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BETTING ON FAMINE

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Why the World Still Goes Hungry

Jean Ziegler

Translated from the French
by Christopher Caines



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*The man who wants to keep faith with justice
must ceaselessly break faith with injustice
in all its inexhaustibly triumphant forms.*

—Charles Péguy

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To all, I express my profound gratitude.

LIST OF ABBREVIATIONS

AGRA	Alliance for a Green Revolution in Africa
AQIM	Al-Qaeda in the Islamic Maghreb
ASCOFAM	World Association for the Struggle Against Hunger
AU	African Union
CCC	Clean Clothes Campaign
CIAN	Conseil Français des Investisseurs en Afrique (French Council of Investors in Africa)
CODEN	Comité de Développement de la Région de N'do (Committee for the Development of the N'do Region), Cameroon
DPKO	UN Department of Peacekeeping Operations
DRC	Democratic Republic of the Congo
ECOSOC	UN Economic and Social Council
FAO	UN Food and Agriculture Organization
FCI	Food Corporation of India
FIAN	FoodFirst Information and Action Network
FINMA	Finanzmarktaufsicht (Financial Markets Authority), Switzerland
G20	Group of Twenty Finance Ministers and Central Bank Governors
G8	Group of Eight (and similarly: G6, G8+5)
GATT	General Agreement on Tariffs and Trade
GBD	Global Burden of Disease
GDS	Grands Domaines du Sénégal (Large Estates of Senegal)
ICDs	Integrated Child Development Centers, India
ICRC	International Committee of the Red Cross
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
ILO	UN International Labour Organization
IMF	International Monetary Fund
IRFED	Institut International de Recherche et Formation Éducation et Développement (International Institute for Research and Training in Education and Development)
LAP	Libyan-African Portfolio, Mali
LDCs	least developed countries
LEPI	Liste Électorale Permanente Informatisée (Computerized Permanent Electoral List), Benin
MDGs	UN Millennium Development Goals
MST	Movimento dos Trabalhadores Rurais Sem Terra (Landless Rural Workers' Movement), Brazil

LIST OF ABBREVIATIONS

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NGO	nongovernmental organization
NKVD	Narodnyy Komissariat Vnutrennikh Del (People's Commissariat for Internal Affairs), the regular and secret police force of the USSR under Stalin; its successor was the KGB
OECD	Organisation for Economic Co-operation and Development
OHCHR	UN Office of the High Commissioner for Human Rights
OIC	Organization of the Islamic Conference
OIP	UN Office of the Iraq Programme
PDS	Public Distribution System (for food), India
PT	Partido dos Trabalhadores (Workers' Party), Brazil
RNS	Reichsnährstand (Reich Food Corporation), Nazi Germany
ROPPA	Réseau des Organisations Paysannes et des Producteurs d'Afrique de l'Ouest (Network of Farmers' and Agricultural Producers' Organizations of West Africa)
Socapalm	Société Camerounaise de Palmeraies (Cameroon Palm Plantations Company)
SOMINA	Société des Mines d'Azelik (Azelik Mining Company), Niger
SOSUCAM	Société Sucrière du Cameroun (Cameroon Sugar Company)
SS	Schutzstaffel (Protection Squadron or Defence Corps), Nazi paramilitary organization
SYNPA	Association Synergie Paysanne (Farmers' Synergy Association), Benin
UNAIDS	Joint UN Programme on HIV/AIDS
UNCTAD	UN Conference on Trade and Development
UNDP	UN Development Programme
UNHRC	UN Human Rights Council (formerly UN Sub-Commission on the Promotion and Protection of Human Rights)
UNICEF	United Nations Children's Fund
UNOHCI	UN Office of the Humanitarian Coordinator in Iraq
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
VAM	Vulnerability Analysis and Mapping, WFP Food Security Analysis Unit
VAR-Palmares	Vanguardia Armada Revolucionaria-Palmares (Armed Revolutionary Vanguard-Palmares), Brazil
WARDA	West Africa Rice Development Association (now the Africa Rice Center)
WEF	World Economic Forum, Davos, Switzerland
WFP	UN World Food Programme
WHO	UN World Health Organization
WMO	UN World Meteorological Organization

PREFACE

The destruction, every year, of tens of millions of men, women, and children from hunger is the greatest scandal of our era. Every five seconds, a child under the age of ten dies of hunger—on a planet abounding in wealth and rich in natural resources. In its current state, the global agricultural system would in fact, without any difficulty, be capable of feeding 12 billion people, or twice the world's current population. Hunger is thus in no way inevitable. Every child who starves to death is murdered.

Relying upon the mass of statistics, graphs, reports, resolutions, and other studies released by the United Nations, organizations that specialize in problems of hunger, and other research institutions, as well as various NGOs, I attempt, in the first part of this book, to describe the extent of world hunger, and to assess the scope of the mass destruction it causes.

Almost half of the 56 million civilian and military deaths during World War II were caused by hunger and its immediate consequences. Like the biblical plague of locusts, the plundering Nazis descended upon the occupied countries, requisitioning the harvests, national food reserves, and livestock. For the inmates of the concentration camps, Hitler conceived, before the implementation of the Final Solution, the *Hungerplan* (hunger plan or hunger strategy), a program of planned starvation that aimed to liquidate

as many detainees as possible through deliberate and prolonged deprivation of food.

Yet despite the European peoples' suffering, their collective experience of starvation had, in the immediate aftermath of the war, beneficial consequences. Several important researchers, patient prophets whom no one had heeded before, all at once saw hundreds of thousands of copies of their books sold and translated into a great many languages. The one universally recognized figure in this movement was Josué de Castro, a doctor born of mixed ethnic heritage in the impoverished northeastern provinces of Brazil, whose book *Geopolítica da fome* (The Geopolitics of Hunger), originally published in Portuguese in 1951, became known worldwide. Other writers, emerging in many different countries at about the same time, likewise exerted a profound influence on the collective consciousness—and the collective conscience—of the West, including Tibor Mende, René Dumont, and Abbé Pierre.

Immediately after its founding in June 1945, the United Nations created the Food and Agriculture Organization (FAO) and, not long after, the World Food Programme (WFP). In 1946, the UN launched its first global campaign against hunger. Finally, on December 10, 1948, the UN General Assembly, meeting in the Palais de Chaillot in Paris, adopted the Universal Declaration of Human Rights, whose article 25 defined the right to adequate nutrition. The second part of this book gives an account of this crucial moment in the awakening of the conscience of the West.

However, this moment was, unfortunately, very short-lived. Within the heart of the UN system itself, as well as in many of its member states, there were (and still are today) many powerful enemies of the right to food. The third part of this book unmasks them.

Deprived of adequate means to fight against hunger, the FAO and the WFP survive today only under highly adverse conditions. While the WFP succeeds, with great difficulty, in providing some of the emergency food aid needed by starving communities around the world, the FAO lies in ruins. The fourth part of this book reveals the reasons for the organization's decline.

In recent years, new scourges have descended upon the starving

peoples of the southern hemisphere: expropriation of land by bio-fuel corporations and speculation in staple foods on commodities exchanges. The global power of the multinational corporations that dominate the agri-food industry and the hedge funds that speculate on the prices of agricultural commodities is superior to the power of national governments and all intergovernmental organizations. The leaders of agri-food and finance companies decide every day who on this planet will die and who will live.

The fifth and sixth parts of this book explain how and why, today, the obsession with profit, the lure of gain, the limitless greed of the predatory oligarchies of the globalized financial services industry prevail—both in public opinion and in governmental circles—over every other consideration, blocking effective action against hunger worldwide.

I was the first UN Special Rapporteur on the Right to Food. Together with my colleagues, men and women of exceptional abilities and commitment, I worked in this capacity for eight years. I would like especially to acknowledge Sally-Anne Way, Claire Mahon, Ioana Cismas, and Christophe Golay. Without these young scholars, nothing would have been possible. This book represents eight years of shared experiences and battles fought together.

I refer often throughout this book to the missions that we have undertaken in countries around the world stricken with famine: India, Niger, Bangladesh, Mongolia, Guatemala, and many others. Our reports from each mission reveal with particular clarity the devastation of the communities most severely afflicted by hunger. They reveal as well those who are responsible for this mass destruction. Doing so has not always been easy.

Mary Robinson is the former president of the Republic of Ireland and the former UN High Commissioner for Human Rights. Few of the bureaucrats at the UN could forgive this exceptionally elegant, keenly intelligent woman for her fierce sense of humor. In 2009, there were 9,923 international conferences, meetings of experts, and multilateral negotiation sessions among member states at the Palais des Nations, the European headquarters

of many UN agencies in Geneva. There were even more in 2010. Many of these meetings concerned questions of human rights, and especially the right to adequate nutrition. Throughout her term of office, Mary Robinson showed little regard for most of these meetings. They smacked too much, she would say, of “choral singing”—referring to the old Irish tradition of village choirs that go from house to house on Christmas Day, singing in unison, year in and year out, the same trite songs. Indeed, there are hundreds of conventions in international law, intergovernmental organizations, and NGOs whose reason for being is to curb hunger and malnutrition. And in fact, from one continent to the other, thousands of diplomats, all year long, engage in such “choral singing” about human rights, while nothing ever changes in the lives of the victims of hunger. We must understand why.

How many times have I heard, during the debate that would follow my speeches in France, Germany, Italy, or Spain, such objections as, “But *monsieur*, if the Africans would only stop having children all over the place, they would be less hungry!” The ideas of Thomas Malthus die hard.

And what can one say of the lords of the corporate agri-food industry, the eminent directors of the World Trade Organization (WTO) and the International Monetary Fund (IMF), the “tiger shark” speculators, and the vultures who feed on the “green gold” of the biofuel industry, all of whom pretend that hunger is a natural phenomenon that can only be vanquished by Nature herself—that is, by a somehow self-regulating world market? According to them, such a market must, of course, inevitably create riches that would quite naturally benefit the hundreds of millions of starving people.

All consciousness is mediated. The world is not self-evident; it does not offer itself to view immediately as it really is, even to those who can see clearly. Ideology obscures reality. And crime, for its part, advances in disguise.

The older generation of Marxists of the Frankfurt School, such as Max Horkheimer, Ernst Bloch, Theodor Adorno, Herbert Marcuse, and Walter Benjamin, reflected at length on the individual’s mediated perception of reality, and on the processes through

which subjective consciousness is alienated by the doxa of an ever more aggressive and authoritarian capitalism. They sought to analyze the effects of the dominant capitalist ideology, especially the way in which that ideology leads people, from childhood, to consent to submit their lives to distant ends by depriving them of the possibilities of personal autonomy through which they might assert their freedom.

Some of these philosophers speak of a “double history”: on the one hand, the visible history of everyday events, and on the other, the invisible history of consciousness. They show that consciousness is developed by hope in history, by a utopian spirit, by active faith in freedom. Such hope has a secular eschatological dimension: it nourishes an underground history that opposes to the actual justice system the justice that we deserve.

“It is not only the direct use of violence that has enabled the established order to maintain itself, but the fact that men themselves have learned to approve of it,” writes Horkheimer. In order to change reality, to liberate the liberty latent within us, we must reawaken that “anticipatory consciousness,” that historical force whose name is utopia, revolution.

Today, our awareness of the inevitability of progress is steadily growing. In the dominant Western societies above all, more and more women and men are mobilizing, fighting, confronting the neoliberal doxa that accepts the inevitability of mass starvation. More and more, it becomes irrefutable that hunger is human-made and that human beings can conquer it.

The question remains: how can we strike down this monster?

Deliberately ignoring Western public opinion, powerful revolutionary forces are awakening among the small farmers of the southern hemisphere. International farmers’ unions, leagues of farmers who raise crops and livestock, are fighting against the vultures of “green gold” and against the speculators who seek to steal their land. They constitute the principal force in the battle against hunger.

In the epilogue to this book I return to this battle and the hope that nourishes it. Supporting it, for all of us, is a matter of life and death.

PART I

THE GEOGRAPHY OF HUNGER MASSACRE

The human right to food is set forth in article 25 of the International Covenant on Economic, Social and Cultural Rights, which since 1955 has formed the basis of the UN's Social Compact on the Right to Food as follows:

The right to have access, personally and unobstructed, to sufficient food to meet the basic requirements of nutrition, health and well-being, and sufficient food corresponding to the cultural traditions of the people in which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life for all.

Among all human rights, the right to food is certainly the one most consistently violated in our planet. Allowing people to starve borders an organized crime, as we read in Le Monde: "A hunger diet is the very life of the poor, to deprive them of it is to commit murder. To starve a child is to deprive him of his life, to deprive an employee of his wages is to starve him."

According to estimates by the FAO, the number of people on the planet who are severely and permanently undernourished reached 935 million in 2010, or against 1.021 billion in 2013.

THE GEOGRAPHY OF HUNGER

The human right to food, which follows from article 11 of the International Covenant on Economic, Social and Cultural Rights, has since 2002 been defined by the office of the UN's Special Rapporteur on the Right to Food as follows:

The right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear.

Among all human rights, the right to food is certainly the one most constantly violated on our planet. Allowing people to starve borders on organized crime. As we read in Ecclesiastes: "A meagre diet is the very life of the poor, to deprive them of it is to commit murder. To take away a fellow-man's livelihood is to kill him, to deprive an employee of his wages is to shed blood."

According to estimates made by the FAO, the number of people on the planet who are seriously and permanently undernourished reached 925 million in 2010, as against 1.023 billion in 2009.

Nearly a billion human beings out of the 7 billion on the planet thus suffer from permanent hunger.

