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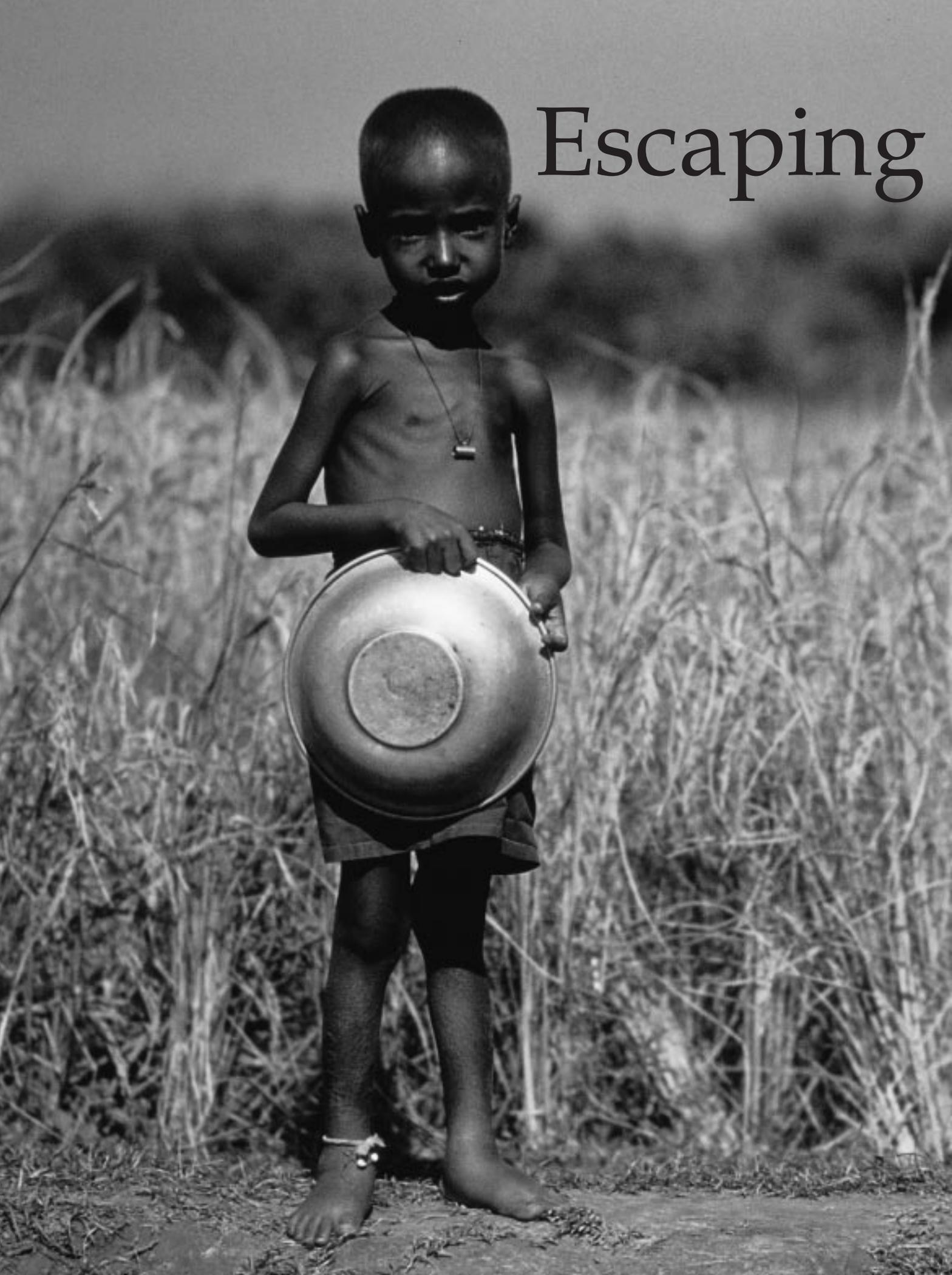
WORKING FOR A SUSTAINABLE FUTURE

Escaping Hunger, Escaping Excess

by Gary Gardner and Brian Halweil

Reprinted from WORLD WATCH, July/August 2000 © 2000 Worldwatch Institute

Escaping



Hunger, Escaping Excess

The big myth of malnutrition is that it's a problem of poor countries. But in a world at once rich in food and filled with poverty, malnutrition now has many faces—all over the world.

by Gary Gardner and Brian Halweil

TODAY, ETHIOPIA AND ITS neighbors are once again in the grip of an unrelenting famine, which has left more than 16 million people on the brink of starvation. After a massive international mobilization to aid this region in the 1980s, the Horn of Africa has become synonymous with famine and malnutrition. But across the Atlantic Ocean, another country is currently facing an epidemic that has left not *tens* of millions, but more than 100 million people malnourished—a quarter of them morbidly so. This growing problem receives little attention as a public health disaster, despite warnings from health officials that malnourishment has reached epidemic levels and has left vast numbers of people sick, less productive, and far more likely to die prematurely.

