notably Papua New Guinea) sharing the same high ecological burden.

All of this helps to explain why Africa is burdened with malaria like no other part of the world, but it does not mean that the situation is hopeless. Far from it. Household spraying, insecticide-treated bed nets, and antimalarial medicines all work in Africa just as they do in other parts of the world. Although these technologies will not eliminate the disease in the way that it was eliminated in Europe and the United States, they will control the disease, reducing decisively the number of deaths from malaria. No children need to die, and none will if they have access to all of the modern tools of disease prevention and treatment! Yet malaria sets the perfect trap: it impoverishes a country, making it too expensive to prevent and treat the disease. Thus malaria continues and poverty deepens in a truly vicious circle.

This knowledge led me to the third question: what to do? I have to admit, I could not even begin to imagine what I would find when I first looked into possible solutions. There I was, a macroeconomist, reasonably proficient in issues of trade, budget deficits, inflation, and exchange rates. I understood quite a bit, I believed, about market reforms and globalization. And I believed these issues were quite important.
Nonetheless, I presumed malaria to be an even more urgent issue, a truly life-and-death concern. I fully expected to find that whatever could be done to fight malaria was already being done. Surely, I thought, the world community would not simply be standing by while millions of children were dying each year. But when my colleague Amir Attaran and I began to run the numbers on the levels of donor assistance to fight malaria, we barely found any numbers. The level of rich-country help to Africa to fight malaria was minimal, in the tens of millions of dollars per year when $2 to $3 billion was needed.

I was shocked. I started to scour the World Bank and USAID Web sites and project descriptions. Surely we had overlooked a massive effort to help Africa fight the disease. But no, the original calculations were correct. Malaria was not on the policy radar screen. The IMF and World Bank were apparently too busy arguing for budget cuts and privatization of sugar mills to have much time left to deal with malaria.

*Africa’s AIDS Cataclysm*

From these lessons, it was but a small step to HIV/AIDS. The same three questions applied for AIDS as for malaria. What does the disease do to economic growth and poverty? What accounts for Africa’s special circumstances? And what must be done? The answers are similar, but they have one important difference: as of today there is no solid explanation for why Africa’s AIDS prevalence is at least an order of magnitude higher than anywhere else in the world.

The simplest answer, widely believed, is that in Africa there is more sexual activity outside of long-term stable relationships. The data, however, repeatedly cast doubt on that widely believed hypothesis. Perhaps the sexual networking is different in Africa (for example, there are more relationships between older men and younger women and more concurrent relationships, although not more lifetime partners). Perhaps HIV/AIDS is transmitted more easily in Africa because the population has other untreated ailments (malaria, other sexually transmitted diseases), or because men are much less frequently circumcised, or because condoms are less frequently used in casual sexual relations. Perhaps the viral subtypes (known as clades) are different in Africa. The truth is that nobody is sure. The only certainty is that HIV/AIDS is an unmitigated tragedy and a development disaster throughout Africa, especially in the hardest hit regions of eastern and southern Africa.

As for the economic costs of the disease, these certainly rival or exceed malaria’s in the disaster at hand. Africa is losing its teachers and doctors, its civil servants and farmers, its mothers and fathers. There are already more than ten million orphaned children. Business costs have soared because of disarray from massive medical costs for workers, relentless absenteeism, and an avalanche of worker deaths. Foreign investors are deterred from stepping into Africa’s AIDS morass. And millions of households are battling the illness of the head of household, resulting in an incredible toll in time and expense, to say nothing of the emotional trauma for the family.

Once again I looked at what was being done and what could be done. By the late 1990s, AIDS in the rich countries was being treated, with growing success, by antiretroviral medicines given in three-drug combinations, so-called highly active antiretroviral therapy (HAART) or simply antiretroviral therapy (ART). This therapy was changing the face of the disease in the rich countries. Individuals infected with HIV now had hope. Others who thought they might be infected were willing to come forward for testing. The prospect of drug treatment, and therefore the readiness of more people to submit to voluntary counseling and testing, meant that prevention and treatment programs worked in a mutually supportive manner.

Certainly, I thought, the same must be happening in the low-income world. With all the worldwide attention on AIDS, and all the hand wringing and speeches, surely the donor world was gearing up to help the impoverished world to fight this terrifying epidemic. But once again my presumptions were wrong. Attaran and I went to work on the donor figures, and we were blown away by what we found. Could it really be true that the world was giving just $70 million to all of Africa to fight AIDS? Was this even conceivable? As we started circulating these data, shown in table 2, there was no statement of correction or complaint from the donors. These estimates were, stunningly, the right numbers, and so afterward Attaran and I published them in one of Britain’s leading medical journals, *The Lancet*.