The phenomenon of hunger may be approached in very simple terms. Solid foods, whether of animal or vegetable (and sometimes mineral) origin, are consumed by living beings to satisfy their needs for energy and nutrition. Liquid foods, or beverages (including water from underground sources, which may contain dissolved minerals), are consumed for the same purpose (liquid foods may be essentially considered solid food when they are in the form of soups, sauces, and so on). Together, solid and liquid sources of nourishment constitute what we call an organism's diet.

The human diet provides the vital energy that human beings need to live. The fundamental unit of food energy is the calorie, which enables us to measure the amount of nourishment that the body needs to grow, maintain, and rebuild itself. An inadequate caloric intake leads first to hunger, then to death. Human caloric needs vary according to age: about 700 calories per day for an infant, 1,000 for a child between one and two years old, and 1,600 for a five-year-old; adults' needs range from 2,000 to 2,700 calories per day depending on the climate where they live and the kind of work they do. The World Health Organization (WHO) sets 2,200 calories per day as the minimum necessary for an adult. Below this limit, an adult cannot maintain his or her body in a healthy state.

Severe, permanent undernutrition also causes acute suffering, tormenting the body. It induces lethargy and gradually weakens both mental and physical capacities. It leads to social marginalization, the loss of economic autonomy, and, of course, permanent unemployment on account of the sufferer's inability to engage in regular work. With rare exceptions, a human being may live normally for three minutes without breathing, three days without drinking, and three weeks without eating. No more. Then we begin to decline. Severe hunger leads inevitably to death.

To die of hunger is painful. The dying process is long and

causes unbearable suffering. Hunger destroys the body slowly, and it destroys the mind and spirit also. Anxiety, despair, a panicked feeling of being alone and abandoned accompany the body's physical decline.

Death from hunger passes through five stages. The body exhausts first its reserves of sugar, then of fat. Lethargy sets in, then rapid weight loss. Next the immune system collapses. Diarrhea accelerates the dying process. Oral parasites and respiratory tract infections cause dreadful suffering. Next the body begins to devour its own muscle mass. For undernourished children, death comes much more quickly than for adults. At the end, children can no longer stand upright. Like so many little animals, they huddle in the dust. Their arms hang lifelessly. Their faces look like those of the very old. Finally, they die.

In humans, neuronal development in the brain occurs primarily in the first five years of life. If, during this period, a child does not receive quantitatively and qualitatively adequate and sufficient food, his brain will remain stunted for life. By contrast, for example, an adult whose car breaks down while crossing the Sahara and who is deprived of food for some time before being saved, even at death's door, can return without difficulty to a normal life. A program of "re-nutrition" administered under medical supervision will enable a starving adult to regain all his or her mental and physical capacities.

The case of a child under five years of age deprived of sufficient food of adequate quality is entirely different. Even if such a child subsequently enjoy a series of miraculously favorable events in her life—her father finds work, she is adopted by a well-off family, and so on—her destiny is sealed. She has been crucified at birth; she will remain cognitively impaired for life. No therapeutic feeding program can provide her the satisfying, normal life she deserves.

In a great many cases, undernutrition causes illnesses called the "diseases of hunger": noma, kwashiorkor, and others. In addition, hunger dangerously weakens the immunological defenses of its victims. In his large-scale investigation of AIDS, Peter Piot, executive director of the Joint UN Programme on HIV/AIDS

(UNAIDS), has shown that millions of people who die of the disease could be saved, or could at least resist this scourge more effectively, if they had access to regular and sufficient nourishment. As Piot writes:

For the poor across the globe, food is always the first necessity. Even more so in the face of HIV/AIDS. Good nutrition is the first line of defence in warding off the detrimental effects of the disease. And while it cannot match the effectiveness of life-extending drug therapies, nutritious food can help people infected with HIV stay healthier, longer. This allows teachers to continue to teach, farmers to continue to farm and parents to continue to care for their children. Without proper nutrition, however, the disease progresses faster and with more force.

In Switzerland, the average life expectancy at birth for men and women combined is slightly more than eighty-three years. In France, it is eighty-two. It is thirty-two years in Swaziland, a small country in southern Africa ravaged by AIDS and hunger.

The curse of hunger is passed from mother to child biologically. Every year, millions of undernourished women give birth to millions of children who are condemned from birth, deprived from their first day on earth. During her pregnancy, the malnourished mother transmits the curse of hunger to her child. Fetal undernutrition causes permanent physical and cognitive impairment: brain damage and neuromuscular motor deficiency. A starving mother cannot breast-feed her baby, nor does she have the means to buy infant formula. In the countries of the South, half a million women die in childbirth every year, most because of prolonged lack of food during pregnancy. Hunger is thus by far the leading cause of death and needless suffering on our planet.

How does the FAO attempt to collect data on world hunger? The organization's analysts, statisticians, and mathematicians

are universally recognized for their expertise. The mathematical model that they developed first in 1971 and have been refining ever since is extremely complex. On a planet where 7 billion human beings live divided among some 193 states, it is obviously impossible to collect data on individuals. The FAO's statisticians therefore use an indirect method of sampling, which I describe in a deliberately simplified fashion here.

First, for each country the FAO gathers data on food production and on the country's imports and exports of foodstuffs, assessing for each of these figures the total number of calories represented. (Such an analysis reveals, for example, that even though India accounts for almost half of the people in the world who suffer from serious, permanent undernutrition, the country in certain years exports tens of millions of metric tons of wheat. Between June 2002 and November 2003, for example, India's wheat exports reached 17 million tons.) By this method, the FAO calculates the total number of calories available in each country.

Second, statisticians analyze for each country the population's demographic and sociological structure. As we have seen, caloric needs vary according to age. Sex constitutes another key variable: women burn fewer calories than men, for a whole range of sociological reasons. The work a person does and his socioeconomic status constitute still another important variable: a steelworker laboring at a blast furnace obviously requires more calories than a retiree who spends his days sitting on a park bench. Such factors vary furthermore according to the region and climatic zone under consideration; prevailing air temperatures and weather conditions influence caloric needs.

At this second stage of their analysis, FAO statisticians are in a position to correlate each country's caloric and demographic data, to determine its total caloric deficit, and therefore to calculate the theoretical number of people afflicted with serious, permanent undernutrition. However, the results of such calculations say nothing about the distribution of calories within a given population. The statisticians therefore refine their models by targeted

surveys based on sampling techniques. The goal is to identify particularly vulnerable groups.

Bernard Maire and Francis Delpuech have criticized the FAO's model. First, they question its *parameters*. The FAO's statisticians in Rome, they say, are able to determine nutritional deficits so far as calories are concerned, that is, at the level of macronutrients (protein, carbohydrates, fats) that provide calories, and therefore food energy. But they are utterly unable to account for a population's deficiencies in micronutrients, the lack of vitamins, minerals, and trace elements. Yet the absence in the food supply of enough iodine, iron, and vitamins A and C, among other elements indispensable to health, each year leaves millions of people blind, deformed, or disabled, and kills millions more. Thus the FAO manages with its statistical methods to calculate the number of victims of undernutrition, but not those who suffer from malnutrition.

Maire and Delpuech further question the reliability of the FAO's *method*, which depends entirely upon the quality of the statistics provided to it by individual states. Many countries in the southern hemisphere, for example, have no system for gathering statistical information at all, not even in embryonic form. Yet it is precisely in the Southern countries that hunger claims the greatest number of victims.

Despite all the criticisms leveled at the mathematical model used by the FAO's statisticians—criticisms whose pertinence I recognize—I for my part consider that the model does enable us to grasp long-term variations in the number of undernourished people and deaths from hunger on our planet. In any case, even if the FAO's figures are underestimates, its method does satisfy this dictum of Jean-Paul Sartre: "To know the enemy is to fight the enemy."

The current goal of the UN is, by 2015, to reduce by half the number of people suffering from hunger. In formally adopting this target in 2000 as the first of the UN's eight Millennium Development Goals (MDGs), the Assembly General in New York

took 1990 as its point of reference. It is thus the total number of people who were starving in 1990 that the UN is attempting to reduce by half.

This goal, of course, will not be reached, for the pyramid of martyrs to hunger, far from shrinking, only grows. As the FAO itself admits:

Latest available statistics indicate that some progress has been made towards achieving MDG 1, with the prevalence of hunger declining from 20 percent undernourished in 1990–92 to 16 percent in 2010. However, with the world's population still increasing (albeit more slowly than in recent decades), a declining proportion of people who are hungry can mask an increase in the number. In fact, developing countries as a group have seen an overall setback in terms of the number of hungry people (from 827 million in 1990–92 to 906 million in 2010).

In order to more accurately determine the geography of hunger, the distribution of this form of mass destruction around the planet, we must first have recourse to a fundamental distinction that is referred to by the UN and its specialized agencies: "structural hunger" on the one hand, and "conjunctural hunger" on the other.

Structural hunger inheres in the insufficiently developed structures of agricultural production in the South. It is permanent and unspectacular, and it is reproduced biologically as, every year, millions of undernourished mothers bring millions of hungry babies into the world. Structural hunger represents the physical and mental destruction of human beings, the shattering of their dignity, endless suffering.

Conjunctural hunger, on the other hand, is highly visible. It erupts periodically on our television screens. It occurs suddenly, when natural disasters—swarms of locusts, drought, floods—devastate a region, or when war tears apart the fabric of a society, ruins its

economy, drives hundreds of thousands of its victims into camps for internally displaced persons within a country or into refugee camps beyond its borders. In all these situations, farmers can neither sow seed nor harvest their crops anymore. Markets are destroyed, roads blocked, bridges collapsed. The institutions of government no longer function. For millions of victims of hunger penned into camps, the WFP is their only hope.

Nyala, in Darfur, is the largest of the seventeen camps for internally displaced persons in the three provinces in western Sudan ravaged by civil war and hunger. Guarded by African "blue helmets" (UN peacekeeping forces), mostly Rwandese and Nigerian, nearly a hundred thousand undernourished men, women, and children are crammed together in an immense camp under canvas and plastic sheeting. Any woman who ventures out even five hundred meters from the camp fence—to search for firewood or well water—runs the risk of being captured by the Janjawid, the mounted Arab gunmen hired by the Islamist dictatorship in Khartoum, the capital of Sudan. She will certainly be raped, and possibly murdered.

If the WFP's trucks, white Toyotas topped by blue UN flags, do not arrive every three days with their pyramidal loads of sacks of rice and flour, containers of water, and crates of medicine, the Zagawha, Massalit, and Fur people confined behind barbed wire and protected by the blue helmets will soon perish.

Who are the people at greatest risk of hunger? The three most vulnerable large groups are, in the FAO's terminology, the rural poor, the urban poor, and victims of natural and human-made disasters described above. Let us pause to consider the first two of these categories.

THE RURAL POOR

The majority of human beings who do not have enough to eat belong to communities of the rural poor in the South. Many have access to neither potable water nor electricity. In these areas, services that provide public sanitation, education, and hygiene are

for the most part nonexistent. Of the 7 billion human beings on the planet, slightly less than half live in rural areas.

Since the dawn of time, peasant communities—farmers and pastoralists (and fishers as well)—have always been among the first victims of extreme poverty and hunger. Today, of the 1.2 billion human beings who, according to World Bank criteria, live in "extreme poverty" (that is, on an income of less than \$1.25 per day), 75 percent live in the countryside.

Many agricultural workers live in extreme poverty for one or another of the following three reasons. Some are landless migrant workers or tenant farmers overexploited by landowners. Thus, for example, in northern Bangladesh, Muslim tenant farmers are forced to remit to their Hindu landlords who live in Calcutta four-fifths of their harvest. Others, if they do have land, do not enjoy sufficiently secure title to it. This is the case of the Brazilian *posseiros*, who occupy small areas of unproductive or vacant land, which they work without holding documents proving that the land belongs to them. For still others, even if they have clear title to their land, their fields are insufficient in extent and quality to feed their families decently.

The International Fund for Agricultural Development (IFAD) estimates the number of landless agricultural workers at around 500 million, representing some 100 million households. These are the poorest of the poor on earth.

For small farmers, overexploited tenant farmers, agricultural day laborers, and migrant workers, the World Bank henceforward recommends "market-assisted land reform," which it first advocated in 1997 for the Philippines. According to this scheme, the landowning classes would be obliged to give up part of their holdings, but rural workers would have to buy the land, possibly with the help of credits from the World Bank. In view of the utter destitution of landless families, "market-assisted" agrarian reform, promoted worldwide by the World Bank, amounts to the most blatant hypocrisy, not to say indecency pure and simple.

The liberation of poor farmers can only be accomplished

by the farmers themselves. Anyone who has ever attended an *assentamento* (settlement) or an *acampamento* (encampment) of the Movimento dos Trabalhadores Rurais Sem Terra (MST; Landless Rural Workers' Movement) of Brazil feels moved and filled with admiration. The MST has become the most important social movement in Brazil, dedicated to agrarian reform, food sovereignty, questioning the assumptions of free trade and the dominant corporate food industry model of food production and consumption, promotion of subsistence agriculture, solidarity, and internationalism.

The international rural workers' movement known as La Via Campesina brings together 200 million tenant farmers, smallholders (who own 1 hectare—about 2.5 acres—or less), and seasonal rural workers across the world, including both sedentary and nomadic pastoralists, as well as self-employed fishers. The organization's headquarters is in Jakarta, Indonesia. La Via Campesina is today one of the most impressive revolutionary movements in the Third World. I will discuss its work further in later chapters.

Few men and women on earth work as hard, in such adverse climatic conditions, and for such meager return on their efforts as the small farmers of the southern hemisphere. Few among them are able to save anything from their earnings to protect themselves against the natural disasters, locusts, and social unrest that always threaten them. Even if, for a few months at a time, food is available in abundance—as drums sound and marriages are celebrated with sumptuous feasting, and everyone shares whatever they have—the threat of hunger is omnipresent. No one can ever know for certain how long they will have to wait, after exhausting the last year's harvest, to gather the new harvest in—a “hunger gap” during which food prices often increase substantially, and during which the rural poor must either buy food or starve.