In this country—the United States—55 percent of adults are overweight and 23 percent are obese. (Definitions of obesity and overweight are not arbitrary, but are based on the internationally accepted standards. See map, pages 30–31.) The medical expenses and lost wages caused by obesity cost the country an estimated \$118 billion each year, the equivalent of 12 percent of the annual health budget. Being overweight and obese are major risk factors in coronary heart disease, cancer, stroke and diabetes. Together these diseases are the leading killers in the United States, accounting for half of all deaths.

Misconceptions of hunger and overeating abound worldwide. We tend to think of hunger as resulting from a desperate scarcity of food, and we imagine it occurring only in poor countries. However, in those nations in Africa and South Asia where hunger is most severe, there is often plenty of food to go around. And even food rich nations are home to many underfed people.

Meanwhile, as the concept of malnutrition stretches to encompass excess as well as deficiency, wealthy nations are seeing rates of malnourishment that rival those in desperately poor regions. And overeating is growing in poorer nations as well, even where hunger remains stubbornly high. In Colombia, for example, 41 percent of adults are overweight, a prevalence that rivals rates found in Europe. While hunger is a more acute problem and should be the highest nutritional concern, overeating is the fastest growing form of malnourishment in the world, according to the World Health Organization (WHO). For the first time in history, the number of overweight people rivals the number who are underweight, both estimated at 1.1 billion.

Because myth and misconception permeate the world's understanding of malnutrition, policy responses have been wildly off the mark in addressing the problem. Efforts to eliminate hunger often focus

PHOTOGRAPH BY SHEHZAD NOORANI/STILL PICTURES

on technological quick fixes aimed at boosting crop yields and producing more food, for example, rather than addressing the socioeconomic causes of hunger, such as meager incomes, inequitable distribution of land, and the disenfranchisement of women. Efforts to reduce overeating single out affected individuals—through fad diets, diet drugs, or the like—while failing to promote prevention and education about healthy alternatives in a food environment full of heavily marketed, nutritionally suspect, “supersized” junk food. The result: half of humanity, in both rich and poor nations, is malnourished today, according to the WHO. And this is in spite of recent decades of global food surpluses.

Malnutrition has become a significant impediment to development in rich and poor countries alike. At the individual level, both hunger and obesity can reduce a person’s physical fitness, increase suscepti-

bility to illness, and shorten lifespan. In addition, children deprived of adequate nutrients during development can suffer from permanently reduced mental capacity. At the national level, poor eating hampers educational performance, curtails economic productivity, increases the burden of health care, and reduces general well-being. Confronting this epidemic of poor eating will have widespread benefits, but first the myths that obscure the causes of malnutrition must be dispelled.

The Scarcity Myth

IN THE EARLY 1980s, the world was flooded by news of hunger and death from the Horn of Africa. By 1985, nearly 300,000 people had died. But international observers paid little attention to the fact that in the midst of famine, these countries were exporting

Food portions have steadily grown in recent decades. A standard serving of soda in the 1950s, for example, was a 6.5-ounce bottle. Today the industry standard is a 20-ounce bottle. “Supersizing” has evolved as a marketing strategy that costs food producers little, but appears to give significant added value to consumers. But this trend skews perceptions of normal servings: in the United States, one study found that participants consistently labeled as “medium” portions that were double or triple the size of recommended portions.

Food companies tend to push fatty or sweet foods for two reasons: they know we have an innate preference for them, and highly processed foods like white hamburger buns offer greater profits than more elemental products like fruits and vegetables. Adding more sugar, salt, fats, or oils (as typically concentrated in prepared mustard, ketchup, or pickles), can provide a tasty and profitable product that is often irresistible to consumers and companies alike.

The overeating phenomena is quickly spreading around the world, in part due to heavy advertising. Food companies spend more than any other industry on advertising in the United States. Coca-Cola and McDonald’s are among the 10 largest advertisers in the world. This strategy has paid off: McDonald’s opens five new restaurants every day, four of them outside the United States.



Americans consume 70 kilograms of caloric sweeteners per year—75 percent more than in 1909. That is nearly 200 grams or 53 teaspoons a day, the equivalent of a 5 pound bag of sugar every week and a half. In Europe and North America, fat and sugar count for more than half of all caloric intake, squeezing complex carbohydrates like grains and vegetables down to about one-third of total calories.

Supersized

cotton, sugar cane, and other cash crops that had been grown on some of the country's best agricultural land. While only 30 percent of farmland in Ethiopia was affected by drought, ubiquitous images of emaciated people surrounded by parched land have served to reinforce the single largest myth about malnutrition: that hunger results from a national scarcity of food.

Indeed, for more than 40 years the world has produced regular and often bountiful food surpluses—large enough, in fact, to prompt major producing countries like the United States to pay farmers *not* to farm some of their land. Indeed, the Food and Agriculture Organization (FAO) estimates that 80 percent of hungry children in the developing world live in countries that produce food surpluses. And only about a quarter of the reduction in hunger between 1970 and 1995 could be attributed to increasing food availability per person, according to a study by the International Food Policy Research Institute (IFPRI).

