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Hunger in the Land of Plenty: A Critical Look at Food Insecurity

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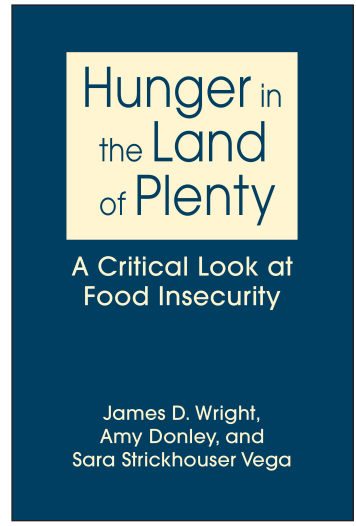

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Food Insecurity in Context

In 1968, during Lyndon Johnson's War on Poverty, CBS Reports aired the documentary "Hunger in America." It was a searing exposé of hunger, malnutrition, and starvation in American society. The documentary reported that there were 10 million hungry people in the United States, about 5 percent of the entire population. With graphic images from Indian reservations, the Mississippi delta, Appalachia, and the black inner city, the documentary revealed to its American television audience malnourished children, sharecroppers sleeping on rat-infested bedding, and migrant workers literally too hungry to move their broken bodies into the field to harvest crops. The report concluded with a plea to "do something" about widespread hunger in the United States.

Half a century has passed since the *CBS Reports* documentary, and hunger in the United States has taken on a new face. The very term "hunger" has receded from the public policy discussion in favor of today's debate about "food insecurity." And instead of 10 million hungry people and a hunger rate of 5 percent, today's food-insecure population is estimated at around 50 million people, or one American in six. This book tells the story of how we managed to get from one in twenty who were hungry to one in six who are food-insecure.

The present chapter situates the problem of hunger or food insecurity in a broader theoretical and global context. We review how the

definition of food insecurity has evolved over the past several decades and how the US Department of Agriculture (USDA) came to develop what is now the consensus definition and measurement. We also review survey evidence on the extent of food insecurity in the United States and how that compares to certain other nations. We review both theoretical and empirical evidence that food insecurity is predominantly a problem of how food is accessed and distributed, not a problem of insufficient production. And we also consider how the problem has been framed in the literatures of community organizing, economics, and anthropology.

Subsequent chapters explore the social and demographic correlates of food insecurity (Chapter 2) and the consequences of food insecurity for physical and mental health (Chapter 3). These chapters describe food as a valued commodity that is very unevenly distributed in most contemporary societies; as such, food is the same as money, prestige, influence, well-being, or self-esteem—namely, an important if often overlooked element of inequality, poverty, and social stratification.

Many contemporary discussions of food insecurity and dietary inadequacies point the finger of blame at so-called food deserts, ecological areas that are bereft of healthy food outlets. Chapter 4 reviews the arguments and explains why the focus on food deserts has been somewhat misplaced. In the same vein, Chapter 5 explains why people cannot realistically be expected to solve their own food insecurities. Backyard and community gardens, farmers' markets, food pantries, guerrilla gardens, and many of the other elements of the so-called alternative food movement have a lot to contribute, but they do not constitute a realistic solution to food insecurity.

A great deal of public policy focuses on food insecurity, so much so that many people just assume that food stamps, Meals on Wheels, and the school breakfast and lunch programs have effectively solved the problem. But all of these programs have problems of access and participation that limit their effectiveness, as concluded in Chapter 6.

Experts and organizations from the United Nations (UN) down fear that the world's production of food will need to double in the next few decades if mass starvation is to be avoided. We conclude the book with an extended argument that the earth produces more than enough food to go around and that scientific advances will ensure this truth well into the next century. The problem, to reiterate, is not that there is not enough food but rather that there are gross

inefficiencies and inequalities in how the available food gets distributed to the world's population.

This book is intended as a comprehensive overview of a truly vast literature on food, food insecurities, and hunger in the modern world, and as such we have sacrificed depth of detail in many places in favor of wide-ranging summaries of what is presently known. But we have also tried to provide current references that can be consulted for additional details on almost every point we make.