Ninety percent of small farmers in the South have no tools other than the hoe, the machete, and the scythe. More than a billion have neither a draft animal nor a tractor. When a farmer

doubles his pulling power, the area of land he can cultivate doubles likewise. Without animal or mechanical traction, the farmers of the South will remain confined to extreme poverty.

In the Sahel, 1 hectare planted with cereal crops yields between 600 and 700 kilograms (536 to 625 pounds per acre). In Brittany, Beauce, Baden-Wurtemberg, or Lombardy, 1 hectare of wheat yields 10 tons—more than ten times as much. This difference in productivity cannot of course be explained by a disparity in skills. The Bambara, Wolof, Mossi, and Toucouleur farmers of West Africa work with the same energy, the same intelligence as their European colleagues. The difference lies in the inputs available to each. In Benin, Burkina Faso, Niger, or Mali, most farmers do not enjoy the advantage of any irrigation system; like farmers three thousand years ago, they rely on the rains—only 3.8 percent of farmland in sub-Saharan Africa is irrigated (versus 37 percent in Asia, for example). Moreover, they also have at their disposal neither mineral fertilizers, nor improved seed, nor pesticides to fight predatory insects.

Indeed, the FAO estimates that 500 million farmers in the South as a whole have no access to improved seed, mineral fertilizers, or even manure (or other natural fertilizers), because they have no animals. Again according to the FAO, 25 percent of the world's harvests are destroyed each year by bad weather or rodents. Silos are rare in sub-Saharan Africa, in South Asia, and on the Altiplano (the Andean plateau). It is thus the farming families of the South who are the first and hardest hit by harvest destruction.

The transportation of harvested crops to market is another great problem. Farmers who cannot keep their rice dry can store it for only four months before it begins to germinate. If it does not get to market within this period, it is lost. I witnessed in Ethiopia in 2003 the following absurd scenario: in Mek'ele, in the Tigray region, in the high plateaus tormented by winds, where the earth is cracked and dusty, famine ravaged 7 million people. Yet 500 kilometers farther west, in Gondar, tens of millions of tons of teff rotted in the granaries for lack of trucks and roads capable of transporting food that could have saved countless lives.

In sub-Saharan Africa, in India, or in the heart of the Aymara and Otavalo communities of the Altiplano in Peru, Bolivia, and Ecuador, there is no such thing as a cooperative rural retail bank on the model of the French and Swiss *crédit agricole*. As a result, farmers have no choice: most of the time, they have to sell their crops at the worst possible moment, that is, immediately after harvest, when prices are lowest.

Once they are caught in the spiral of overindebtedness—descending ever deeper into debt in order to pay the interest on their previous debts—farmers are forced to sell their future harvest to be able to buy, at a price fixed by the lords of the global agri-food trade, the food their families need to bridge the hunger gap.

In rural areas, especially in Central and South America, India, Pakistan, and Bangladesh, violence is endemic.

Consider Guatemala. Together with my colleagues, I undertook a mission to that country from January 26 to February 5, 2005. During our stay, the Guatemalan government's commissioner for human rights, Frank La Rue, himself a former leader of the opposition to the dictatorship of General Efraín Ríos Montt, brought to my attention the crimes committed day after day against the small farmers of his country.

On January 23, in the *finca* (rural plantation or agricultural estate) of Alabama Grande, an agricultural worker stole some fruit. Three of the *finca's* security guards found and killed him. That evening, when their husband and father did not return home, his family, who, like all the families of the *peones* (landless rural laborers), lived in a hut on the edge of the estate, grew worried. Accompanied by their neighbors, the man's eldest son, who was fourteen years old, went up to the estate owner's house. The guards intercepted them. A dispute broke out. Voices were raised. The guards beat the boy and four of the men who were with him. On another *finca*, other guards stopped a young boy whose pockets were full of *cozales*, a local fruit. Accusing him of having stolen the fruit from the landowner's fields, they handed him over to the *patrón*, who killed the boy with a pistol shot.

La Rue said to me, "Yesterday, in the presidential palace, the vice president of the republic, Eduardo Stein Barillas, explained it to you like this: forty-nine percent of the children under ten years old are undernourished . . . ninety-two thousand of them died of hunger and diseases caused by hunger last year. . . . So you can understand why fathers, brothers, at night . . . they climb into the *finca's* orchards . . . they steal some fruit, a few vegetables. . . ."

In 2005, 4,793 murders were committed in Guatemala, 387 in the course of our brief stay. Among the victims were four young members of a farmers' union, three men and a woman, who had just returned from a training course in Fribourg, Switzerland. Their killers machine-gunned their car in the Sierra de Chuacús mountains, on the road between San Cristóbal Verapaz and Salamá.

I heard the news during a dinner at the Swiss embassy. The ambassador, a determined man who loved and knew Guatemala very well, promised me that he would lodge a strong protest the very next day with the minister of foreign affairs. Also in attendance at this dinner was Rigoberta Menchú, winner of the Nobel Peace Prize in 1992, a magnificent Mayan woman who, under the dictatorship of General Fernando Romeo Lucas García, lost her own father and one of her brothers, who were burned alive. As we left, on the doorstep, she whispered to me, "I was watching your ambassador. He was pale . . . his hand was trembling. . . . He is furious. He's a good man. He will protest—but it will do no good!"

Near Finca las Delicias, a coffee estate in the *municipio* of El Tumbador, I questioned striking *peones* and their wives. For six months, the landowner had not paid his workers, using as his excuse the crash in coffee prices on the world market. (In 2005, the legal minimum wage in Guatemala was 38 quetzals a week, or about \$5.) A demonstration organized by the striking workers had just been violently put down by the police and the landowner's private security guards.

Monsignor Álvaro Ramazzini Imeri, the bishop of the San Marcos diocese, president of the Conference of Catholic Bishops

of Guatemala, and an important advocate for the poor and marginalized of Guatemala, had warned me: "Often, at night, after a demonstration, the police return and randomly arrest young people . . . who often disappear."

We are sitting on a wooden bench in front of a shack. The strikers and their wives are standing in a semicircle. In the night's muggy heat, their children watch us with serious expressions. The women and young girls wear vividly colored dresses. A dog barks in the distance. The sky is spangled with stars. The scent of the coffee trees mingles with the smell of the red geraniums growing behind the house. Clearly, these people are afraid. Their faces betray their anxiety, which has surely been fed by the nighttime arrests and the disappearances organized by the police that Bishop Ramazzini told me about. In a frankly clumsy fashion, I hand out my UN business cards. The women press them to their hearts, like talismans.

In the very moment that I am telling them about human rights and the possibility of UN protection, I know already that I am betraying them. The UN, of course, will do nothing. Hiding away in their villas in Guatemala City, the capital, the local UN officials content themselves with administering expensive so-called development programs—which profit the landowners. Maybe, nonetheless, Vice President Eduardo Stein Barillas, a former Jesuit and close to La Rue, will warn El Tumbador's chief of police about the possible "disappearances" that threaten the young strikers. . . .

The greatest violence done to the world's poor farmers is of course the unequal distribution of land. In Guatemala, in 2011, 1.86 percent of the population owned 57 percent of the arable land. There are thus in this country forty-seven large properties each extending over 3,700 hectares (9,143 acres) or more, while 90 percent of the farmers live on plots of 1 hectare or less.

As for the violent crimes committed against the farmers' unions and the protesting strikers, their situation has not improved. On the contrary: the number of disappearances and murders has increased.

THE URBAN POOR

In the world's urban shantytowns—the *callampas* of Lima, the slums of Karachi, the *favelas* of São Paulo, the squatter encampment at Manila's Smokey Mountain landfill—the mothers of poor families must, in order to buy their food, manage on an extremely limited budget. As I have said, the World Bank estimates that 1.2 billion "extremely poor" people live on less than \$1.25 per day. In Paris, Geneva, or Frankfurt, a housewife spends on average 10 to 15 percent of her family income to buy food. In the budget of a woman living at Smokey Mountain, food accounts for 80 to 85 percent of her total expenses.

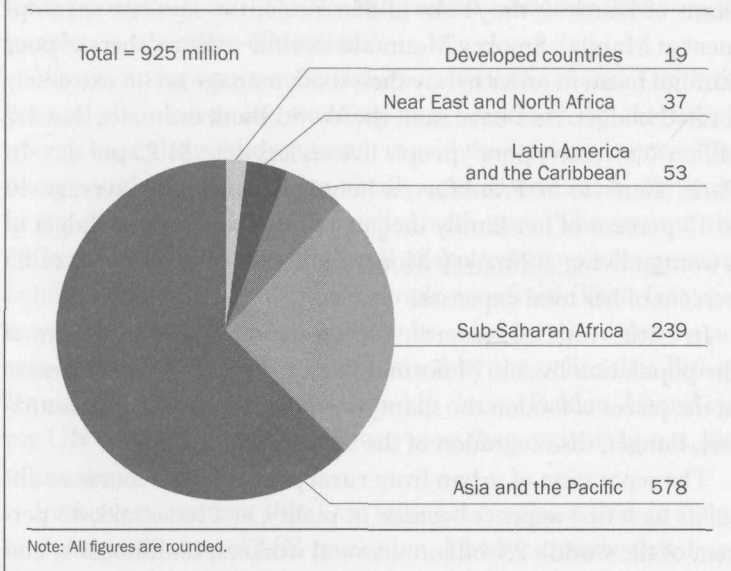
In Latin America, according to the World Bank, 41 percent of the population lives in "informal housing." The slightest increase in the prices of food in the shantytowns' local markets causes anxiety, hunger, disintegration of the family—catastrophe.

The separation of urban from rural poor is not of course as absolute as it first appears because in reality, as I have said, 43 percent of the world's 2.7 billion seasonal workers, smallholders, and tenant farmers, who constitute the majority of the poorest people living in rural areas, must also, at certain times of the year, buy food in the market of their local village or market town to survive the hunger gap between harvests. The rural worker thus bears the full brunt of rising prices for the food that he absolutely must procure.

Yolanda Areas Blas, Nicaragua's warm and energetic representative to La Via Campesina, offers the following example. The Nicaraguan government annually defines a *canasta básica*, a "basket" of consumer goods including twenty-four essential foodstuffs that a family of six needs each month to survive. In March 2011, the cost of the *canasta básica* in Nicaragua was 6,250 cordobas (about \$500). The legal minimum wage in the same period for an agricultural worker (which is, moreover, rarely paid) was 1,800 cordobas (about \$80).

The geographical distribution of world hunger is extremely unequal. In 2010, the situation looked like this:

Figure 1. Undernourished people by world region (in millions), 2010



The following table enables us to assess the variation over time of the total number of victims of hunger in recent decades:

Figure 2. Undernourished people worldwide, 1969–2007

Year	Number (in millions)	Percentage of total population
2005–7	848	13%
2000–2002	833	14%
1995–97	788	14%
1990–92	843	16%
1979–81	853	21%
1969–71	878	26%

The following table shows the change in the scale of hunger in the various regions of the world from 1990 to 2007, that is, over the course of approximately one generation:

Figure 3. Undernourished people by world region (in millions), 1990–2007

Region	1990–92	1995–97	2000–2002	2005–7
World	843.4	787.5	833	847.5
Developed countries	16.7	19.4	17	12.3
Developing countries	826.6	768.1	816	835.2
Asia & the Pacific (inc. Oceania)	587.9	498.1	531.8	554.5
East Asia	215.6	149.8	142.2	139.5
Southeast Asia	105.4	85.7	88.9	76.1
South Asia	255.4	252.8	287.5	331.1
Central Asia	4.2	4.9	10.1	6
Western Asia	6.7	4.3	2.3	1.1
Latin America & the Caribbean	54.3	53.3	50.7	47.1
North & Central America	9.4	10.4	9.5	9.7
The Caribbean	7.6	8.8	7.3	8.1
South America	37.3	34.1	33.8	29.2
Near East & North Africa	19.6	29.5	31.8	32.4
Near East	14.6	24.1	26.2	26.3
North Africa	5	5.4	5.6	6.1
Sub-Saharan Africa	164.9	187.2	201.7	201.2
Central Africa	20.4	37.2	47	51.8
East Africa	76.2	84.7	85.6	86.9
Southern Africa	30.6	33.3	35.3	33.9
West Africa	37.6	32	33.7	28.5
Africa (all regions)	169.8	192.6	207.3	207.2

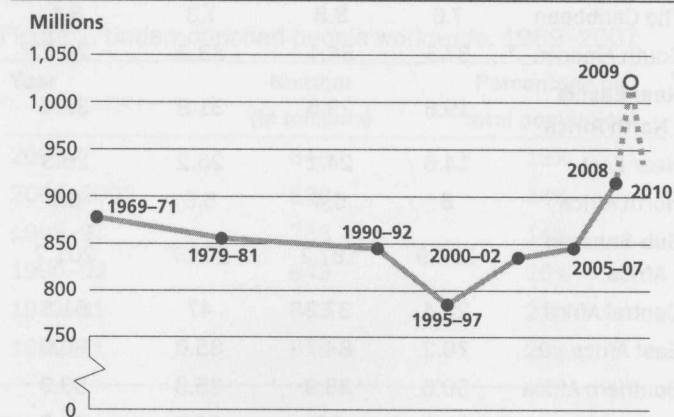
These statistics, which end in 2007, should be compared to the changes in the world's population by continent, for which the figures in 2007 were as follows:

Figure 4. World population distribution by world region, 2007

Region	Population (millions)	Percentage of world population
Asia	4,030	60.5%
Africa	965	14.0%
Europe	731	11.3%
South America (inc. Central America & the Caribbean)	572	8.6%
North America	339	5.1%
Oceania (inc. Australia and New Zealand)	34	0.5%

The following graph shows long-term change in the scale of world hunger from 1969 to 2010, or over the course of about two generations:

Figure 5. Number of undernourished people in the world, 1969–71 to 2010

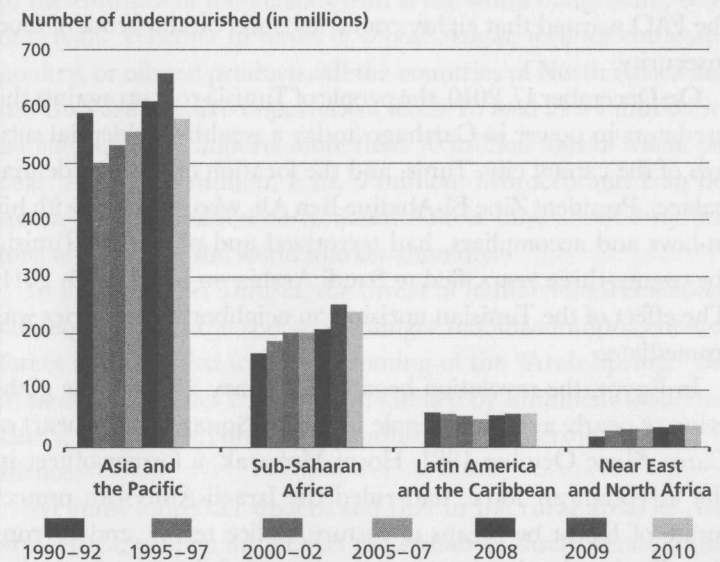


Note: Figures for 2009 and 2010 are estimated by FAO with input from the United States Department of Agriculture, Economic Research Service. Full details of the methodology are provided in the technical background notes (available at www.fao.org/publication/sofi/en/).

This graph requires several qualifications. Obviously, we must compare these figures to the total global population increase over the course of the same period: in 1970, there were 3.696 billion people on the planet; in 1980, 4.442 billion; in 1990, 5.279 billion; in 2000, 6.085 billion; and in 2010, 6.7 billion. Since 2005, the global total number of victims of hunger has increased catastrophically, while the rate of increase of the world's total population—about 400 million people every five years—has remained stable. The greatest increase in the number of undernourished people occurred between 2006 and 2009, even though, according to the FAO's figures, harvests of cereal crops were good worldwide in this period. The number of undernourished people rose severely because of an explosion in the prices of food and because of the crisis that I analyze in the sixth section of this book, the scandal of market speculation in food.

The following graph offers a more detailed portrait of regional trends in hunger in the developing world from 1990 to 2010:

Figure 6. Regional trends in the number of undernourished, from 1990–92 to 2010



This graph reveals that the developing countries in recent years have been home to between 98 and 99 percent of the undernourished people on the planet. In absolute terms, the region afflicted with the greatest number of starving people remains Asia and the Pacific, but with a reduction of 12 percent in recent years (from 658 million in 2009 to 578 million in 2010), this region showed genuine improvement by 2010. It is in sub-Saharan Africa that the percentage of undernourished people remains the highest at present, at 30 percent in 2010, or nearly one person in three.

If the majority of the victims of hunger live in developing countries, the industrialized West does not entirely escape the specter of hunger. Nine million seriously and permanently undernourished people live in the industrialized countries, and another 25 million in the nations of Eastern Europe and the former Soviet Union said to be “in transition.”

In the first few months of 2011, once again, as in 2008, the world market in staple food commodities exploded. (The staple foods are rice, wheat, and corn [maize], which together account for 75 percent of world food consumption. Rice alone constitutes 50 percent of the world's total volume of food.) In February 2011, the FAO warned that eighty countries stood on the brink of food insecurity.

On December 17, 2010, the people of Tunisia rose up against the predators in power in Carthage (today a wealthy residential suburb of the capital city, Tunis, and the location of the presidential palace). President Zine El-Abidine Ben Ali, who, together with his in-laws and accomplices, had terrorized and plundered Tunisia for twenty-three years, fled to Saudi Arabia on January 14, 2011. The effect of the Tunisian uprising on neighboring countries was immediate.

In Egypt, the revolution began on January 25, with the gathering of nearly a million people in Tahrir Square, in the heart of Cairo. Since October 1981, Hosni Mubarak, a former officer in the Egyptian air force, had ruled the Israeli-American protectorate of Egypt by means of torture, police terror, and corruption. During the three weeks preceding his fall from power, elite

secret-police snipers, perched on the roofs overlooking the square, murdered more than three hundred men and women, mostly young people, while the security forces “disappeared” hundreds of others into their torture chambers. Mubarak was overthrown on February 12. The unrest soon spread throughout the entire Arab world, including both North Africa and the entire Middle East: from Libya, to Yemen, to Syria, to Bahrain, and elsewhere.

The revolutions in Egypt and Tunisia have complex causes; the tremendous courage of the protesters in each country draws on deep roots. However, hunger, undernutrition, and anxiety provoked by the rapidly rising cost of their daily bread constitute a powerful source of their rebellion. Ever since the period when Tunisia was a French protectorate, the baguette has been the staple of the Tunisian diet, just as the *ish masri* or *ish balad*, a thick pita-type bread, has been the Egyptians' essential food. In June 2010, the price of a ton of bread wheat on the world market began to rise steeply, spiking in February 2011 at over \$348, or more than double the price of June 2010.

The vast area that stretches from the Atlantic coast of Morocco to the emirates of the Persian Gulf is the world's largest importer of cereals. Whether in terms of cereals, sugar, feed for cattle and poultry, or oilseed products, all the countries of North Africa and the Gulf are massive importers of food. To feed its 84 million inhabitants, Egypt imports more than 10 million tons of wheat per year; Algeria, 5 million; Iran, 6 million; Morocco and Iraq between 3 and 4 million each. Saudi Arabia buys about 7 million tons of barley on the world market annually.

In Egypt and in Tunisia, the threat of famine had tremendous consequences, as the specter of hunger mobilized unprecedented forces that have led to the blossoming of the “Arab Spring.” But in most of the other countries threatened by imminent food insecurity, the people continue to endure their suffering and fear in silence.

We must moreover understand that in the rural areas of Asia and Africa, women are subject to permanent discrimination that results in undernutrition. Thus among certain culture groups in

Sudan, Somalia, and the Sahel, women and their daughters eat only what is left after the men in the family and their sons have eaten. Very young children suffer from the same kind of discrimination. Widows and second or third wives must endure even more seriously discriminatory treatment.

In the Somali refugee camps in Kenya, the representatives of the UN High Commissioner for Refugees fight a daily battle against the following appalling custom. Among Somali pastoralists, women and young girls are not allowed to touch the bowl of millet or the remains of grilled mutton until after the men have had their meal. The men serve themselves, then let the male children have their turn. At the end of the meal, when the men have left the room with their sons, the women and girls gather round the bowls on the floor mat, in which the men have left behind a few little clumps of rice, leftover bits of wheat, a few shreds of meat. If the bowls are empty, the women and girls do not eat.

One more word about the victims of hunger. The geography that I have sketched and the statistics that I have listed account for at least one human being in seven on earth. But when we look at the situation from another point of view, when we cease to consider the death of a child as a mere statistic, but see it as the disappearance of a singular, irreplaceable being who comes into the world to live a unique life and who will never return, then the perennial destruction wrought by hunger—in a world abounding in riches and in which we seem capable of accomplishing so many “impossible” things—appears ever more unacceptable. It amounts to nothing less than a massacre, mass murder of the poorest of the poor.

2

INVISIBLE HUNGER

Alongside the human beings destroyed by undernutrition, the victims encompassed within the terrifying geography of hunger mapped in the previous chapter, there are also those whose lives are ravaged by malnutrition. The FAO does not neglect them, but counts them separately. While undernutrition is the result of a lack of calories, malnutrition is caused by deficiencies in micronutrients—vitamins and minerals. Several million children under age ten die of acute, severe malnutrition every year.

During my eight-year term as UN Special Rapporteur on the Right to Food, I traveled throughout the lands of hunger. On the arid, frozen heights of the Yucatán sierra in Guatemala, in the desolate steppes of Mongolia, deep in the dense jungle of Orissa in India, in villages stricken by the famine endemic to Ethiopia and Niger, I have seen gray, toothless women who, at age thirty, looked eighty years old; little boys and girls with huge black eyes, astonished, cheerful, but with arms and legs as thin as matchsticks; men, ashamed, gesturing slowly, with emaciated bodies. Their affliction is immediately visible. All are victims of a lack of sufficient calories.

The ravages of malnutrition, on the other hand, are not immediately visible. A man, woman, or child may be at normal weight

and suffer nonetheless from malnutrition, that is, from serious, permanent deficiencies of vitamins and minerals essential to the assimilation of *macronutrients*. These substances are called *micronutrients* because they are necessary only in tiny quantities; nonetheless, the body cannot grow, mature, and maintain itself in good health without these nutrients, because the organism cannot synthesize them. They can only be provided by a diet that is varied, balanced, and of high quality.

Deficiencies in vitamins and minerals can in fact lead to very serious health problems: a greatly increased vulnerability to infectious diseases, blindness, anemia, lethargy, reduced learning ability, cognitive impairment, congenital deformities, and death. The three most common deficiencies are lack of vitamin A, iron, and iodine.

The UN often calls malnutrition “silent hunger.” Yet victims of malnutrition may in fact cry out in pain. I prefer to speak of *invisible* hunger, imperceptible to the eye—even, oftentimes, to the eye of a doctor. A child’s body may appear to be well fed, with normal curves, and she may weigh within the normal range for her age, while nonetheless malnutrition gnaws away at her from inside—a dangerous state that, as much as a sheer lack of calories, may lead to serious illness and death.

However, as critics have been pointed out, deaths due to malnutrition are not captured in the FAO’s hunger statistics, which only count total available calories. Insofar as children under fifteen years old are concerned, UNICEF (the United Nations Children’s Fund) and the not-for-profit Micronutrient Initiative (MI) have since 2004 undertaken periodic surveys whose results are published in a series of reports with titles such as *Vitamin and Mineral Deficiency: A Global Damage Assessment Report*. These reports show that one-third of the world’s people fail to realize their full physical and intellectual potential because of vitamin and mineral deficiencies. Malnutrition is particularly devastating for children under five.

Anemia, due to iron deficiency, is one of the most frequent consequences of malnutrition. It is characterized chiefly by a low hemoglobin count in the blood. Anemia can be fatal, especially for

children and women of childbearing age. For infants, iron is essential: the major part of neuronal development occurs within the first two years of life. Furthermore, anemia also causes immune system malfunction. About 30 percent of births occur in the world’s fifty poorest countries or LDCs (least-developed countries), to use the UN’s terminology. Among these babies, the lack of iron causes irreparable damage. Many will be cognitively impaired for life.

Every four minutes a human being goes blind, in most cases because of nutritional deficiency. Blindness is most often caused by a lack of vitamin A: 40 million of the world’s children suffer from a lack of this nutrient; 13 million of them go blind every year. Beriberi, a disease that destroys the nervous system, is caused by prolonged lack of thiamine, or vitamin B1. The absence of vitamin C in food causes scurvy and, in small children, rickets. Folic acid, also called vitamin B9, is absolutely essential to pregnant women; WHO estimates that 200,000 babies are born every year suffering from birth defects due to a lack of this micronutrient.

Iodine is essential to good health. Nearly a billion people—mainly men, women, and children living in the southern hemisphere, especially those who live in mountainous regions and in floodplains where both drinking water and the water-saturated soil are often low in iodine—suffer from a natural deficiency of iodine in their diet. When this deficiency is not compensated for by supplementation, it causes goiter in adults (enlargement of the thyroid gland, which leads to severe swelling of the neck) and cretinism in children, a syndrome of severely stunted physical and mental growth caused by untreated congenital deficiency of thyroid hormones (congenital hypothyroidism) due to maternal hypothyroidism. For a pregnant mother and consequently also for the fetus, a lack of iodine can be fatal.

A lack of zinc also affects both motor and mental abilities. According to a study undertaken by *The Economist*, zinc deficiency causes some 400,000 deaths annually. Zinc deficiency also causes diarrhea, often fatal, in young children.

It is important as well to realize that half the people afflicted with a lack of micronutrient suffer from cumulative deficiencies,

meaning that they suffer from the lack of a sufficient amount of several vitamins and several minerals at the same time.

Fully half of the deaths of children under age five around the world are caused directly or indirectly by malnutrition. The great majority of these children live in South Asia or sub-Saharan Africa. Only a small percentage of the world's malnourished children have access to treatment: national health policies in numerous countries in the South only rarely address acute, severe malnutrition, even though the condition can be treated at minimal cost and treatment does not pose any particular therapeutic problems. Health centers specializing in the treatment of malnutrition are sorely lacking in many countries. In a document released in 2008, Action Contre la Faim, the worldwide NGO known in English as Action Against Hunger, rightly protested: "To end childhood malnutrition would be easy. We have to make it a priority. Yet many governments lack the will."

In all probability, since 2008, the situation has if anything grown worse. In sub-Saharan Africa, for example, primary sanitation services have continued to deteriorate. In Bangladesh, where the number of malnourished children exceeds 400,000, there are only two hospitals capable of administering the care that can bring back to life a little boy or girl ravaged by a lack of vitamins and/or minerals.