Over and over again I saw the difference between spin and reality in how the world community faced AIDS and malaria. At one point, for example, an IMF official published a letter in the *Financial Times* noting that health and education spending in poor countries with IMF programs was actually up 2.8 percent per year between 1985 and 1996. The fact is, however, that although the IMF official was correct in a strictly
Table 2: Overseas Development Budgets for Sexually Transmitted Disease Control, Including HIV/AIDS, in Sub-Saharan Africa (1990–1998)

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<tr>
<th>Year</th>
<th>All Sources Total</th>
<th>Grant Sources Total</th>
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<th>United</th>
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*Millions of US$.
Source: Astor and Sacks (2001).

technical sense, health spending was disastrously, indeed shockingly, low in African countries with IMF programs. In most cases, public health spending in 1996 was below $10 per person, so the increase had been from almost nothing to almost nothing. I was initially amazed that the IMF would play such tricks with the public, but I came to realize that the fund had no special feel for these numbers. The IMF management and staff know very little about public health, and traditionally they pay almost no attention to whether health spending in their client countries is $10 or $100 or $1,000 or more per person (as it is for the rich countries that dominate the Executive Board of the institution).

Around the same time, I made a speech noting that the World Bank had made no grants or loans during 1995–2000 for controlling AIDS in Africa. A bank spokesman attacked me vigorously. “You don’t know what you’re talking about. We had several program countries with AIDS programs.” “That can’t be; I’ve checked, and I did not find a single loan.” Again they were technically correct, in a way that utterly distorted the truth. There were probably a few dozen countries where AIDS was mentioned in a sentence or maybe a paragraph in a loan for the health sector. The AIDS component was usually tiny, perhaps a few million dollars over several years. Up to the year 2000, these minimal efforts never even contemplated the use of antiretroviral drugs to treat AIDS.

In the late 1990s, in the wake of my public spats with the IMF over their mismanagement of the 1997–98 East Asian financial crisis, I went on the warpath with the international financial community over AIDS and malaria. I called for an end to the international community’s gross negligence regarding the diseases ravaging Africa. I complained that the IMF and World Bank had been in Africa for decades, but had remained blind to the most basic realities there, and to the growing human and economic catastrophe.

At that point, I teamed up with President Olusegun Obasanjo of Nigeria to help prepare a major Africa-wide summit on malaria in Abuja, Nigeria, in April 2000. My colleagues, including several world-class malariologists at Harvard—Andy Spielman, Awash Tekaiehimanot (visiting from WHO), and Anthony Kissewski—and I wrote a key background report that demonstrated the massive burden of malaria on economic development in Africa and also stressed the opportunities at hand to control the disease.

At about this time I received a call from Dr. Gro Harlem Brundtland, who had recently been appointed director general of the World Health Organization. Brundtland was former prime minister of Norway and, without doubt, one of the world’s most skilled political leaders. In the mid-1980s she had chaired the famous Brundtland Commission, which had launched the concept of sustainable development. She said to me, “If you want to get someone’s attention about the health crises in Africa, show them the money.” Help them to understand the economic costs of the disease pandemics, as well as the economics of disease control. Above all, propose practical solutions based on a rigorous emphasis on economic costs and benefits.”

Brundtland suggested that I chair a commission of macroeconomists and public health specialists to do just that. The WHO Commission on Macroeconomics and Health (CMH) was born. I chaired the commission for two years, from the start of 2000 to the end of 2001. In December 2001, the CMH published its report, Investing in Health for Economic Development. This was the work of eighteen commissioners, including Harold Varma, Nobel laureate and former director of the National Institutes of Health; Supachai Panitchpakdi, who would go on to lead the World Trade Organization; Robert Fogel, the Nobel laureate economic historian at the University of Chicago; and Mannohar Singh, the former finance minister and future prime minister of India. In addition to this stellar commission, we drew upon six task forces that included more than a hundred specialists from around the world. The
commission and task forces had senior representation of the IMF, the World Bank, and several donor agencies.