A decade after CBS brought the problem of hunger into the national spotlight, political scientist Ronald Inglehart (1977) published his very influential book *The Silent Revolution.* The book depicted a profound change of values in the advanced Western societies, from "an overwhelming emphasis on material well-being and physical security" (p. 3) to a new emphasis on quality of life. Tellingly, Inglehart wrote that "a desire for beauty may be more or less universal, but hungry people are more likely to seek food than aesthetic satisfaction. Today, an unprecedentedly large portion of Western populations have been raised under conditions of exceptional economic security" (p. 3). He then described the anticipated changes in social and political values that will result from that security. The very basis of political struggle will change, Inglehart predicted, from a focus on economic well-being to a "higher-order" quest for self-actualization and aesthetic and psychological satisfaction.

In 1977, when those words were being written, the official US poverty rate stood at 11.6 percent and the entire poverty population of the nation was around 25 million people. Today (2016 data), the poverty rate is higher, at 12.7 percent, and the poverty population is up to 41 million people (US Census Bureau 2017). The idea that the populations of the advanced Western societies are, or have been, liberated from economic want no longer resonates with the facts. Some have been liberated from material insecurity, but many have not. This book focuses on the latter.

A famous paper published by psychologist Abraham Maslow in 1943 depicted a "hierarchy of needs." At the bottom of the hierarchy were the most basic human physiological needs: breathing, food, water, sex, sleep, homeostasis, and excretion. Just one step up from the bottom were safety needs, then needs for love, community, and belonging, then the need for esteem (confidence, achievement, respect), and finally the need for self-actualization. The general theory (still prominent in sociology, management training, and education

but largely supplanted by other theories in psychology) is that needs at lower levels must be satisfied before consciousness is freed to pursue higher-level goals. Inglehart's theory generalizes the "hierarchy of needs" to entire societies and depicts social development as a progression through the hierarchy. Whether Inglehart's depiction is plausible or not, the important point is that people who face obstacles in satisfying their lower-order needs—that is, the food-insecure—may be prevented from pursuing higher-order needs. And this calls attention not just to the incidence and social location of food insecurity but also to its consequences for physical and psychological well-being.

Despite widespread use, there is no universally agreed-upon definition of what it means to be "food-secure" or, indeed, whether "food security" is a property of individuals, families, communities, whole nation-states, or the entire global food production and distribution system. Two decades ago, developmental economist Simon Maxwell (1996) identified thirty-two distinct definitions of food insecurity in the research and policy literature, a number that has since grown. These definitions run the gamut from the crassly bureaucratic to the ennobling: "a basket of food, nutritionally adequate, culturally acceptable, procured in keeping with human dignity and enduring over time" (p. 169). These definitions show an evolution in thinking about food insecurity from a global level to a national level and finally to the level of persons and households; from an initial focus on food to a larger focus on livelihoods (i.e., from "food first" to poverty and political economy); and on the measurement side, from objective indicators (weight, nutritional intake, hunger) to subjective perceptions, as in the now-universal USDA food-insecurity scale discussed later.

"Food insecurity" is a rather sterile euphemism without the emotional impact of terms such as "hunger," "starvation," or "malnourishment." On the global scene, the term made its first official appearance at the 1974 World Food Conference, where it was defined as enough food to sustain steady population growth and stabilize agricultural production and prices. This, obviously, defined food security as a property of entire nation-states. A second World Food Summit, in 1996, redefined food security and insecurity as properties of people and families: food security exists when and where "all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (International Food Policy Research Institute 2017:1).

In the United States, the USDA has been taking annual measurements of hunger and food insecurity since the 1990s.[1] Prior to 2006, those at the extreme end of the USDA food-insecurity scale were labeled "food insecure with hunger" to indicate households "in which one or more people were hungry at times during the year because they could not afford enough food" (*hunger* was defined as "the uneasy or painful sensation caused by lack of food"). In 2006, the USDA changed the terminology from "food insecure with hunger" to "very low food security," and "hunger" was thus purged from the national discourse. Researchers stopped asking whether people were literally starving, stunted, or underweight and began asking instead whether people had missed meals, were worried about running out of food, were unable to afford nutritious meals, or had ever sent their children to bed hungry. The conceptual shift was away from the experience of hunger and toward the anxieties that resulted from uncertainties about the household food supply.