This is not to say that scarcity might not one day become the principal source of hunger, as population growth and ongoing damage to farmland and water supplies shrink food availability per person in many countries. Countries like Nigeria and Pakistan, which are on track to double their populations in the next 50 years, have already seen stocks of surplus food erode steadily in the 1990s. And countries such as India, which overpump groundwater to prop up agricultural production, will be hard pressed to maintain self sufficiency once aquifers run dry or become uneconomical to pump. But for the billion or so people who are hungry *today*, the finger of blame points in other directions.

Hands down, the major cause of hunger is poverty—a lack of access to the goods and services essential for a healthy life. Where people are hungry, it's a good bet that they have little income, cannot gain title to land or qualify for credit, have poor access to health care, or have little or no education. Worldwide, 150 million people were unemployed at the end of 1998, and as many as 900 million had jobs that paid less than a living wage. These billion-plus people largely overlap with the 1.1 billion people who are underweight, and for whom hunger is a chronic experience. And nearly 2 billion more teeter at the edge of hunger, surviving on just 2 dollars or less per day, a large share of which is spent on food.

Hunger, like its main root, poverty, disproportionately affects females. Girls in India, for example, are four times as likely to be acutely malnourished as boys. And while 25 percent of men in developing countries suffer from anemia, a condition of iron deficiency, the rate is 45 percent for women—and 60 percent for those who are pregnant. This gender bias stems from cultural prejudices in households and in

societies at large. Most directly, lean rations at home are often dished out to father and sons before mother and daughters, even though females in developing countries typically work longer hours than males do. Gender bias is also manifest in education. Inequitable schooling opportunities for girls lead to economic insecurity: women represent two-thirds of the world's illiterate people and three-fifths of its poor. With fewer educational and economic opportunities than men, women tend to be hungrier and suffer from more nutrient deficiencies.

Any serious attack on hunger, therefore, will aim to reduce poverty, and will give special attention to women. The IFPRI study on curbing malnutrition found that improving women's education and status together accounted for more than half of the reduction in malnutrition between 1970 and 1995. Such nutritional leverage stems from a woman's pivotal role in the family. A woman "eats for two" when she is pregnant and when she is nursing; pull her out of poverty, and improvements in her nutrition are passed on to her infant. But there's more: studies show that provided with an income, a woman will spend nearly all of it on household needs, especially food. The same money in a man's pocket is likely to be spent in part—up to 25 percent—on non-family items, such as cigarettes or alcohol.

From this perspective, microcredit initiatives, such as those of the Bangladesh-originated Grameen Bank, offer a promising means of combatting hunger. These unconventional programs provide small loans of tens or hundreds of dollars to help very poor women generate income through basket-weaving, chicken-raising, or other small projects. As the loans lift women out of poverty, they also yield nutritional benefits: a 10 percent increase in a woman's Grameen borrowing, for example, has been shown to produce a 6 percent increase in the arm circumference of her children (a measure of nutritional well-being). It also increases by 20 percent the likelihood that her daughter will be enrolled in school, which lowers the girl's risk of suffering malnutrition as an adult.

International support for such programs could expand them dramatically. One option is the non-profit Microcredit Summit's campaign to raise \$22 billion to increase the number of microcredit beneficiaries from 8 million in the late 1990s to 100 million by 2005. Such investments are a high-leverage option for a nation's foreign aid commitment, given all of the benefits—improved nutrition, better health, and slower rates of population growth—that come from reducing poverty, especially among women.

At a broader social level, the journey out of poverty and hunger can be expedited through better access to land and agricultural credit. These measures are especially important for women, since they produce more than half of the world's food, and a large share

of what is consumed in rural households in developing countries. In India, Nepal, and Thailand, less than 10 percent of women own land, and those who do often have small, marginal tracts. For landless women, credit is next to impossible to obtain: in five African countries—Kenya, Malawi, Sierra Leone, Zambia, and Zimbabwe—where women constitute a large share of farmers, they receive less than one percent of the loans provided in agriculture. This despite their exceptional creditworthiness: women typically pay their debts more faithfully than men do.

Women also need access to sound nutritional information as a way to avoid nutritional impoverishment and unnecessary food expenditures. Breast-feeding campaigns, for example, can highlight the many advantages of this free and wholesome method of infant feeding. Baby formulas are often prepared in unsanitary conditions or watered down to reduce costs. Campaigns to promote breastfeeding and restrict sales of formula have been estimated to reduce illness from diarrhea—a condition that robs infants of needed vitamins and minerals—by 8 to 20 percent. They have reduced deaths from diarrhea by 24 to 27 percent. Breastfeeding also acts as a natural contraceptive following pregnancy, spacing births at greater intervals and thereby easing the pressure to feed everyone in poor families.

Nutritional education efforts are also essential to fighting hunger, and the most successful programs involve entire communities by enlisting affected people and local leaders. The BIDANI program in the Philippines, for example, provides orientation and training for villagers to participate in nutritional “interventions,” which have worked to elevate 82 percent of enrolled children to a higher nutritional status. A similar program in Gambia substantially cut the death rate among women and children by working with the highly respected women elders of the matriarchal Kabilo tribe to educate community members about child-feeding practices, hygiene, and maternal health care.