The commission gave me a wonderful opportunity to test my favorite hypothesis about collective rationality, which is that if you put people of strongly opposing views in a room together, and infuse their discussion with data, background studies, and unhurried time for debate, it is possible to bridge seemingly irreconcilable positions among the members of the group. I have come to call this process analytical deliberation. It works. The commission was deeply divided at the start about who was “to blame” for Africa’s roiling disease crisis: Africans for their mismanagement, the pharmaceutical industry for its greed, the rich world for its malign neglect. Did Africa need more aid, or just better use of those resources that it had at hand? Could anti-AIDS drug treatment be applied in Africa? On these and a dozen other issues, the first day of the two-year process was contentious, to say the least. On the last day, when the report was issued, we had reached a consensus that extended not only to the eighteen commissioners and hundred or so experts in the working groups, but also to major representatives of the pharmaceutical industry and the NGO community. We had worked diligently and assiduously to bring forward evidence and a consensus on three basic issues:

First, is disease a cause of poverty, a result of poverty, or both? The commission concluded that causation runs strongly in both directions. Poor health causes poverty and poverty contributes to poor health.

Second, why do poor countries have a life expectancy several decades shorter than rich countries? Why, especially, is Africa’s life expectancy, at forty-seven years in 2000, more than three decades less than the seventy-eight years of the rich countries? The commission identified eight areas that accounted for the vast proportion of the gap in disease burden: AIDS, malaria, TB, diarrheal disease, acute respiratory infection, vaccine-preventable disease, nutritional deficiencies, and unsafe childbirth.

Third, how much should the rich world help the poor world to invest in health? The commission calculated that donor aid ought to rise from around $6 billion per year to $27 billion per year (by 2007). With the combined GNP of the donor countries equal to around $25 trillion dollars as of 2001, the commission was advocating an annual investment of around one thousandth of rich-world income. The commission showed, on the best epidemiological evidence, that such an investment could avert eight million deaths per year.

The report of the Commission on Macroeconomics and Health had quite a notable reception. Reports come and go. This one, I think it is fair to say, came and stayed. It made the important point that we, as a generation, can do something dramatic to improve our world. The report found a wide audience, in part, because it was based on a broad and surprising consensus. It was launched with the kind of pizzazz that it deserved, with Brundtland; UK Secretary of State for International Development Clare Short; Ray Gilmartin, the CEO of Merck; and Bono as enthusiastic supporters.

Around the same time that the commission began meeting, I started to push the idea of a “global fund” to fight AIDS and malaria. At the International AIDS Conference in Durban in July 2000, I gave a speech calling for such a global fund. Word spread of the speech and the idea of a new global fund took hold. I met with UN Secretary-General Kofi Annan, whom I consider the world’s finest statesman, to discuss the practicalities and design of such a fund. He was very interested and asked me to work closely with his staff in the coming months to refine the concept.

One more piece of the puzzle was needed. As of early 2001, the donor world still shunned the idea of using anti-AIDS drugs in low-income countries to save the lives of people with late-stage AIDS disease. The donor world viewed anti-AIDS drugs as hugely expensive and technically impractical—in short, not cost-effective. Getting global financing for them in Africa was still a huge uphill struggle. The most common claim was that anti-AIDS treatment wouldn’t work anyway. Impoverished and illiterate patients would not be able to comply with complicated drug regimens.

My colleague Paul Farmer put those arguments to rest for me and, in some ways, for the world. A professor of medicine at Harvard, and a saint of global health, Paul had been running a clinic in the impoverished central plateau of Haiti since 1985. Using charitable contributions and drug donations from HIV-infected patients whose regimens had changed (leaving the patients with unneeded pills), Paul had begun introducing anti-AIDS drug treatment among his AIDS patients. He was getting marvelous clinical results. In January 2001, he invited my wife and me to his clinic to see the results. We went out to the villages to
meet mothers and fathers who had been at death's door, but who were now standing tall with their children. Wherever we went, we were greeted with gracious hospitality by people who would have been dead but for a few pills per day.

**Birth of the Global Fund to Fight AIDS, TB, and Malaria**

It was time to bring these benefits to the poorest of the poor all over the world and, most urgently, to Africa. Together with two other colleagues in the struggle against AIDS—Bruce Walker, of the Harvard Medical School, and Max Essex, of the Harvard School of Public Health—Paul Farmer and I decided that we would prepare a document to show that treatment of dying AIDS patients was possible and could be scaled up to millions of people within a few years. In the end, the four of us guided the Consensus Statement by Members of the Harvard Faculty. One hundred twenty-eight faculty members signed the document that outlined how large-scale anti-AIDS drug treatment was possible in the impoverished world.

One of our key points was that drug treatment for the poor would actually cost the donor world much less than appeared to be the case from drug prices in the rich countries. Under the patent system, anti-retroviral medicines are priced far above their actual cost of production. The companies can price in this manner because the patent gives them a temporary monopoly. The economic theory is that the profits that result from high patent-protected prices are the incentive for the companies to engage in research and development in the first place. Still, with the actual production costs of an antiretroviral regimen at $500 per year or less (compared with U.S. market prices of around $10,000 per year), it would be possible to provide access to the poor with donor help, assuming that drug companies would supply the low-income markets at production cost rather than monopoly prices. This turned out to be the case. The patent holders agreed to cut their prices in the low-income markets, while various generic drug manufacturers provided additional competition by offering low-priced competitor drugs in countries where patents did not apply or where they were circumvented by special procedures.