Today, the USDA defines food insecurity as "the state of being without reliable access to a sufficient quantity of affordable, nutritious food" (US Department of Agriculture 2016). There are four key terms in this definition: access, sufficient quantity, affordable, and nutritious. Of these, affordability has received the most attention. Indeed, the idea that food insecurity results from inadequate economic resources is built into the very questions used to measure the concept. All of the eighteen survey questions that the USDA uses to determine household food insecurity (presented and discussed later and in the appendix to this book) include economic qualifiers—"because there wasn't enough money for food," "because we were running out of money to buy food," "because we couldn't afford" to buy nutritious food, and so on. The USDA measures assume that food insecurity is an economic issue.

But people can be food-insecure for reasons other than lack of money. An emerging literature on "food deserts" suggests that even relatively well-off people can be food-insecure if there is no supermarket close to where they live.[2] And there can also be transportation, mobility, or disability issues that interfere with access to food. The large majority of the US population shops for groceries by car (Morrison and Mancino 2015), and yet one in ten households does not own or have direct access to a car. In some urban areas, the "car-less" are a fourth of the population. Or there may be cultural issues—that is, culturally based preferences for foodstuffs that

nearby grocery stores and food outlets don't carry. If the things people want to eat and know how to prepare are unavailable, food insecurity might be the result. Finally, if we take the point about "nutritious food" in the USDA definition seriously, people may be food-insecure because they are not sufficiently knowledgeable about nutrition to purchase healthy foods. Affordability is only one part of a complicated issue, and yet very little of the existing research on food insecurity has addressed any of these complicating factors of mobility limitations, food deserts, cultural issues, or nutritional knowledge, all issues we address in later pages.

Why has "hunger" fallen out of favor in public policy discussions while "food insecurity" has fallen in? There are several reasons, some more obvious than others. First, hunger is a physiological state that is difficult to measure in surveys. Food insecurity is a social, cultural, or economic status and is easier to conceptualize and measure. People can more easily tell you that they are worried about running out of food than they can describe the sensation of being hungry.

Second, saying that people are "hungry" implies a much greater degree of need than saying they have problems with access to food. Hunger became very politicized subsequent to the aforementioned CBS documentary, especially during the Reagan years. Politicization of the issue stimulated a lot of fairly useless controversy over whether Americans were "really hungry"—whether poor people in the United States were as deprived as, say, people in Haiti or Honduras. "Hunger" seems to generate shrill and often inaccurate reactions from across the political spectrum. "Food insecurity" has been an easier concept to accept.

Third, food insecurity describes a much wider although less serious problem than hunger. Even in the days when "hunger" was part of the USDA lexicon, it was reserved for those at the extreme end of the food-insecurity scale. But a family does not need to be at the extreme end to experience occasional issues with securing food. Food insecurity does not necessarily mean hunger any more than poverty implies homelessness. The food-insecure may well be anxious about being hungry, but it is their anxiety that food-insecurity surveys measure.

Still, we should not let public policy euphemisms blind us to the realities of the conditions we study. When low-income children fall asleep in Monday classes because they haven't eaten all weekend, or adult men stand in line at the local soup kitchen for their one hot

meal of the day, or seniors line up at the local grocery store because day-old bread is being given away, it is not because they are food-insecure, it is because they are hungry.

Food insecurity has been recognized as a significant public policy problem for two or three decades now. For the last of those decades, the Institute for Social and Behavioral Sciences at the University of Central Florida[3] has been involved in a great deal of research on various aspects of the problem. This book weaves the materials from our research program into a narrative that relates the lessons we have learned.

There is a line in Aleksandr Solzhenitsyn's *One Day in the Life of Ivan Denisovich* that reads: "The belly is an ungrateful wretch, it never remembers past favors, it always wants more tomorrow."[4] This reminds us that while human needs for, say, companionship or self-actualization or aesthetic fulfillment can be satisfied on an occasional basis, the need for food and water is ever-present. A full belly only lasts until it is time to eat again, a few hours or at most a day. "It always wants more tomorrow." And it is the tomorrow of food availability that has put food insecurity on the political agenda.