Important as these social initiatives are for improving nutrition, more direct action is often required to meet the needs of those who suffer from hunger today. Even here, however, creative approaches can empower women and aid entire communities. In one simple case in Benin, food aid is dispensed not directly to families, but to girls at school, who bring it home to their parents. The practice combats the cultural bias against girls found in many countries, which often results in their removal from school at a young age to help at home or to allow a brother to get an education. It achieves two critical nutritional goals: it gets food to families that need it, and it increases girls’ future employment prospects, which in turn reduces the likelihood of future malnutrition.

The Prone-to-Obesity Myth

FOR THOSE WHO HAVE ACCESS to enough food, eating habits around the world are in the midst of the most significant change since the development of agriculture thousands of years ago. Since the turn of the century, traditional diets featuring whole grains, vegetables, and fruits have been supplanted by diets rich in meat, dairy products, and highly processed items that are loaded with fat and sugar. This shift, already entrenched in industrial countries and now accelerating in developing nations as incomes rise, has created an epidemic of overeating and sparked a largely misunderstood public health crisis worldwide. In the United States, the leader in this global surge toward larger waist sizes, more than half of all adults are now overweight—a condition that, like hunger, increases susceptibility to disease and disability, reduces worker productivity, and cuts lives short.

The proliferation of high-calorie, high-fat foods that are widely available, heavily promoted, low in cost and nutrition, and served in huge portions has created what Yale psychologist Kelly Brownell calls a “toxic food environment.” Sweets and fats increasingly crowd out nutritionally complete foods that provide essential micronutrients. For instance, one-fifth of the “vegetables” eaten today in the United States are servings of french fries and potato chips. Our propensity to eat sweet and fatty foods may have served our ancestors well for weathering seasonal lean times, but amidst unbridled abundance for many, it has become a handicap. When these eating habits are combined with increasingly urbanized, automated, and more sedentary lifestyles, it becomes clear why gaining weight is often difficult to avoid.

Failure to recognize the existence of this negative food environment has created the widespread misconception that individuals are entirely to blame for overeating. The reality is most countries embrace policies and practices that promote mass overconsumption of unhealthy foods, but abandon citizens when it comes to dealing with the health implications. Because individuals are stigmatized as weak-willed or prone to obesity, prevailing efforts to curb overeating have focused on techno-fixes and diets, not prevention and nutrition education.

This end-of-the-pipe mentality manifests itself in a variety of ways: liposuction is now the leading form of cosmetic surgery in the United States with 400,000 operations performed each year; fad diet books top the bestseller lists; designer “foods” such as olestra promise worry-free consumption of nutritionally empty snacks; and laboratories scurry to find the human “fat gene” in an effort to engineer our way out of obesity. While the U.S. Agriculture Department spends \$333 million each year to educate the public about nutrition, the U.S. diet and weight-loss indus-

Hungry children are often scarred for life, suffering impaired immune systems, neurological damage, and retarded physical growth. Infants that are underweight *in utero* will be five centimeters shorter and five kilograms lighter as adults.

Where hunger exists, women are invariably more malnourished than men. In India, for example, girls are four times as likely to be hungry or suffer from micronutrient deficiencies as boys are. Hungry women bear and raise hungry children. Because impoverished families are less able to care for their offspring, hunger is perpetuated across generations.

Targeting Women

PHOTOGRAPH BY HOWARD DAVIES



Chronic hunger leaves children and adults more susceptible to infectious diseases. Among the five leading causes of child death in the developing world, 54 percent of cases have malnutrition as an underlying cause.

Conflict and military spending exacerbate hunger directly by disrupting economies and food production, and indirectly by diverting funds away from poverty alleviation to militaries.

Women produce more than half of the world's food, and in rural areas they provide the lion's share of food consumed in their own homes. Yet, note who's in control here. Women often cannot obtain access to land, credit, or the social and political support that men can.

try records annual revenues of \$33 billion. And the highly lucrative weight-loss business feeds off of a global food industry that now has significant influence over food choices around the world.

Indeed, consumers get the majority of their dietary cues about food from food companies, who spend more on advertising—\$30 billion each year in the United States alone—than any other industry. The most heavily advertised foods, unfortunately, tend to be of dubious nutritional value. And food advertisers disproportionately target children, the least savvy consumers, in order to shape lifelong habits. In fact, in the United States, the average child watches 10,000 commercials each year, more than

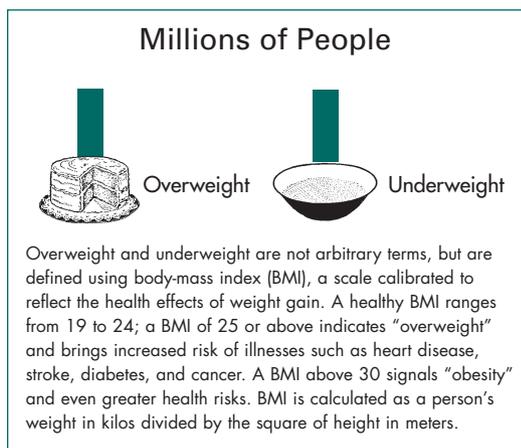
any other segment of the population. And more than 90 percent of these ads are for sugary cereals, candy, soda, or other junk food, according to surveys by the Center for Science in the Public Interest.