The consensus statement therefore showed that it would be possible to treat millions of poor people per year for a few billion dollars of donor support each year. The statement circulated immediately around the world, to Anthony Fauci at the National Institutes of Health, the White House, the Commission on Macroeconomics and Health, the WHO, the foundations, the presidents in Africa, and, of course, UN Secretary-General Kofi Annan.

I worked very closely with the secretary-general and his staff in the weeks leading up to the Abuja Summit on AIDS in April 2001, refining the concepts of a new global fund as well as the economics that would underlie the fund. The secretary-general announced his support for a plan for the Global Fund to Fight AIDS, TB, and Malaria at the summit in a marvelous and historic speech. By the next month, the secretary-general was standing at the Rose Garden next to President Obasanjo to hear President Bush announce that the United States would subscribe to the Global Fund. In June, the General Assembly endorsed the fund, followed by the G8 leaders in July. By the end of 2001, the fund had begun.

As always, these battles are never won, just pushed forward to new terrain. Since the fund started, the continuing battle has been to get the resources the fund needs on a long-term reliable basis, and to help the low-income countries to prepare and implement plans that are commensurate with their challenge. Still, after years of extreme neglect, the battle against AIDS, malaria, and TB has finally been joined.

**Some Lessons Learned**

A decade of intensive work in Africa has added to my determination to fight against the prejudices and misperceptions that leave hundreds of millions of impoverished people stranded in unnecessary suffering. Africa gets a bad rap as the "corrupt continent." Even when such sentiments are not racist in intent, they survive in our societies as conventional wisdom because of existing widespread racism. Many African governments are desperately trying to do the right thing, but they face enormous obstacles of poverty, disease, ecological crisis, and geopolitical neglect or worse.

Since the issuance of the Macroeconomics and Health Report and the launch of the Global Fund, I have turned my own attention in Africa to issues beyond public health. Africa needs solutions not only for dis-
ease control, but also for chronic hunger, rural isolation, and growing environmental degradation, often the result of still-booming populations. As in the case of disease, there are special reasons why Africa is particularly hard pressed in each of these areas. In other words, geography has conspired with economics to give Africa a particularly weak hand. I have noted that Africa lacks navigable rivers with access to the ocean for easy transport and trade. Moreover, much of Africa’s population lives in the interior of the continent rather than at the coast. Indeed, sub-Saharan Africa’s highest population densities are in the highland regions, such as Ethiopia and Rwanda, because rainfall reliability and soils tend to be a bit better there than in the interior lowlands and coast. Yet these highland populations are isolated from the international division of labor. In general, Africa lacks irrigation, and more than 90 percent of the food crops are rain fed. Rainfall tends to be highly variable in the subhumid savannah and the arid Sahel near the Sahara. Farmers lack access to roads, markets, and fertilizers. Soils have been long depleted of nutrients as the result of repeated harvests without the benefit of chemical or organic nutrient inputs. Without transport, telecommunications, clinics, and fertilizers, the hunger-disease-poverty nexus has only deepened.

The combination of Africa’s adverse geography and its extreme poverty creates the worst poverty trap in the world. Yet the situation in Africa is not hopeless. Far from it. Just as my malaria-expert colleagues taught me about bed nets, indoor spraying, and effective antimalarial medicines, and just as my HIV/AIDS-knowledgeable colleagues taught me what can be accomplished through effective prevention programs linked to access to anti-AIDS drugs, so my colleagues in tropical agriculture, rural electrification, road building, and safe water and sanitation began to teach me what could be done in these other areas of vital concern.

Africa’s problems, I have come to understand, are especially difficult but still solvable with practical and proven technologies. Diseases can be controlled, crop yields can be sharply increased, and basic infrastructure such as paved roads and electricity can be extended to the villages. A combination of investments well attuned to local needs and conditions can enable African economies to break out of the poverty trap. These interventions need to be applied systematically, diligently, and jointly, since they strongly reinforce one another. With focused attention by African countries and the international community, Africa could soon have its own Green Revolution, and achieve a takeoff in rural-led growth, thereby sparing the coming generation of Africans the continued miseries of drought-induced famine. Sooner than I expected, I received an important new opportunity to put these ideas into practice.