On History, Definitions, and Measurement

When the concept of food insecurity first entered the public policy lexicon, it was conceived as a property of entire nations. The setting was Rome, the date was 1974, and the occasion was the first World Food Conference convened by the UN's Food and Agricultural Organization (FAO). The conference was convened as a United Nations response to the devastating Bangladesh famine of the previous two years.

UN world summits, conferences, workshops, and the like are often long on high-minded pronouncements but short on concrete plans of action and implementation. In this case, the high-minded pronouncement at the Rome conference was the Universal Declaration on the Eradication of Hunger and Malnutrition, which obligated all nations to accept the principle that

> every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties. Society today already

> possesses sufficient resources, organizational ability and technology and hence the competence to achieve this objective. Accordingly, the eradication of hunger is a common objective of all the countries of the international community, especially of the developed countries and others in a position to help.

The declaration passed unanimously, but more than forty years have passed and a large share of the world's population, even in the most advanced industrial societies, have yet to see their hunger and food insecurities erased. An inalienable right, perhaps, but an *enforced* right—not so much.

One famous legacy of the 1974 Rome conference was the declaration by then–US secretary of state Henry Kissinger that within ten years no child anywhere in the world would need to go to bed hungry. But in the 2013 Current Population Survey of the US population, 1.3 percent of respondents with children answered yes to the question, "In the last 12 months, were the children ever hungry but you just couldn't afford more food?" and 0.8 percent said yes when asked, "In the last 12 months, did any of the children ever skip a meal because there wasn't enough money for food?" (Coleman-Jenson, Gregory, and Singh 2014). These are American children who continue to "go to bed hungry," not Haitians or Bangladeshis. Kissinger's 1974 declaration was far off the mark.

Proponents of "American exceptionalism" always expect the United States to be different from the rest of the world—more advanced, more affluent, happier, and more secure than any other nation. But in matters such as inequality and poverty, the United States frequently lags behind other advanced democratic nations. Food insecurity is one such case. Problems of access to sufficient food are visible not just in the less developed or so-called emerging nations but also in the most affluent nation in the history of the world.

Is Food Insecurity a Property of Nations, Communities, or Individuals?

The Universal Declaration on the Eradication of Hunger and Malnutrition recognized the distinction between the developed and undeveloped nations and stated that the former should help resolve the hunger issues of the latter. In the declaration, "food security" is

explicitly mentioned on five occasions, and usually, within context, the notion is conceived as a property of entire nations. Thus, at that time, Bangladesh and Honduras (along with many others) were food-insecure, whereas Canada, Italy, and the United States (along with many others) were not. The declaration failed to recognize that there could be highly food-insecure persons and households, or even whole communities, inside developed and generally food-secure nations, and that the problem of food insecurity was not confined to the developing world—a theme we stress throughout this volume.

The following Rome World Food Summit of 1996 abandoned the idea that food insecurity was a problem only in the developing economies, although the recognition remained that the developing world was where the problem was most severe. The 1996 Rome Declaration of Food Security pledged "to achieve food security *for all* and to an ongoing effort to eradicate hunger *in all countries,* with an immediate view to reducing the number of undernourished people to half their present level no later than 2015" (emphasis added). The recognition that food insecurity was a problem in all countries was a major conceptual step forward.

In an important passage, the new declaration (at www.fao.org) asserted:

> Poverty is a major cause of food insecurity and sustainable progress in poverty eradication is critical to improve access to food. Conflict, terrorism, corruption and environmental degradation also contribute significantly to food insecurity. Increased food production, including staple food, must be undertaken. This should happen within the framework of sustainable management of natural resources, elimination of unsustainable patterns of consumption and production, particularly in industrialized countries, and early stabilization of the world population. We acknowledge the fundamental contribution to food security by women, particularly in rural areas of developing countries, and the need to ensure equality between men and women. Revitalization of rural areas must also be a priority to enhance social stability and help redress the excessive rate of rural-urban migration confronting many countries.