We must, moreover, not forget that malnutrition, like undernutrition, has severe psychological as well as physical consequences. The lack of macro- and micronutrients and the host of illnesses such deprivation entails cause anxiety, a permanent sense of shame, depression, an obsessive fear of each new day. How will a mother whose children cry from hunger at night, and who miraculously succeeds in borrowing a little bit of milk from her neighbor, be able to feed them tomorrow? How can she avoid going mad? What father, unable to feed his family, can fail to lose, in his own eyes, every last shred of his dignity? A family denied regular access to food, of adequate quality and in sufficient amounts, is a family destroyed. The tens of thousands of farmers in India who have committed suicide bear tragic witness to this harsh truth.

3

PROTRACTED CRISES

At the center of the FAO's analysis of world hunger is the concept of protracted crisis—a rather banal term used by many UN agencies that fails to do justice to the tragedies, contradictions, tensions, and failures that mark the world's most long-lasting food crises. During a protracted crisis, structural hunger and conjunctural hunger mutually reinforce each other. A natural disaster, a war, or a plague of locusts destroys the economy, causing society to disintegrate and weakening institutions of all kinds. A country thus afflicted can no longer find a way out of the crisis or recover a minimal sense of balance. The state of emergency becomes an ordinary way of life for the inhabitants. Tens, even hundreds of millions of people thrown into this situation struggle in vain to reconstruct a society destroyed by hunger. But food insecurity is only the most obvious external symptom of protracted crisis. Such crises are by no means all the same, but they do share certain characteristics:

Long duration. Afghanistan, Somalia, and Sudan are all examples of countries that have been in a crisis situation since the 1980s—for three decades.

Armed conflicts. War may afflict only one relatively isolated region of a country, as in Uganda, in Niger, or in Sri Lanka from 2000 to 2009. Or, on the contrary, it may engulf an entire

country, as was until recently the case in Liberia and Sierra Leone.

The weakening of institutions. In protracted crises, governmental and other public institutions are weakened to an extreme degree, whether because of corruption among leaders or lower-level officials, or owing to the disintegration of the social fabric caused by war.

All the countries in a state of protracted crisis are included on the list of the fifty least developed countries. This list of the LDCs is compiled annually by the UN Development Programme (UNDP) according to the following criteria: low income (based on a three-year average estimate of the gross national income per capita); human resource weakness (based on indicators of nutrition, health, education, and adult literacy); and economic vulnerability (based on indicators of such factors as instability of agricultural production and exports, degree of industrialization, reliance on exports, and percentage of the population displaced by natural disasters).

Currently twenty-one countries fulfill the FAO's criteria for protracted crisis. All these countries have experienced a human-caused emergency—military conflict or political crisis. Eighteen of them have also had to confront, at one time or another, a natural disaster, in isolation or in combination with a military/political crisis.

Niger is a magnificent country in the Sahel extending over nearly 1.27 million square kilometers (about half a million square miles), home to some of humanity's most splendid cultures, including those of the Djerma, Hausa, Touareg, and Fula peoples. Niger is also a typical example of a country in a protracted state of crisis. Niger has very little arable land: only 4 percent of the land is entirely suitable for agriculture. Aside from the Djerma and some of the Hausa, most of the country's peoples are descended from nomadic or seminomadic pastoralists. Niger has 20 million head of cattle, white camels, zebu (humpbacked cattle with lyre-shaped horns), goats (notably the pretty red Maradi goat), sheep, and donkeys. In the center of the country, the soil is rich in min-

eral salts that give the livestock who lick them extraordinarily firm and tasty flesh.

But the people of Niger are crushed under the burden of their external debt, and are subjected on that account to the iron law of the International Monetary Fund (IMF). In the course of the last ten years, the IMF has ravaged the country with a series of "structural adjustment" programs. In particular, the IMF ordered the closing of the National Veterinary Office, opening the market to multinational veterinary pharmaceutical corporations. The government of Niger now no longer has any control over the expiration dates of veterinary vaccines and medications. (Niger's capital city, Niamey, is 1,000 kilometers [620 miles] from the Atlantic coast. Many veterinary medicines have expired by the time they reach Niamey's markets. Local merchants make do by changing the expiration dates on the labels by hand.) Since the closing of the Veterinary Office, the herders of Niger have been forced to buy antiparasitic medicines, vaccines, and other drugs and supplements to treat their herds at prices dictated by Western multinational corporations.

The climate in Niger is harsh. To keep a herd numbering several hundred or several thousand head healthy is expensive. Most herders are in no way able to pay the new prices. As a result, their animals fall sick and die. At best, they can be sold for next to nothing before they die. Human health, which is directly linked to the health of the animals, deteriorates. The proud herdsmen sink into despair and tumble down the social ladder. Together with their families, they migrate to the shantytowns of Niamey or Kano, Niger's second-largest city after Lagos, in the north, or the big coastal cities of neighboring countries, such as Cotonou, Abidjan, or Lomé.

In this country of recurrent famine, where drought periodically exposes people and their animals to undernutrition and malnutrition, the IMF has forced the government to dismantle its system of food reserves, which amounted to 40,000 tons of cereals. The state used to store mountains of sacks of millet, barley, and wheat in its warehouses precisely in order to be able, on

an emergency basis, to help the country's most vulnerable communities survive drought, invasions of locusts, or floods. But the African Department of the IMF in Washington is of the opinion that such food reserves distort the free market. In short: the state should play no role in the buying and selling of cereals, because that would violate the sacrosanct dogma of free trade. Since the great drought of 1985, which lasted five years, the rhythm of dry periods has accelerated. Famine now attacks Niger on average every two years.

Niger is a former French colony (1922–60), and today a French neocolony. It is the second-poorest country on the planet, according to the UNDP's Human Development Index. Vast resources lie untapped under its soil. After Canada, Niger is the second-biggest producer of uranium in the world. However, the AREVA group, a French public multinational industrial conglomerate (90 percent state-owned), has a monopoly on the development of the uranium mines at Arlit. The royalties paid by AREVA to the government in Niamey are ridiculously low.

In 2007, then president Mamadou Tandja decided to grant a permit to SOMINA (the Société des Mines d'Azelik) to develop the uranium mines at Azelik. The government of Niger would own 33 percent of SOMINA, while a Chinese company, Sino Uranium, would hold the remaining majority 67 percent of the company's shares. Tandja presented this as a done deal. At the same time, AREVA, which had been in Niger for forty years, was preparing to develop a site at Imouraren, south of Arlit. In early 2010, Tandja received a delegation from the Chinese minister of mines in the presidential palace. Niamey was rife with rumors that the Chinese too were interested in the mine at Imouraren.

Tandja's punishment was swift. On the morning of February 18, 2010, a military coup brought to power an obscure colonel named Salou Djibo, who broke off all discussions with the Chinese and reaffirmed Niger's "gratitude and loyalty" to AREVA. (In early 2011, free elections brought to power Mahamadou Issoufou, a former mining engineer and AREVA employee.)

Five years ago, the World Bank undertook a feasibility study on installing an irrigation system in Niger. The study concluded that installing groundwater pumps and a system of canals to channel river water would, without any major technical difficulties, permit the irrigation of 440,000 hectares (1.09 million acres). If it were realized, this project would therefore enable Niger to achieve self-sufficiency in food, and to permanently shield from famine 10 million people. Sadly, the world's second-largest uranium producer does not have a single penny to finance such a project.

The extreme poverty of the peoples who live in northern Niger, particularly the communities living at the foot of the Tibesti highlands, is the root cause of the Touareg rebellion, which has been rampant for the last ten years. Terrorist groups originating in Algeria, linked together in the network that calls itself Al-Qaeda in the Islamic Maghreb (AQIM), dominate the region. Their preferred action is taking Europeans hostage. They even kidnap Europeans in their favorite restaurant, Le Toulousain, in the center of Niamey, and in the heart of the whites' living quarters in the immense mining camp at Arlit. AQIM killers find willing recruits among young Touareg, who have been reduced by AREVA's policies to a life of permanent unemployment, despair, and poverty.

In southern Niger, in the Hausa territory around the city of Maradi in the ancient sultanate of Zinder, I witnessed the arrival of a devastating swarm of locusts. Far away, a strange sound fills the air, like a squadron of jets passing high overhead.

The sound comes closer.

Then, suddenly, the sky grows dark. Billions of migrating desert locusts—black and purple—beat their wings furiously. An enormous cloud obscures the sun. A sort of twilight dims your vision. The insects form a compact mass at the moment when they prepare to swoop down to earth. Their descent occurs in three stages. First they hover for several minutes, a restless, loud, threatening mass, above the villages, the fields, and the granaries they are

preparing to attack. Then, with a terrifying roar, the mass drops halfway to earth. In countless numbers, they land on trees, shrubs, millet stalks, the roofs of huts, devouring everything their hungry jaws can seize. After a brief pause, the voracious army reaches the earth. Trees, bushes, millet plants, and other food crops are by now stripped bare, reduced to skeletons, the smallest leaf, the smallest fruit, the smallest grain having been devoured by the invader. The moving sea of locusts now covers the land for miles in every direction. On the surface of the soil, they devour every last edible morsel, churning the earth to a depth of half an inch.

The satisfied horde leaves as it arrived: suddenly, with a deafening noise, blocking out the sun. The farmers, their wives, their children emerge timidly from their huts, helpless to do anything but take stock of the disaster.

The size of the female locust ranges from about 7 to 9 centimeters ($2\frac{3}{4}$ – $3\frac{1}{2}$ inches), the males from 6 to 7.5 centimeters ($2\frac{1}{2}$ –3 inches); they weigh 2 to 3 grams—about a tenth of an ounce. The locust devours in one day a volume of food equal to three times its own weight.

The desert locust is rife throughout the Sahel, the Middle East, North Africa, Pakistan, and India. Their ravenous swarms can cross oceans and continents. One neurotransmitter in particular, serotonin, unleashes their social instincts, leading to the formation of the swarm. Sometimes they join together to form super-swarms comprising, it is said, several billion insects.

In theory, it is not difficult to fight these invaders: using all-terrain vehicles and small aircraft, powerful insecticides can be spread at the same time on the ground and in the air to deliver fatal doses of poison that penetrate entire swarms. By such means, during the locust invasion in 2004, Algeria rushed forty-eight vehicles into the field to spread 80,000 liters (21,000 gallons) of pesticides, Morocco used six vehicles to spread 50,000 liters (13,200 gallons), and Libya used six Toyota all-terrain vehicles to spread 110,000 liters (29,000 gallons). However, these pesticides are extremely toxic and can destroy the soil, making it unfit to plant for years. Handling such pesticides requires great care.

In the Bible, the following story is told in the book of Exodus. The Egyptian pharaoh refused to free the Hebrew people, whom he kept in slavery. To punish him, Yahweh sent a series of ten plagues against Egypt. First the waters of the Nile were changed into blood, killing all aquatic life. Then there followed plagues of frogs, lice or gnats, flies (or wild animals), pestilence that killed livestock, incurable boils, hail and thunder that destroyed orchards and crops, and locusts. After this came three days of darkness, and finally the deaths of Egypt's firstborn, both human and animal.

The eighth plague, the locusts, is described as follows:

The locusts invaded the whole of Egypt and settled all over Egypt, in great swarms; never had there been so many locusts before, nor would there be again. They covered the surface of the ground till the land was devastated. They devoured whatever was growing in the fields and all the fruit on the trees that the hail had left. No green was left on tree or plant in the fields anywhere in Egypt.

Finally, Pharaoh gave in. He allowed the Jewish people to leave Egypt, and Yahweh put an end to the scourges with which he had ravaged Egypt.

In Africa, however, grasshoppers (locusts are the swarming phase of short-horned grasshoppers) continue to destroy crops, both in the field and after harvest. They return again and again, bringing famine and death.

The situation of Niger applies to all the countries in protracted crisis afflicted with this scourge. As a result, the levels of serious, permanent undernutrition are extremely high in all these countries, as the FAO table on pp. 36–37 clearly shows.

POSTSCRIPT 1: THE GAZA GHETTO

One of the most distressing of the world's current protracted crises does not show up in the FAO's table above. It is the direct consequence of the Israeli blockade of the Gaza Strip.

Figure 7. Levels of serious, permanent undernutrition

Country	Total population (in millions)	Number of undernourished people (in millions)	Percentage of undernourished people
	2005-7	2005-7	2005-7
Afghanistan	n/a	n/a	n/a
Angola	17.1	7.1	41
Burundi	7.6	4.7	62
Congo	3.5	0.5	15
Ivory Coast	19.7	2.8	14
Eritrea	4.6	3	64
Ethiopia	76.6	31.6	41
Guinea	9.4	1.6	17
Haiti	9.6	5.5	57
Iraq	n/a	n/a	n/a
Kenya	36.8	11.2	31
Liberia	3.5	1.2	33
Uganda	29.7	6.1	21
Central African Republic	4.2	1.7	40
Democratic Republic of the Congo	60.8	41.9	69
North Korea	23.6	7.8	33
Sierra Leone	5.3	1.8	35
Somalia	n/a	n/a	n/a
Sudan	39.6	8.8	22
Tajikistan	6.6	2	30
Chad	10.3	3.8	37
Zimbabwe	12.5	3.7	30

Percentage of children under age 5 who are underweight for their age	Mortality rate for children under 5 (percent)	Delayed growth (as percentage of body weight appropriate for age)
2002-7	2007	2000-2007
32.8	25.7	59.3
14.2	15.8	50.8
35	18	63.1
11.8	12.5	31.2
16.7	12.7	40.1
34.5	7	43.7
34.6	11.9	50.7
22.5	15	39.3
18.9	7.6	29.7
7.1	4.4	27.5
16.5	12.1	35.8
20.4	13.3	39.4
16.4	13	38.7
24	17.2	44.6
25.1	16.1	45.8
17.8	5.5	44.7
28.3	26.2	46.9
32.8	14.2	42.1
27	10.9	37.9
14.9	6.7	33.1
33.9	20.9	44.8
14	9	35.8

Gaza is a strip of land 41 kilometers (25 miles) long that reaches inland 6 to 12 kilometers (about 4 to 8 miles) from the eastern Mediterranean coast, bordered by Israel to the north and east and Egypt to the south. Gaza has been inhabited for about 3,500 years and is home to Gaza City, historically an important port and market town, a crossroads of exchange among Egypt and Syria, the Arabian Peninsula, and the Mediterranean.