Numerous studies show that these ads work. They prompt children to more frequently request, purchase, and consume advertised foods, even when they become adults. And as kids fill up on items loaded with empty calories like soda or candy, more nutritious items are squeezed out of the diet. Marketing to children has intensified in recent years as food companies have begun to target the school environment. More than 5,000 U.S. schools—13 percent of the country's total—now have contracts with fast-food

Nutrition Split

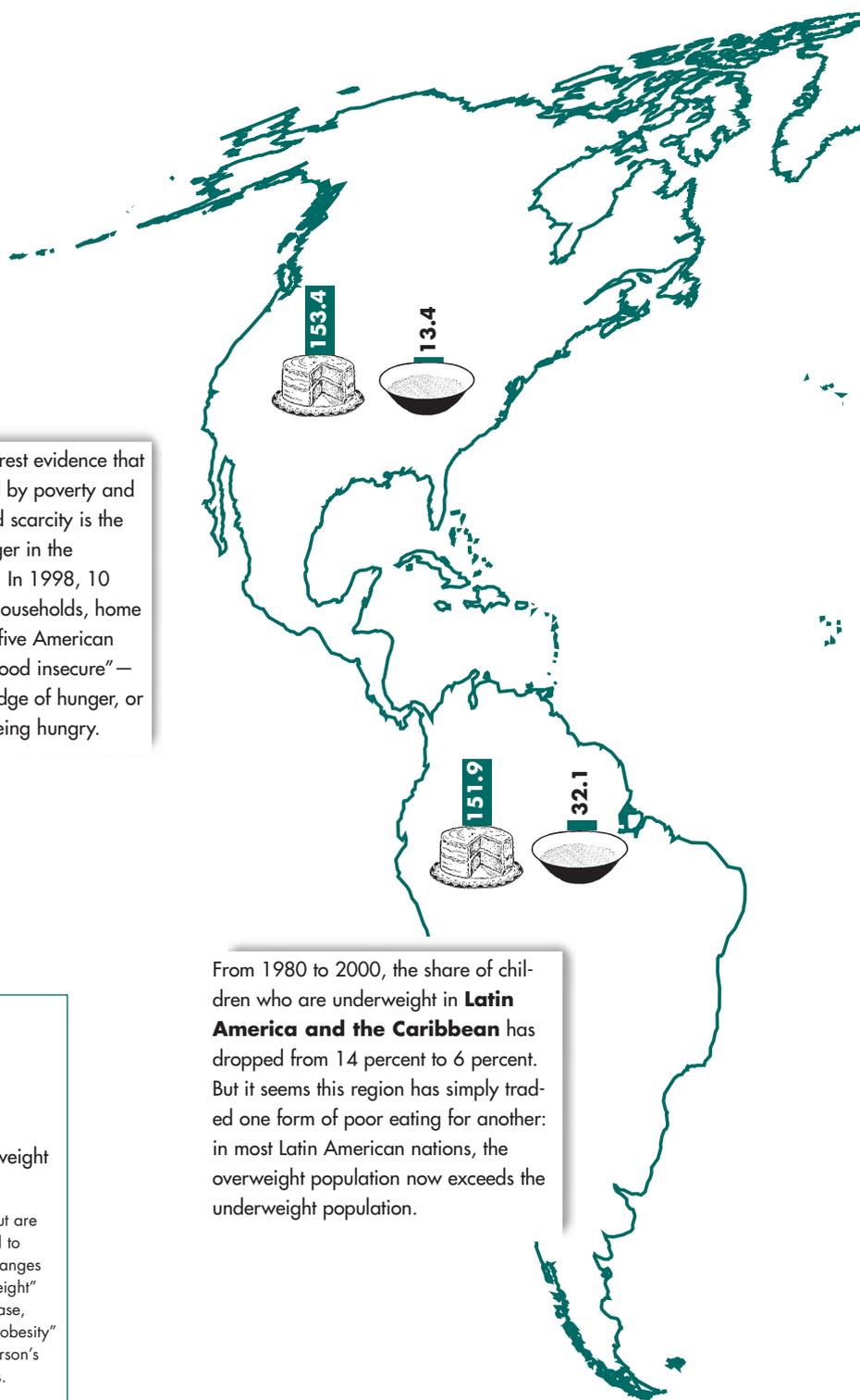
Every region in the world now has large numbers of hungry or overweight people – or both – as affluence spreads and poverty persists.