This passage introduced several key themes into the discussion of food insecurity that remain with us today. Food insecurity is a problem of poverty and unequal income distribution; it is, in short, an element in the social stratification of societies. Large-scale social forces such as

corruption and conflict contribute to the problem. A permanent solution will require environmentally sustainable agricultural practices. Overconsumption in the industrialized world creates food insecurities both there and elsewhere. There are important gender and urban-rural aspects to the issue. And food-insecure people and families can be found in all countries, regardless of their economic development.

Enter the US Department of Agriculture

The USDA first surveyed Americans about food insecurity in 1995, with a "food security" supplemental module implemented in the December wave of the 1995 Current Population Survey. This module, now known as the Current Population Survey Food Security Supplement, has been administered annually ever since and serves as the data resource of record for research on food insecurity in the United States.

The USDA's interest in food security originated in the National Nutrition Monitoring and Related Research Act of 1990. The ten-year comprehensive plan developed under the auspices of the act called on the USDA to develop standardized definitions and survey items that could be used to measure food insecurity or food insufficiency. In 1994, following a detailed review of the literature, the USDA's Food and Nutrition Service cosponsored a National Conference on Food Security Measurement and Research, the outcome of which was the now famous eighteen-item Food Security Supplement to the Current Population Survey. Major modifications to the survey to improve data quality and reduce respondent burden were made in 1998, and the survey has been administered annually ever since.

In their current manifestation, the eighteen survey items are listed in the appendix to this book. The appendix also shows the responses obtained in the 2014 survey. We summarize the survey items under three broad topics: item "difficulty" and response metrics; how the eighteen items are scaled; and prevalence of food insecurity in the United States.

Item "Difficulty" and Response Metrics

The eighteen survey items present respondents with a variety of response metrics. Several of the eighteen questions require simple

yes/no responses, others ask "how true" a particular statement is, still others ask how often a particular problem or issue occurs. Moreover, some of the items reflect low levels of food insecurity ("We worried whether our food would run out before we got money to buy more"), whereas others indicate more dire circumstances ("In the last 12 months, did you ever not eat for a whole day because there wasn't enough money for food?").

Inevitably, different items suggest very different conclusions about the degree of food insecurity. In 2014, about 20 percent of the US adult population (19.5 percent) said they had worried sometime in the previous year that their food would run out before they got money to buy more, but fewer than 2 percent said they had skipped meals for an entire day. Ditto on the children's questions: 17 percent of respondents with children said they occasionally relied on a few kinds of low-cost food to feed their children, but only 0.1 percent (one respondent in a thousand) reported at least one occasion when their children did not eat for an entire day.

Researchers are used to answering "How many?" questions with some version of "It depends on what you mean." If food insecurity exists when people are worried about running out of food, then the food-insecure fraction of the US population is 19.5 percent. If food insecurity means people have skipped meals because they couldn't afford food, then the food-insecure fraction is less than 2 percent. If someone is food-insecure when they give an insecure response to *any* of the USDA items, the food-insecure fraction is about one in three. But "somewhere between 2 percent and 30 percent" is not a very compelling answer. Policymakers and the public demand a precision that the empirics of data and surveys can rarely satisfy.

To be useful to policymakers and acceptable to the public, something had to be done to the eighteen items to generate a precise answer to the "How many?" question. The USDA responded to this need with a scaling algorithm that has been used ever since.

How the Eighteen Items Are Scaled

To address the incommensurability of response metrics, all the items with responses other than yes/no were recoded to some sort of binary format. Items with the response format "almost every month, some months but not every month, or in only one or two months" were rescaled so that "almost every month plus some months but not

every month" implied a degree of food insecurity, whereas "only one or two months" did not. Items with the response "often, sometimes, or never true" were likewise rescaled: "often" and "sometimes" implied a degree of food insecurity; "never" did not. This turned the eighteen items into a series of eighteen binary variables equivalent to eighteen yes/no questions. The USDA Food Security Scale is then the simple sum of the number of yes answers a particular respondent gives. So in households without children, the resulting scale can vary from zero (respondent provides food-insecure answers to *none* of the items) to ten (provides food-insecure answers to all ten of the questions asked of households without children); and by the same logic, in households with children under eighteen, the scale can vary from zero to eighteen.