Today more than 1.5 million Palestinians are crammed together in the 365 square kilometers (141 square miles) of the Gaza Strip, the great majority of them refugees and the descendants of refugees from the Arab-Israeli wars of 1947, 1967, and 1973.

In February 2005, the government of Prime Minister Ariel Sharon decided to evacuate its troops and officials from Gaza. Inside Gaza, the Palestinian Authority would from then on assume administrative responsibilities. But, in accordance with international law, Israel would remain in effect an occupying power: Gaza's airspace, territorial waters, and land borders would remain under Israeli control. On its side of the border with Gaza, Israel built an electrified barrier, fortified on both sides with mined areas, entirely surrounding the Strip. And Gaza became the biggest open-air prison on the planet.

As an occupying power, Israel has a duty to respect international humanitarian law and in particular to refrain from the use of hunger as a weapon against the civilian population. The facts on the ground are as follows.

I found myself one afternoon in Gaza City, in the sunshine-flooded office of the Commissioner-General of the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), Karen Koning AbuZayd. Born a Danish citizen and married to a Palestinian, she was wearing an elegant, loose Palestinian dress embroidered in red and black. Step by step, day after day, since the day in 2005 when she replaced her fellow Dane Peter Hansen, declared persona non grata by the occupying Israelis, she had fought against the Israeli generals to maintain the food distribution centers, hospitals, and 221 schools run by UNRWA.

The commissioner-general was preoccupied. "Anemia caused

by malnutrition—many of the children are sick with it," she told me. "We have had to close more than thirty of our schools. . . . Many children can no longer stand upright. Anemia is devastating them. They can no longer manage to concentrate. . . ." In a low voice, she continued, "It's hard to concentrate when the only thing you can think about is food."

After 2006, following the Israeli-Egyptian blockade of the Gaza Strip, the Gazans' food security situation deteriorated further. By 2010, the unemployment rate reached 81 percent of the able-bodied population. The loss of jobs, income, assets, and revenues has gravely endangered Gazans' access to food. Per capita income has been cut in half since 2006. In 2008, eight people in ten had an income below the official threshold of extreme poverty (less than \$1.25 per day); 34 percent of the inhabitants were seriously undernourished. The situation is especially tragic for the most vulnerable groups, such as the 22,000 pregnant women, whose undernutrition will without question cause neurological problems among their unborn babies. In 2010, four in five Gazan families ate no more than one meal a day. In order to survive, 80 percent of the Strip's inhabitants depended upon international food aid. The entire population of Gaza is punished for acts for which they bear no responsibility.

On December 27, 2008, Israel's army, navy, and air force unleashed a broad-scale assault against the infrastructure and the inhabitants of the Gaza ghetto: 1,444 Palestinians, including 348 children, were killed, many with weapons that Israel was testing for the first time. The inhabitants of the ghetto were trapped, with no way to escape, caught between the electrified fence on the Israeli side and the locked-down border crossing at Rafah on the Egyptian side. More than 6,000 men, women, and children were injured, paralyzed, burned, or mutilated, or lost limbs.

The attacking Israeli forces systematically destroyed Gaza's civilian, and especially its agricultural, infrastructure. The Al Bader flour mill west of Jabalya, the biggest mill in Gaza and one of only three still functioning at the time, was attacked by Israeli F-16 fighter jets and totally destroyed. Yet bread is the staple food in Gaza.

Next, two successive attacks, on January 3 and 10, 2009, by jets armed with air-to-surface missiles, destroyed Gaza City's wastewater treatment plant, located on road number 10 in the al-Sheikh Ejlin neighborhood, as well as the dikes surrounding one of its wastewater lagoons. The city was thereby deprived of drinking water.

Richard Goldstone, president of the UN Fact Finding Mission on the Gaza Conflict, points out that neither the Al Bader flour mill, the water treatment plant, nor the farms at Ateya al-Samouni and Wa'ed al-Samouni in Zeytoun, where twenty-three members of one family were killed, were at any time ever used as shelter by Palestinian combatants. They could not therefore have constituted legitimate military targets.

As of 2011, the Gaza blockade continues. Despite the fall of the Mubarak regime in February 2011, Egypt continues to be an Israeli-American protectorate. In April 2011, the military council in power in Cairo opened the border at Rafah to allow people, but not merchandise, to cross the Egypt-Gaza border. The government in Tel Aviv allows just enough food to enter the ghetto to prevent a general famine, which would attract too much international attention. The Israelis are organizing undernutrition and malnutrition. Stéphane Hessel and Michel Warschawski believe that the goal of this strategy is to cause deliberate suffering among the inhabitants of Gaza so that they will rebel against the Hamas government. In order to achieve this political end, the Israeli government is using hunger as a weapon.

POSTSCRIPT 2: REFUGEES FROM THE NORTH KOREAN FAMINE

The UN Special Rapporteur on the Right to Food has, strictly speaking, no powers of enforcement. Nonetheless, I experienced some extraordinary moments, including one gray afternoon in November 2005 in New York. I was preparing to present my report before the Social, Humanitarian, and Cultural Affairs Committee (commonly known as the Third Committee) of the UN General Assembly. Waiting on the platform a few moments

before my turn to speak, I felt a hand clutch at the sleeve of my jacket. A man was kneeling behind me, in such a way that he could not be seen from the assembly hall. He begged me, "Please, do not mention paragraph fifteen. . . . We have to talk."

It was the ambassador from the People's Republic of China. The paragraph of my report that he was so afraid of discussed the manhunts undertaken by the Chinese government against refugees from the North Korean famine. Two rivers—the Tumen, which forms part of the boundary between the two countries, and the Yalu, which runs along most of the border—are frozen for half the year, allowing thousands of refugees who dare defy the fiercely repressive North Korean government to cross into Manchuria, often only with great difficulty. This northeastern Chinese province has traditionally been home to a large community of the Korean diaspora. Men, women, and children are periodically arrested in Manchuria by the Chinese police and sent back to the authorities in Pyongyang. Many of the men repatriated by force are immediately shot; some disappear with the women and children into reeducation camps.

That same morning I had gone up to the thirty-eighth floor of the UN skyscraper, where the secretary general has his office. For five years, Kofi Annan had tried to negotiate the opening of camps on Chinese soil to receive North Korean refugees, which would be run by the UN. But Annan had utterly failed. That morning, the secretary general had given me the green light to condemn the Chinese manhunts.

Between 6 million and 24 million North Koreans are seriously undernourished. From 1996 to 2005, recurrent famine killed 2 million of the country's people. The Kim dynasty has built its nuclear arsenal over the mass graves of the victims of hunger.

As of early 2011, the situation in North Korea was once again catastrophic: floods destroyed rice fields, an epidemic of foot-and-mouth disease devastated livestock. Corruption, waste due to mismanagement, and the contempt for the starving that the terrorist Kim dynasty has shown complete the picture. Urgent action by the World Food Programme, with the support of certain NGOs

(but not of the United States or South Korea), has attempted to contain the catastrophe. (The governments and NGOs that refuse to come to the aid of the starving people of North Korea justify their decision by explaining that they want to avoid the seizure of their aid by the authorities to feed the ruling class and the army.)

Amnesty International estimates the number of prisoners in North Korea at more than 200,000—including famine refugees sent back by the Chinese—confined in the country's political reeducation camps without trial or any prospect of being freed. Many returned famine refugees are held in camps such as Yodok in South Hamgyong province, one of six known political prison camps in North Korea. Yodok includes a "Total Control Zone" for those convicted of antiregime crimes, from which prisoners are never released. As Amnesty International reports:

Family members of those suspected of crimes are also sent to Yodok. This can include parents, grandparents, sisters, brothers, nieces, nephews and cousins. Infants born in Yodok automatically become inmates, and if they are born in the "Total Control Zone," they will be there for life.

Thus entire families, covering several generations, including children of all ages, are incarcerated on the basis of "guilt by association."

Amnesty International has condemned the way that inmates designated as "troublemakers" in the camps, including children, are confined within cube-shaped concrete cells in which it is impossible to stand upright or to stretch out fully when lying down. Amnesty has noted in particular the case of a teenager who was held in such a cube for eight months. Furthermore, according to Amnesty, up to 40 percent of prisoners in the camps die of malnutrition. They attempt to survive the forced labor they are compelled to undertake (ten hours per day, seven days a week) by eating rats and grains foraged from animal feces.

The UN has shown itself to be powerless in the face of such horror.

4

THE CHILDREN OF CRATEÚS

Brazil's northeastern states account for 18 percent of the country's territory and are home to 30 percent of its total population. Most of the land belongs to the semiarid *sertão*, which stretches over 1 million square kilometers (386,000 square miles) of dusty, uncultivated savannah with scattered low thorn bushes, ponds dotted here and there, and a few rivers cutting across it. The sun burns white-hot, and the heat is scorching year-round.

Dressed in their leather outfits, the *vaqueiros* (cowboys) look after herds of several thousand head of cattle each, which belong to the *fazendeiros*, landowners with vast holdings who mainly descend from families that belong to Brazil's old Lusitanian vice-royalty, the colonial ruling class.

Crateús is a city in the *sertão* in the state of Ceará. The municipality covers an area of 2,000 square kilometers (770 square miles) and includes 72,000 inhabitants, most of them in the city itself. On the outskirts of the great *fazendas* (large estates, or *latifúndios*) and in the city's poverty-stricken suburbs stand the shacks of the *bóias-frias* (itinerant farm laborers) and their families: the landless rural labor force.

Every morning, including on Sundays, the *bóias-frias* gather in Crateús's central square. The *feitores*, the big landowners' overseers, walk among the crowd of starving men. They choose from

among them the workers who will be hired for a day or a week, to dig an irrigation canal, fence a pasture, or do other work on a fazenda. Before a man leaves his hovel at dawn to sell himself in the square, his wife has prepared his lunch: a little rice, black beans, a potato. If he is lucky enough to be hired, her husband will eat his lunch cold at midday. If he is not hired, he will stay in the square, too ashamed to go home. Under a giant tree, he will wait, and wait, and wait some more. . . .

A *bóia-fria* in Ceará earns on average 2 reais a day, or about a dollar. In 2000, in the first term of President Luiz Inácio Lula da Silva, the government set the minimum wage for rural day laborers at twenty-two reais per day. But the *fazendeiros* of Ceará who respect laws made far away in the capital city, Brasília, are rare.

For several decades, Crateús has been the residence of an exceptional bishop: Dom Antônio Batista Fragoso. My very first visit to Crateús, in the early 1980s, when I was accompanied by my wife, Erica, had the air of a semiclandestine operation. Like Dom Hélder Câmara (1909–99), former archbishop of the cities of Olinda and Recife in the state of Pernambuco, Dom Fragoso was a determined partisan of liberation theology. In his sermons and in his social work, he defended the *bóias-frias*. The officers of the First Infantry Regiment of the Third Army stationed in Crateús and the great landowners in the area hated him. Many assassination attempts were organized against him. Twice the landowners' gunmen just barely missed their target.

Bernard Bavaud and Claude Pillonel, two Swiss priests affiliated with Dom Fragoso, had arranged our visit. And there we were at nightfall, at 1064 Rua Firmino Rosa, in front of the modest house that served Fragoso as the seat of his bishopric. Fragoso was a small, tough man from the northwest of the country, with a beaming smile. He welcomed us in perfect French. His warm simplicity immediately reminded me of the bishop in Victor Hugo's *Les Misérables*, the "Monseigneur Bienvenue" of the poor people of Digne.

The next day, Dom Fragoso drove us to a patch of wasteland a few miles beyond the last shacks at the edge of the city. "The anonymous children's burial ground," he told us. Looking

more closely, we made out dozens of rows of little wooden crosses painted white. The bishop explained: according to Brazilian law, every birth has to be registered at the *prefeitura*, the city hall, but there is a fee to register a birth, and the *bóias-frias* did not have enough money to pay it. In any case, many of their children died shortly after birth as a consequence of fetal undernutrition or because their undernourished mothers could not breast-feed them. In short, said Dom Fragoso, "They come to earth to die."

Since they were not registered at the city hall, the children of the *bóias-frias* were unknown to the government, which could therefore not provide a permit for their burial. And without this government document, the Church could not bury the children in a consecrated cemetery. Dom Fragoso had found a solution on the edge of the law. With money from the bishopric, he had bought this bit of wasteland. Every week he buried there the "children who come to earth to die."

That morning, a friend of Bavaud and Pillonel's was with us: Cicero, a farmer who lived on a tiny patch in the middle of the *sertão*. He was a big man, with skin as dry as the surrounding countryside, like the skin of his wife and their many children, who all lived in a small house made of cut branches and adobe, where we would meet them all the next day. Then, he would show us the land he held as a *posseiro*, the holder of a legal title to a tiny property—barely 100 square meters (1,000 square feet)—where he was growing a few stalks of corn and where one pig rooted around. Cicero would tell us how, periodically, local landowners' *vaqueiros* sent their cows to graze on the land inside his fences, destroying his meager garden. He would tell us too that he was illiterate, which did not prevent him from listening to Radio Tirana, dreaming of revolution.