Some of the clearest evidence that hunger is caused by poverty and not regional food scarcity is the presence of hunger in the **United States**. In 1998, 10 percent of U.S. households, home to nearly one in five American children, were “food insecure” – hungry, on the edge of hunger, or worried about being hungry.



establishments to provide either food service, vending machines, or both. Since 1990, soda companies have offered millions of dollars to cash-strapped school districts in the United States for exclusive rights to sell their products in schools.

With industrial country markets increasingly saturated, many food corporations are now looking to developing countries for greater profits. Mexico recently surpassed the United States as the top per capita consumer of Coca-Cola, for example. And that company’s 1998 annual report notes that Africa’s rapid population growth and low per capita con-



From 1980 to 2000, the share of children who are underweight in **Latin America and the Caribbean** has dropped from 14 percent to 6 percent. But it seems this region has simply traded one form of poor eating for another: in most Latin American nations, the overweight population now exceeds the underweight population.

sumption of carbonated beverages make that continent “a land of opportunity for us.” The number of U.S. fast-food restaurants operating around the world is also growing rapidly: four of the five McDonald’s restaurants that open every day are located outside the United States.

Overeating is also becoming a problem even in countries where hunger and poverty persist. In China, for example, consumption of high-fat foods such as pork and soy oil (which is used for frying) both soared after the economic boom of the 1980s, while consumption of rice and starchy roots



dropped—changes that were most pronounced among wealthier households. The parallel trend of urbanization in the developing world also means exposure to new foods and food advertising—particularly for highly processed and packaged items—and considerably more sedentary lifestyles. A recent study of 133 developing countries found that migration to the city—without any changes in income—can more than double per capita intake of sweeteners. Cash-squeezed households in Guayaquil, Ecuador, often spurn potatoes and fresh fruit juices in favor of fried plantains, potato chips, and soft drinks,

replacing nutrient-dense foods with empty calories.

A world raised on Big Macs and soda isn't inevitable. But countering an increasingly ubiquitous toxic food environment will require dispelling the myths that surround overeating. Governments will have to recognize the existence of a health epidemic of overeating, and will have to work to counter the social pressures that promote poor eating habits. Empowering individuals through education about nutrition and healthy eating habits, particularly for children, is also essential.

If preventing overeating is the goal, rather than

treating it after habits have been formed, then the school environment is an obvious place to start. In Singapore, for example, the nationwide Trim and Fit Scheme has reduced obesity among children by 33 to 50 percent, depending on the age group, by instituting changes in school catering and increasing nutrition and physical education for teachers and children. Similar programs in other countries have found comparable results, yet physical education programs in many nations are actually being scaled back.

Mass-media educational campaigns can also change long-standing nutritional habits in adults. Finland launched a campaign in the 1970s and 1980s to reduce the country's high incidence of coronary heart disease, which involved government-sponsored advertisements, national dietary guidelines, and regulations on food labeling. This broad, high-profile approach—it also advocated an end to smoking, and involved groups as diverse as farmers and the Finnish Heart Association—increased fruit and vegetable consumption per person two-fold and slashed mortality from coronary heart disease by 65 percent between 1969 and 1995. About half of the drop in mortality is credited to the lower levels of cholesterol induced by the nutrition education campaign.

A public health approach to overeating might also take some hints from successful campaigns against smoking, including warning labels and taxes to deter consumption. In Finland, the government now requires “heavily salted” to appear on foods high in sodium, while allowing low-sodium foods to bear the label “reduced salt content.” A complement to the “low-fat” labels that grace so many new food products would be a more ominous “high-fat” or “high-sugar” label.

Consumption of nutrient-poor foods can be further reduced by fiscal tools. Yale's Kelly Brownell advocates adoption of a tax on food based on the nutrient value per calorie. Fatty and sugary foods low in nutrients and loaded with calories would be taxed the most, while fruits and vegetables might escape taxation entirely. The idea is to discourage consumption of unhealthy foods—and to raise revenue to promote healthier alternatives, nutrition education, or exercise programs, in essence to make it easier and cheaper to eat well. Large-scale cafeteria and vending machine studies show how powerful an influence price has on buying choices—reducing the price and increasing the selection of fruit, salad, and other healthy choices can often double or triple purchase of these items, even as total food purchases remain the same.

Such a tax is also justified as the cost of overeating to society grows. Graham Colditz at Harvard estimates the direct costs (hospital stays, medicine, treatment, and visits to the doctor) and indirect costs (reduced productivity, missed workdays, disability pensions) of obesity in the United States to be \$118

billion annually. This sum, equal to nearly 12 percent of the U.S. annual health budget, is more than double the \$47 billion in costs attributable to cigarette smoking—a better known and heavily taxed drag on public health. Fiscal measures to reduce overeating may be most attractive to developing countries, which must tackle growing caseloads of costly chronic diseases even as they struggle to eradicate infectious illness.

Putting the Pieces Together

THE EFFECTS OF POOR NUTRITION run deep into every aspect of a community, curtailing performance at school and work, increasing the cost of health care, and reducing health and well-being. By the same token, improving nutrition promises to have equally far-reaching, positive impacts on regions that choose to address the problem. Better eating can set into motion a host of other benefits, many in areas seemingly unrelated to food.