Table 1.1 shows the distribution of the resulting scale for the 2013 administration of the Food Security Scale (Coleman-Jensen, Gregory, and Singh 2014). It also shows the "cut points" used by the USDA to define various degrees of food insecurity.

Several comments are again in order. First, any nonzero score reflects *some* degree of anxiety about food, so at the outer limit, two-thirds to three-quarters of the US population are food-secure and the remainder are not. But the USDA has a stricter standard. In its view, persons answering yes to none, one, or even two items from the scale can all be considered food-secure. (In some presentations, the food-secure were those answering yes to none of the items, and the "marginally" food-secure were those answering yes to one or two of them.) Childless households answering yes to three to five of the items are classified as having "low" food security, and those answering yes to six or more are considered having "very low" food insecurity (the category that until 2006 was described as "food insecure with hunger"). If households also have children and therefore eight additional opportunities to answer yes, the criterion for "low" is increased to three to seven yes responses, and "very low" is increased to eight or more yes responses. All scale scores greater than two are described in USDA reports as food-insecure.

Food insecurity is higher among households with children present (approximately 20 percent food-insecure) than among childless households (approximately 12 percent food-insecure). As we will see later, the most serious food-insecurity problems are faced by younger, low-income families with children—not, for example, by seniors.

Table 1.1 Percentage of US Households by Food-Security Raw Score, 2013

Number of Conditions Reported	Percentage of Households	Food Status
Households with children: 18-item scale		
0	69.3	Food-secure
1	6.2	(80.5%)
2	5.0	
3	3.9	Low security
4	2.9	(13.7%)
5	2.7	
6	2.2	
7	2.0	
8	1.8	Very low security
9	1.1	(5.8%)
10	1.0	
11	0.6	
12	0.5	
13	0.2	
14	0.2	
15	0.1	
16	0.1	
17	0.1	
18	0.1	
Households without children: 10-item scale		
0	80.5	Food-secure
1	4.2	(88.0%)
2	3.3	
3	3.4	Low security
4	1.6	(6.4%)
5	1.4	
6	1.8	Very low security
7	1.5	(5.4%)
8	1.0	
9	0.4	
10	0.7	

Prevalence of Food Insecurity in the United States

Using the preceding definitions and conventions, and as of 2013, 85.7 percent of all US households were food-secure, so 14.3 percent qualified as food-insecure—about one household in seven. (More recent surveys show the same essential pattern.) The latter figure includes 8.7 percent who were scored as having "low" food security and 5.6 percent who qualified as having "very low" food security. If we refer to the 5.6 percent as "hungry," hunger is just about as common today as it was in 1968—meaning half a century of no progress in resolving severe food insecurities.

The cut points used by the USDA to define the various categories of food insecurity are arbitrary. They arose initially because the USDA deemed the scale by itself "too detailed" to be a useful measure (Andrews, Bickel, and Carlson 1998). The cut points were created as "conceptually meaningful sub-ranges of severity" (Carlson, Andrews, and Bickel 1999:513S). The main role of the categories is to provide a consistent basis for comparison, and this they do. Still, why must a household have three or more affirmative responses to be considered food-insecure? The USDA admits that the thresholds are conservative, and others worry that this results in an underestimation (Coleman-Jensen 2010). Some scholars, including the author of the Radimer/Cornell measures of hunger from which the USDA questions are derived, suggest that since no objective guideline exists, even one affirmative answer is indicative of food insecurity (Radimer, Olson, and Campbell 1990; Radimer et al. 1992; Kendall, Olson, and Frongillo 1995). Does the difference between two and three yes responses amount to a qualitative difference in well-being? How about the difference between five and six?

Two further observations. First, all items specify some monetary reason for food insecurity, but as we have already argued, people can be food-insecure for reasons other than economics. Taking these other factors into account would increase the amount of food insecurity. Second, all the items refer to "the last twelve months" and therefore tell us nothing about the *chronicity* of food insecurity. We know from studies of poverty that the number of the poor in any given year is fewer than the number poor at least once in five or ten or twenty years (Devine, Plunkett, and Wright 1992); the same is true of homelessness and most other social problems, and the same is presumably also true for food insecurity. Extending the timeframe of the ques-

tions to twenty-four or forty-eight or sixty months would also serve to drive up the numbers. There is, after all, nothing magical about "the last year."