The sun was already high in the sky. Erica and I stood silent and still at the edge of the field dotted with small crosses. Cicero saw how moved we were. He tried to console us: "Here in Ceará, we bury these little ones with their eyes open so that they'll find the way to heaven more easily."

The sky in Ceará is beautiful, always strewn with a few pretty white clouds.

5

GOD IS NOT A FARMER

The macroeconomic situation, or in other words, the state of the world economy, is the ultimate determining factor in the struggle against hunger.

In 2009, the World Bank announced that, in the aftermath of the financial crisis of 2007–8, the number of people in “extreme poverty” (meaning, as I have said, those living on less than \$1.25 per day) would rapidly increase by 89 million. As for “poor people,” those living on less than \$2 a day, their number would increase by 120 million. These predictions have been confirmed as millions of new victims of hunger have been added to the victims of normal “structural” hunger.

In 2009, the gross domestic product in every country in the world remained stagnant or fell for the first time since World War II. Worldwide industrial production tumbled by 20 percent. Those countries of the South that have most eagerly sought to integrate their economies within the world market are today the hardest hit: 2010 saw the biggest shrinkage of world trade in eighty years. In 2009, the flow of private capital to the countries of the South, and in particular to the “emerging” economies, fell by 82 percent. The World Bank estimates that, in 2009, the developing countries lost between \$600 billion and \$700 billion in capital investment. With global financial markets dried up, private capital is lacking.

In addition to this problem is the high level of debt owed by private companies, especially those in emerging countries, to Western banks. According to the UN Conference on Trade and Development (UNCTAD), nearly a trillion dollars’ worth of debt came due in 2010. Given the insolvency of many of the companies based in countries in the South, this has caused a chain reaction leading to bankruptcies, factory closings, and waves of unemployment.

Another scourge has descended upon the poor countries: for many of them, transfers of foreign currency back home to their countries of origin by workers who have migrated to North America and Europe constitute an important part of their gross domestic product. In Haiti, for example, such transfers reached almost 49 percent of gross domestic product; in Guatemala, 39 percent; in El Salvador, 61 percent. Yet in North America and Europe, immigrants have been among the first to lose their jobs. Foreign-currency transfers to the developing world have thus drastically diminished or stopped altogether.

The speculative mania of the predators of the globalized financial industry cost, in total, \$8.9 trillion in the industrialized Western nations in 2008–9. The Western nations have in particular spent trillions of dollars to bail out their delinquent bankers. But since the resources of their governments are not unlimited, their expenditures devoted to cooperative development ventures and humanitarian aid to the poorest countries have fallen dramatically. The Berne Declaration, a Swiss NGO, has calculated that the \$8.9 trillion that the governments of the industrialized nations spent in 2008–9 to bail out their respective banks would equal seventy-five years of government development aid. The FAO estimates that for an investment of \$44 billion in agricultural food production in the countries of the South over five years, the first of the UN’s Millennium Development Goals could be realized: to halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day; to achieve full and productive employment and decent work for all, including women and young people; and to halve, between 1990 and 2015, the proportion of people who suffer from hunger.

As I have said, only 3.8 percent of the arable land of sub-Saharan

Africa is irrigated. Like their forebears three thousand years ago, the vast majority of African farmers today practice a form of subsistence agriculture that relies on rain, with all the life-threatening unpredictability that implies. In a study released in May 2006, the World Meteorological Organization (WMO) examined the production of black beans in northeastern Brazil, comparing the productivity of an irrigated hectare and a nonirrigated one. The WMO's conclusion would hold equally true in Africa, and it is beyond dispute: rain-fed crops yield 50 kilograms per hectare, while irrigated crops yield 1,500 kilograms per hectare—a ratio of 1:30.

Africa, South Asia, Central America, and South America are all rich in strong ancestral farming cultures. Their farmers are culture bearers of impressive traditional knowledge, especially in meteorology. They have only to scan the sky to predict nourishing rains—or floods that will sweep away fragile sprouts. But, as I have said, their equipment is rudimentary: their principal tool remains the short-handled hoe. And the image of a woman or a teenager bent low over the short-handled hoe dominates the countryside from Malawi to Mali. There are no tractors. Despite the efforts of certain governments, such as Senegal's, to manufacture tractors domestically, or to import them en masse from Iran or India, there remain no more than 85,000 tractors in all of sub-Saharan Africa. As for draft animals, their number barely exceeds 250,000 head. The very low number of draft animals also explains the shockingly low usage of natural fertilizers.

Improved, high-yield seed, pesticides against locusts and grubs, mineral fertilizers, irrigation—all are lacking. The result is persistently very low productivity: 600 to 700 kilograms of millet per hectare in the Sahel in normal weather compared to 10 tons of wheat per hectare in European fields, as I have said. Moreover, to achieve even these low yields, the weather in the Sahel must be “normal”—that is, rain must fall as expected in June, moistening the soil and making it ready for sowing, and the “big rains” must in turn come in September—good, regular, constant rainfall that lasts for at least three weeks, soaking the young millet plants and enabling them to grow to ripeness.

Yet catastrophic weather patterns occur with increasing frequency. The “small rains” of June never come, the soil dries hard as concrete, and the seed remains on the surface of the cracked earth. The “big rains” come in great floods and, instead of gently watering the three-month-old plants, they “clean them out,” as the Bambara say, uprooting them and sweeping them away.

The preservation of the harvest also poses an enormous problem. Each harvest should, in principle, enable a farmer and his family to survive until the next one. But today, according to the FAO, in the countries of the South, more than 25 percent of total harvests, including all products (grains, vegetables, and so on), are destroyed each year by the effects of climate, insects, or rats. Silos, as I have said, are rare in Africa.

Mamadou Cissokho cuts a figure that inspires respect. In his sixties, with a close-cropped cap of gray hair and strong features, a quick wit and ready, booming laughter, he is unquestionably one of the most widely listened-to leaders among the farmers of West Africa. A former teacher, he renounced his vocation at a young age and in 1974 returned to the village where he was born, Bamba Thialène, in Senegal, about 400 kilometers (250 miles) from the capital city, Dakar, to become a farmer. Since then, he has fed his large family as a subsistence farmer on a modest scale.

In the late 1970s, Cissokho joined together with all the farmers of the villages in the area around Bamba Thialène to found the country's first farmers' union. Since then, seed cooperatives have sprung up, first in the nearby region, then throughout Senegal, and finally in neighboring countries. The Réseau des Organisations Paysannes et des Producteurs d'Afrique de l'Ouest (ROPPA; Network of Farmers' and Agricultural Producers' Organizations of West Africa) was soon founded. ROPPA is today the most powerful farmers' organization not only in West Africa but on the entire continent. Cissokho is its director.

In 2008, the farmers' unions and cooperatives in countries in South, East, and Central Africa asked Cissokho to organize the Plateforme Panafricaine des Producteurs d'Afrique (Pan-African

Producers' Platform), a continent-wide union of farmers (raising both crops and livestock) and fishers that is today African producers' principal representative organization to the European Union in Brussels, African national governments, and the main intergovernmental organizations concerned with agriculture: the World Bank, the IMF, IFAD, and UNCTAD.

From time to time, I run into Cissokho in New York's John F. Kennedy Airport. He also often comes to Geneva. He works in Geneva with Jean Feyder, who since 2005 has been the courageous Permanent Representative of the Grand Duchy of Luxembourg to the United Nations, international organizations, and the World Trade Organization in Geneva. In 2007, Feyder was named president of the Committee on Trade and Development of the WTO, which attempts to defend the interests of the fifty poorest countries against the industrialized countries that control 81 percent of world trade. Since 2009, Feyder has also served as president of UNCTAD's executive council. In both these positions, he has made a certain modest farmer from Bamba Thialène his principal adviser. In the face of the most powerful forces in world agriculture, Cissokho assumed this role with determination, effectiveness—and humor. The battle against the inertia of African governments and intergovernmental organizations, and against the mercenary oligarchies of global finance, is a Sisyphean struggle. Between 1980 and 2004, the proportion of government development aid devoted to investment in agriculture, both multilateral and bilateral, fell from 18 to 4 percent.

But, to paraphrase British historian Eric Hobsbawm, nothing sharpens the mind like defeat. Every time I meet him, Cissokho's mind is even sharper than before. Fighting his way through interminable meetings in Geneva, Brussels, and New York with agri-food industry giants and the Western governments that serve their interests, Cissokho is nonetheless hardly an optimist. I have seen him recently exhausted, pensive, sad, worried. The title of the single book he has published sums up his current state of mind very well: *God Is Not a Farmer*.

6

“NO ONE GOES HUNGRY IN SWITZERLAND”

Jean-Charles Angrand, a historian from Réunion, once remarked to me, “The white man has taken the civilization of the lie to levels never previously attained.”

In 2009, the third World Food Summit brought together in the FAO's headquarters in Rome on Viale delle Terme di Carcalla a great many heads of state from the southern hemisphere, including Abdelaziz Bouteflika of Algeria, Oluşegun Obasanjo of Nigeria, Thabo Mbeki of South Africa, and Luiz Inácio Lula da Silva of Brazil. The Western heads of state who were their peers made themselves conspicuous by their absence, with the exception of the prime minister of the host country, Silvio Berlusconi, and the acting president of the European Union, who both put in brief appearances. The total contempt thus expressed on the part of the most powerful nations on the planet for a world conference that aimed to put an end to food insecurity, which afflicts nearly a billion marginalized and undernourished people worldwide, shocked the media and public opinion in the countries of the South.

Switzerland proclaims everywhere and to anyone who will listen its commitment to the struggle against world hunger. Yet the president of the Swiss Confederation, Pascal Couchepin, did not deign to go to Rome. The government in Bern did not even

consider it worthwhile to send a federal councilor (as the cabinet ministers in the Swiss administration are called). Only the Swiss ambassador in Rome put in a quick appearance in the great meeting hall.

I have a friend in Bern who works in the agriculture department of the Swiss Federal Department of Economic Affairs. She is a former student of mine. She is a committed young woman, hardened by experience, who looks at the world with bitter irony. Disgusted, I called to talk to her. She said, "What are you so upset about? No one goes hungry in Switzerland." Nonetheless, one has to admit that the Western heads of state do not have a monopoly on indifference and cynicism.

In sub-Saharan Africa, 265,000 women and millions of infants die every year for lack of prenatal care. And when we study the global distribution of this phenomenon, we see that half of such deaths occur in Africa, while the continent's population represents only 12 percent of the world's population. In the European Union, governments spend on average 1,250 euros per person (about \$1,650) annually on primary health care. In sub-Saharan Africa, the comparable expenditure ranges from 15 to 18 euros (about \$20–24). At the most recent summit of heads of state of the African Union (AU), in July 2010 in Kampala, Uganda, Jean Ping, the president of Gabon and president of the executive committee of the African Union, set as the top item on the summit's agenda the fight against mother and infant undernutrition—much to his chagrin. François Soudan, editorial director of the magazine *Jeune Afrique*, followed the debates and reported them as follows:

"Mothers and babies? But we're not UNICEF!" sputtered Muammar Gaddafi. The result: debate on this subject—a real chore—was dispatched in half an afternoon session by the heads of state, who were mostly daydreaming or half asleep. As for the journalists, pursued by the press attachés of NGOs trying desperately to sensitize them to their causes, they devoted to the debate only a small handful of reports

destined for the editorial wastebasket. The thing is, UA summits, you see, are only concerned with serious matters. . . .

The G8 and the G20 periodically hold summit meetings in such places as Gleneagles, Scotland, or L'Aquila, Italy. At these summits, the governments of the world's rich countries regularly decry the "scandal" of hunger. Just as regularly, they promise to release considerable sums to eradicate this scourge. At the instigation of British prime minister Tony Blair, the heads of state of the G8+5, meeting in Gleneagles in July 2005, accordingly proposed to spend immediately \$50 billion to finance a plan of action to fight extreme poverty in Africa. In his memoir, Blair discusses this initiative at great length, and with evident pride. He sees it as one of the three peak moments of his political career.

At the invitation of Silvio Berlusconi, the G8 heads of state met in the small city of L'Aquila in central Italy in July 2009, which had been struck three months previously by a terrible earthquake. There, they unanimously approved a new plan of action against hunger. This time they announced a commitment to spend \$20 billion immediately in order to support investment in subsistence agriculture.

Kofi Annan was secretary general of the UN until 2006. The son of Fante farmers in the high forest in the Ashanti region of central Ghana, Annan has made the fight against hunger his life-work. An unassuming man who never raises his voice, sensitive, often ironic, he spends most of his time today in Geneva. But he regularly takes the shuttle between Founex, in the Swiss canton of Vaud, and Accra, the capital of Ghana, where the headquarters of the Alliance for a Green Revolution in Africa (AGRA), an organization of which he is president, is located.

Long familiar with the limitless hypocrisy of the Western powers, Annan agreed in 2007 to be president of a committee of NGOs responsible for following up on the implementation of the promises made at Gleneagles (officially the 2005 Gleneagles G8 Plan of Action). The result: as of December 2010, of the \$50 billion promised, it appears that only \$12 billion has in fact been

allocated and spent on financing various projects fighting hunger in Africa.

As for the promises of the G8 in L'Aquila, the situation is even darker: if the British weekly *The Economist* is correct, of the \$20 billion in increased spending promised, only a fraction was in fact "new money," and little if any had been spent by late 2009. The magazine's editors sum up the situation soberly in the article's title: "If Words Were Food, Nobody Would Go Hungry."