For this to occur, however, efforts to improve nutrition must be integrated into all aspects of a country's development decisions—from health care priorities to transportation funding to curricula planning for schools. A cleaner water supply, for example, would reduce the incidence of intestinal parasites that hamper the body's capacity to absorb micronutrients. Thus a ministry of public works dedicated to increasing access to clean water is a logical partner in a campaign to reduce micronutrient deficiencies. Similarly, transportation officials who promote bicycle commuting, ministers of culture who discourage TV watching, and an agriculture ministry that promotes nutritional education are all promoting lifestyles that, in conjunction with better eating, can reduce incidences of obesity.

There are numerous less obvious means, as well, by which nutritional improvement can be woven into daily life. To begin with, smart nutrition policies can be added to already-existing social programs. Health, education, and agricultural extension programs already reach deep into nutritionally vulnerable populations through existing networks of clinics, schools, and rural development offices. Nutrition is a natural outgrowth of their current responsibilities. Clinic staff, for example, could promote breast-feeding, and extension agents could encourage home gardening. Such partnering is cost effective, not only because it uses existing infrastructure, but also because it often reduces the need for the original service. Women educated about breastfeeding on a prenatal visit, for example, are less likely to return months later with an infant suffering from diarrhea.

Programs intended to eradicate poverty, from microlending to employment creation, are most likely to raise nutritional levels when accompanied by education about health and nutrition. A “Credit with

Food advertisers disproportionately target children, the least savvy consumers. In the United States, the average child is bombarded with 10,000 commercials each year—90 percent of them for sugary cereals, candy, or other junk foods.

Junk foods often displace more nutritious foods, providing only “empty calories”—energy with little nutritional value. In the United Kingdom, per capita consumption of snack foods is up by nearly a quarter in the past five years—snack foods are now a \$3.6 billion industry.

Nutritionally poor foods are invading U.S. schools. Fast food companies have contracts, often worth millions of dollars, to provide food service or vending machines, at more than 5,000 U.S. schools. One deal prompted a Colorado school district to push Coca-Cola consumption, even in classrooms, when sales fell below contractual obligations.

Eating in industrial countries centers less than ever before on home and family. In 1998, just 38 percent of meals in U.S. homes were home-made, and one out of every three meals were eaten outside of the home.



Where's the Nutrition?

Education” program initiated in Ghana by the international group Freedom from Hunger coupled lending with education about breastfeeding, child feeding, diarrhea prevention, immunization, and family planning. A three-year follow-up study documented improved health and nutrition practices, fewer and shorter-lived episodes of food shortages, and dramatic improvements in childrens’ nutrition among the participants compared with the control groups. Barbara MKNelly, the program’s coordinator, warns that “simply improving a family’s ability to buy food is no guarantee that poor baby-feeding practices, dietary choices or living conditions will not undercut nutritional gains.”

The city of Curitiba, Brazil has even found links between nutrition and the city’s waste flows. Concerned about the city’s growing waste burden, and about malnutrition among the poorest sectors of the population, officials established a recycling program for organic waste that benefits farmers, the urban poor, and the city in general. City residents separate their organic waste from the rest of their garbage, bag it, then exchange it for fresh fruits and vegetables from local farmers at a city center. The city

reduces its waste flow, farmers reduce their dependence on chemical fertilizer, and the urban poor get a steady supply of nutritious foods.

In any society, but especially where food cues come primarily from advertising, education is critical to making progress toward good nutrition. In the United States, the Berkeley Food System Project, for example, not only teaches kids about healthy eating, but promotes the use of vegetable gardens in school to help children learn about food at the source. The gardens also supply some of the food for school cafeterias, which were required in 1999 to begin serving all-organic lunches. The project encourages schools to incorporate this comprehensive view of food into their classwork. Janet Brown, who spearheaded the project for the Center for Ecoliteracy, explains that kids weaned on packaged and processed foods often shy away from fruits and veggies, because they have not been properly introduced. “But when a child pops a cherry tomato that she helped to grow into her mouth, then introducing a salad bar in the cafeteria is likely to be more successful.”

Nutritional literacy is not just for kids, however. Doctors, nurses, and other health care professionals

Hunger has been alleviated somewhat in the past 20 years, except in Africa.

Food aid is not the long-term answer for most of the world's hungry. Nearly 80 percent of all malnourished children in the developing world live in countries that have food surpluses. Today, hunger is the product of human decisions—people are denied access to food as a result of poverty and other social inequities, not as a result of net scarcity.

Hidden Hunger

PHOTOGRAPH BY HOWARD DAVIES



Micronutrient deficiencies plague between 2 and 3.5 billion people around the world, including a considerable number of both the 1.1 billion who are hungry and the 1.1 billion who are overweight. Micronutrients—vitamins and minerals such as iron, calcium, and vitamins A through E—are crucial elements of a healthy diet.

Deficiencies in nutrients such as iodine can stunt physical and mental growth. More than 740 million people—13 percent of the world—suffer from iodine deficiency, which is the most common preventable cause of mental retardation. Vitamin A deficiency is the world's leading cause of blindness. Iron deficiency, prevalent in 56 percent of women in developing countries who are pregnant, causes anemia, which can stunt the development of the fetus.

are well positioned to educate patients about the links between diet and health, and can be instrumental in improving eating habits. But modern medical systems often de-emphasize the role of nutrition: in the United States, only 23 percent of medical schools required that students take a separate course in nutrition in 1994. Doctors poorly trained in nutrition are less likely to take a preventive approach to health care,

such as encouraging greater consumption of fruits and vegetables or increased physical activity, and are more likely to deal only with the consequences of poor eating—prescribing a cholesterol-lowering drug, for example, or scheduling bypass surgery. A recent U.S. survey by the Centers for Disease Control found “less than half of obese adults report being advised to lose weight by health care professionals.”

Beyond educating medical professionals, health care as a whole could integrate nutrition by recognizing obesity as a disease and covering weight-loss programs and other nutritional interventions. Covering these expenses would not only reduce illness and patient suffering, but is likely to cut health care costs. An encouraging first step in this direction is Mutual of Omaha's decision to cover intensive dietary and lifestyle modification program of patients with heart disease, an initiative they hope will eliminate costly prescriptions and prevent surgeries months or years down the road. A logical next step for the industry might be to cover regular nutrition check-ups, akin to dental check-ups, as part of a basic insurance coverage.

Where communities have lost access to healthy food options, improving diets may require involving players throughout the food chain. Support of urban agriculture and urban farmers' markets has proven effective in getting good food to low-income urbanites. Urban gardens in Cuba, which meet 30 percent of the vegetable demand in some cities, have prospered under government nurturing. In the nutritionally impoverished inner cities of wealthier nations, farmers' markets are often the only source of fresh produce, as green grocers and supermarkets have left for the more affluent suburbs, and as fast food joints and convenience stores have replaced them. The Toronto Food Policy Council has used both farmers' markets and produce delivery schemes to connect local farmers and low-income urban residents, many of whom are single mothers. Some 70 percent of those buying food now eat more vegetables than they did when the program began in the early 1990s; 21 percent eat a greater variety; and 16 percent now try new foods. More people also know about the recommended five or more servings a day of fruit and veggies.

Eliminating poor eating is the business of fiscal authorities as well. The food tax advocated by Kelly Brownell could raise funds for nutritional interventions. Michael Jacobsen, director of the Center for Science in the Public Interest, notes that even small taxes could generate sufficient revenues to fund "television advertisements, physical education teachers, bicycle paths, swimming pools, and other obesity prevention measures." In the United States, a 2/3-cent tax per can of soda, a 5 percent tax on new televisions and video equipment, a \$65 tax on each new motor vehicle, or an extra penny tax per gallon of gasoline would each raise roughly \$1 billion each year.

Even without such a tax, authorities in some countries have begun to encourage lifestyle changes that are important complements to good nutrition. Australia's Department of Transport and Regional Services, Department of Health and Aged Care, and

Department of Environment and Heritage teamed up in 1999 to promote the country's National Bicycling Strategy, which seeks to raise the level of cycling in the country. The involvement of this diverse set of government agencies demonstrates the broad impact that a commitment to good nutrition can have. More cycling means more exercise, an indispensable tool in the fight against overweight. But it can also mean cleaner air, less congested cities, and cheaper transportation infrastructure.

A final part of reshaping the food environment is recultivating an appreciation of food as a cultural and nutritional treasure. The consumer culture, applied to eating, emphasizes brand allegiance and mega-meals, often at the expense of nutrition and health. Groups like the Slow Food Movement, based in Italy, and the Oldways Preservation and Exchange Trust in the United States, offer a postmodern critique of today's culinary norm by promoting a return to the art of cooking traditional foods and of socializing around food. Their work, which targets chefs as well as consumers, is the kind of cultural intervention that could help more people shift to a healthy diet, similar to the change in consciousness that encouraged a shift away from smoking in the United States. Government encouragement of these groups, perhaps through assistance with marketing and promotional activities, would insure that this important work benefits everyone, not just the affluent.

The experience of the Slow Food Movement and Oldways shows that as people care more about their food choices, their concerns are likely to evolve well beyond nutritional value. Health-conscious consumers often gravitate toward organic produce, in an effort to avoid agrochemical residues and to stop promoting farm practices that deplete the soil or pollute waterways. Many also reduce their consumption of animal products, which can reduce their intake of fat and cholesterol, but also eases the pressure on land and water resources. And these consumers are likely to seek out local food sources, which offer superior freshness and quality, as well as the opportunity to know the farmer and his methods.

The far-reaching effects of nutrition make it a central factor in personal and national development. Poor eating is as much a drag on national economic activity as it is on personal health. The reverse is also true: development choices, such as whether girls have as many years of schooling as boys, or whether food corporations are free to advertise without limit to young consumers, heavily influence what and how we eat.

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