7

THE TRAGEDY OF NOMA

In the previous chapters, I have discussed the effects of under-nutrition and malnutrition. But human lives can be ruined equally by the "diseases of hunger" that are among the consequences of these conditions. These diseases are legion, ranging from kwashiorkor (a syndrome caused by insufficient protein in the diet, with especially serious consequences in children, including permanent stunting of mental and physical development), to the blindness caused by lack of vitamin A (discussed in chapter 2), to noma, which ravages children's faces.

Noma's technical name is *cancrem oris* or gangrenous stomatitis. It is a gangrenous disease, a rapidly progressive, polymicrobial, opportunistic infection that develops in the mouth and leads to tissue destruction of the face. Its primary cause is malnutrition. Noma devours the faces of malnourished children, mainly those aged one to six.

Every living creature has in its mouth a great number of micro-organisms, constituting a heavy bacterial load. In well-nourished people with good basic oral hygiene, these bacteria are kept in check by the organism's immune system. But when prolonged under-nutrition or malnutrition weakens the immune system, these oral bacteria may become pathologically uncontrollable and break through the body's last immunological defenses.

The disease progresses in three stages. It begins with simple

gingivitis (inflammation of the gums) and the appearance in the mouth of one or more ulcers (sores). If the disease is detected at this stage, that is, within three weeks following the appearance of the first oral ulcer, it can be easily cured: all that is necessary is to cleanse the mouth regularly with a disinfectant, and to feed the child appropriately, giving him access to the 800 to 1,600 calories per day required, depending on his age, and the micronutrients he needs (vitamins and minerals). His own immune system will eliminate the gingivitis and the ulcers. If neither the gingivitis nor the ulcers are detected in time, a wound forms in the mouth that oozes blood. Gingivitis is succeeded by necrosis, or tissue death. The child shakes with fever. But at this stage, all is not lost. The treatment is still simple: it is enough to provide the child with antibiotics, adequate food, and rigorous oral hygiene.

One important expert on noma is Philippe Rathle, director of the Winds of Hope Foundation, based in Lausanne, Switzerland; Winds of Hope manages the No-Noma International Federation. Rathle estimates that in total only 2 or 3 euros—\$3 or \$4—is enough to provide ten days of treatment for noma at this stage, when a child can still be cured.

If the child's mother does not have the small amount of money necessary, or if she does not have access to medication, or if she is unable to detect the wound in the child's mouth, or if she detects it but, feeling ashamed, isolates the child, who cries and complains ceaselessly, then the last threshold is crossed. Noma becomes invincible. First the child's face swells, then the necrosis gradually destroys all the soft tissues. The lips, the cheeks disappear; a blackish furrow opens in the tissues, then deepens and widens, leaving a yawning gap. The eyes drop down as the orbital bone is laid waste. Scar tissue deforms the face, shrinking and sealing the jaws shut, making it impossible for the child to open her mouth. The mother may now break the child's teeth on one side so that she can pour, say, some millet soup in the child's mouth in the vain hope that this grayish liquid will prevent her child from dying of hunger. The child, with her ruined face and frozen jaws, is unable to speak. With her disfigured mouth, she

can no longer articulate words, and can only emit groans and guttural noises.

Noma has four major consequences: disfigurement by destruction of the facial tissues, the inability to eat and speak, social stigmatization, and, in at least 80 percent of cases, death. The sight of a child's face devoured by noma, leaving the bones of the face visible, fills her family with shame and causes them to reject or hide her, which makes it even less likely that the medical care she needs will reach her. Death generally comes in the months that follow the collapse of the child's immune system, brought on by gangrene, septicemia, pneumonia, or bloody diarrhea. Fifty percent of afflicted children die within three to five weeks.

Noma can attack older children and, exceptionally, adults. The survivors live in agony. In most traditional societies of sub-Saharan Africa, the mountains of Southeast Asia, or the Andean highlands, the victims of noma are condemned as taboo, rejected as if their disease represented supernatural retribution, hidden from the neighbors. As BBC presenter Ben Fogle has said in a documentary on the disease, noma is like a punishment for a crime you haven't committed. Children who survive noma are withdrawn from society, isolated, walled off in their solitude, abandoned. They sleep with the animals.

The shame and the taboo of noma do not even spare the heads of state of countries afflicted with the disease. I confirmed this in May 2009 in the presidential palace in Dakar, Senegal, in the office of President Abdoulaye Wade. Wade is former dean of the law and economics faculty at the University of Dakar, a highly cultivated man, deeply informed about the problems his country faces. He was at the time the chairman of the Organisation of the Islamic Conference (OIC); together with the nations of the Non-Aligned Movement, the OIC, which includes fifty-seven states, forms a powerful bloc of votes in the UN. We talked about the OIC's strategies for working within the UN Human Rights Council (UNHRC). President Wade's analysis was, as always, brilliant and based on solid information. As I was about to leave, I asked him about noma, in order to elicit his thoughts on his

responsibility for addressing the problem and to encourage him to put in place a national program to combat this terrible disease. Wade looked at me inquiringly: "But what are you talking about? I am not aware of this disease. There is no noma in our country."

In fact, I had just met that very morning, in the town of Kaolack, two representatives of Sentinelles, an NGO based in Switzerland that attempts to find children suffering from noma, to persuade their mothers to let them go to the local clinic or, in the most serious cases, to the university hospitals of Geneva or Lausanne. The Sentinelles workers gave me a precise picture of the extent of the disease, which is advancing not only along the Petite Côte, a section of Senegal's coast that includes both seaside resorts and fishing villages as well as the capital city, but in every rural area in Senegal.

Rathle, at Winds of Hope, estimates that in the Sahel, only about 20 percent of children afflicted with noma are detected. For survivors of noma, surgery is necessary. Volunteer surgeons at European hospitals in such cities as Paris, Berlin, Amsterdam, London, Geneva, and Lausanne, as well the rare doctor who travels to Africa to operate in the poorly equipped local clinics, accomplish miracles of reparative and reconstructive surgery, often of extreme complexity.

Two Dutch plastic surgeons, Klaas Marck and Kurt Bos, work in one of the only hospitals specializing in the treatment of noma in Africa, the Noma Children Hospital in Sokoto, Nigeria. They have learned many lessons from their experience: surgical procedures for car accident victims in particular have benefited from their work. Children suffering from noma have benefited, unquestionably. However, in order to reconstruct, even if only partially, the disfigured faces of these small children, as many as five or six successive operations are needed, all terribly painful. In many cases, only partial reconstruction of the face is possible.

As I write, I have before me on my desk photographs of little girls and boys, three, four, seven years old, with jaws sealed shut and drooping eyes. The images are horrible. Many of the children are trying to smile.

The disease has a long history, which Marck has pieced together. The symptoms were known in antiquity. The name *noma* was coined

in 1680 by Cornelis van de Voorde, a surgeon in Middelburg, the Netherlands, who used it to describe a quickly spreading orofacial gangrene. In northern Europe, writings on the disease are relatively numerous throughout the entire eighteenth century. They associate noma with childhood, and with poverty and the malnutrition that accompanies it. Until the middle of the nineteenth century, noma was found all over Europe and North Africa. Its disappearance in these regions is due essentially to improvement in the social conditions of the populations involved, and to the reduction of extreme poverty and hunger. But noma reappeared massively in the Nazi camps between 1933 and 1945, especially in the concentration camp at Bergen-Belsen and the extermination camp at Auschwitz.

Every year, some 140,000 new victims are stricken with noma; about 100,000 are children of ages one to six living in sub-Saharan Africa. The proportion of survivors hovers around 10 percent, which means that more than 120,000 people die from noma every year. Children afflicted with noma are cursed: being born in general to gravely undernourished mothers, their own malnutrition begins in utero. Their growth is impaired even before they are born. Noma generally appears beginning with a mother's fourth child; she simply runs out of milk, weakened by her previous pregnancies. The larger her family, the more they have to share their food. The last children to be born suffer the most. In Mali, for example, slightly more than 25 percent of mothers manage to breast-feed their infants normally for the appropriate amount of time. The rest, the great majority, are too hungry to do so.

Another reason for the insufficient breast-feeding of hundreds of thousands of infants is premature weaning, the sudden early cessation of breast-feeding, which is mainly caused by pregnancies that fall too close together and by women's being compelled to undertake hard work in the fields. The cult of the large family is common all over the African continent. In rural areas especially, the status of women is tied to the number of children they bear. Separations, divorces, and the repudiation of wives are frequent and, accordingly, so is the separation of mothers from their small children. In many African societies, the father's family in fact keeps the

children after the dissolution of a marriage, sometimes separating a mother from her infant even before the baby is weaned.

In their misfortune, Aboubacar, Baâratou, Saleye Ramatou, Soufiranou, and Mariam were lucky. These children from Niger, ages fourteen to sixteen, disfigured by noma, were living secluded in their homes in the heart of Zinder, the second-largest city in the country. Their families hid them, ashamed of the horrifying disfigurements that afflicted their offspring: a nose reduced to the nasal bone, cheeks with holes in them, ruined lips . . .

Sentinelles maintains a small but very active team in Zinder. After hearing about these children, two young women from Sentinelles visited their families. They explained that the children's disfigurement was not due to some kind of curse, but to a disease whose effects could be corrected, at least partially, with surgery. The families agreed to allow their children to go to Niamey, 950 miles away. A minibus took the children to the capital's national hospital, where Professor Jean Marie Servant and his team from the Saint-Louis hospital in Paris gave a human face back to each child.

Medical teams from France, Switzerland, the Netherlands, Germany, and other countries under the auspices of Médecins du Monde/Doctors of the World work in the hospital in Niamey three or four times a year for a week or two at a time. In other hospitals in Ethiopia, Benin, Burkina Faso, Senegal, and Nigeria, as well as in Laos, other doctors from Europe or the United States volunteer to operate on victims of noma.

Winds of Hope and the No-Noma International Federation accomplish tremendous results in detection, care, and reparative surgery for noma sufferers, and in the indispensable corollary of such work, fund-raising, as do other NGOs, such as SOS Enfant (founded by David Mort), Operation Smile, Facing Africa, Hilfsaktion Noma, and others. Yet while we must welcome the valuable contributions made by these NGOs and their doctors, their efforts nonetheless reach no more than a tiny minority of the children disfigured by noma.

Many NGOs are therefore trying to expand the effort to identify victims of noma and to finance reparative surgery in cases where

it is possible. The Senegalese musician Youssou N'Dour, among other influential figures, has joined the fight by sponsoring such programs. However, it is clear that only WHO and the governments of countries affected by noma would be able to put an end once and for all to the suffering of children devastated by this horrible disease. Yet the indifference of WHO is as bottomless as that of the heads of state. In an incomprehensible decision, WHO has delegated the fight against noma to its African regional bureau. This decision is absurd for two reasons: first, noma is present not only in Africa but also in South and Southeast Asia and Latin America; and second, the African regional bureau of WHO has so far displayed an astounding passivity in the face of the suffering of hundreds of thousands of noma victims. The World Bank, whose charter includes a responsibility for fighting severe poverty and its consequences around the world, shows the same indifference. In an important 2003 paper, a team of German scientists showed that while "an excellent biological parameter for the presence of extreme poverty in a population is the structural presence of noma," there is an astonishing "lack of interest" in noma "from the side of public health policy makers" and global institutions such as "WHO and the World Bank." Many publications issued by WHO's Global Burden of Disease project do not even mention noma.

WHO initiates campaigns on its own authority against only two categories of diseases: contagious illnesses that pose a risk of becoming epidemics, and diseases for which a UN member state requests assistance. Noma is not contagious, and no member state has ever asked WHO for help in fighting it. In the capital city of each member state, WHO maintains a team comprising one WHO representative and a number of local employees. The team is permanently tasked with watching over health and sanitation in the country. WHO's representatives travel throughout the country, from urban neighborhoods to villages, hamlets, even nomadic encampments. They carry a checklist with details of all the diseases that they are expected to look out for. When a sick person is discovered, the local authorities are supposed to be alerted, and the patient taken to the nearest local clinic. But noma is not on WHO's checklist.

Together with Philippe Rathle and Ioana Cismas, my colleague on the Advisory Committee of the UNHRC, I appeared in Bern before the Swiss Federal Office of Public Health. The high-level official who met with us refused to present any resolution on noma to the World Health Assembly, with the following argument: "There are already far too many diseases on the checklist." WHO's representatives in the field are already overwhelmed. They hardly know what to do next. Adding another disease to the list—don't even think about it!

The coalition of NGOs led by Winds of Hope has drawn up an action plan against noma that focuses on preventive measures: training health workers and mothers to identify the first clinical signs of the disease, integrating noma into national and international epidemiological monitoring systems, and initiating ethological research into behaviors that lead to or prevent noma. Finally, it is necessary to ensure that antibiotics and supplies for emergency intravenous nutritional therapy are available in local clinics at the lowest possible prices. Realizing this action plan will cost money—money that the NGOs involved do not have.

Those who are fighting noma are caught in a vicious circle. On the one hand, there is the absence of noma from WHO's reports and checklists, and a lack of public attention to noma owing to the public's lack of scientific information on the extent and perniciousness of the disease. But on the other hand, so long as WHO and the ministers of health of the UN member states refuse to focus on this disease that affects the youngest and poorest people, there can be no extensive, in-depth research and no international mobilization against noma.

Moreover, noma is likewise of no interest to the pharmaceutical conglomerates, which exert a powerful influence over WHO, first because the medications used to treat the disease are inexpensive, and second because noma's victims have no money at all to pay for them.

Noma will only be finally eradicated in the world, as it was in Europe, when its causes, undernutrition and malnutrition, are rolled back for good.

PART II

THE AWAKENING OF CONSCIENCE