One of our students interviewed senior citizens on the Orange County "Meals on Wheels" waiting list and found some serious discrepancies between the answers given to the USDA items and their qualitative dietary accounts. One respondent answered the third question—"I couldn't afford to eat balanced meals"—with "never," but when asked what she actually ate, it was instant oatmeal for breakfast, toast for lunch, and a baked potato for dinner, supplemented occasionally with a can of vegetables or pickings from a leftover holiday ham. Other respondents reported that they *always* ate balanced meals but mainly consumed cheese and crackers, canned peas and beans, frozen pizzas, cereal, and mashed potatoes. Many got by on snack items but reported them as "balanced meals" (Gualtieri and Donley 2016). Clearly, the USDA questions do not define terms such as "balanced meals," "run out," "skip meals," and so on, and as a result, different respondents interpret the question in different ways.

The USDA items also do not address the important issue of *adaptation* or of possible tradeoffs families might make among food, housing, transportation, medical expenses, and other costs. A low-income single mother who decided years ago that feeding the family was the top priority might report no food insecurity—she knows she can "make it work" because she always has. Instead, she worries about how to pay the rent, how to get the car repaired, school clothes for the kids, or that someone in the family has to see a doctor. It is not obvious that anxieties about the family food supply are more important or serious than anxieties about how to pay the rent or cover medical expenses.

Theorizing Food Insecurity

As a general principle, food insecurity must result either from the inability of the planet's arable land to produce sufficient food for its human population or from the inability of the planet's food distribution systems (governments, transportation systems, economic systems, etc.) to distribute food adequately. An essential point is that in today's world, food insecurity is mainly a *distribution problem* and not a production problem.

The planet's land surface amounts to 36.7 billion acres. Of that total, about half is potentially arable, so the amount of arable land is on the order of 10–15 billion acres. At present, about 7 billion acres are being used for agricultural production. Assuming a US diet and level of consumption, one acre of arable land supports one person for one year, so the current world population of about 7 billion is still comfortably within the feedable range. At the average food consumption of Italians, the feedable number would approximately double; at the average Indian level of consumption, it would increase by four. (For all the preceding points, see Bradford 2012.)

In short, the planet produces an ample supply of food. The World Food Summit in 1996 reported that the 5.8 billion people on the planet at that time had, on average, 15 percent more food per person than the population of 4 billion did twenty years before. Today, the amount of food available per person is higher still. It is significant that few if any twentieth- or twenty-first-century famines have resulted from insufficiencies in the food supply. Famine results when conflict, corruption, isolation, poverty, and genocide prevent the available food from reaching those in need. This point is absolutely essential to a proper understanding of the global food-security situation.

The various famines that visited the Horn of Africa in the late twentieth century are cases in point. (For a useful overview of famine history in this region, see Rice 2011.) There was serious drought in the region in 1984. The Ethiopian population was devastated while the nearby Somalian population was spared. Were Somali farmers just better at avoiding the effects of drought? No. The Ethiopians starved because the military government of the time was engaged in a brutal civil war and did not come to the rescue of its citizens. Ten years before, an even more serious drought struck several parts of Somalia, and again there was no mass starvation because the Somalian government moved quickly to mobilize the population and seek international aid, which was quickly forthcoming.

Cut to 1992 and the major Somali famine of that and the subsequent two years. The droughts of those years were no more serious than those of the 1970s and 1980s, but between 1992 and 1994, 300,000 Somalis starved to death. Why? The Somali state had collapsed in 1991 and the country was overrun by marauding gangs who looted farmers' harvests and slaughtered resisters. Warlords overran the affected regions and prevented international food aid from being delivered. Boatloads of grain rotted on the docks of

Mogadishu because of a conscious plan to weaken and conquer the Somali countryside. Geopolitics and armed militias, not drought or productive insufficiencies, were the factors responsible for these devastating famines.

In short, global agricultural productivity is more than adequate given the present and likely future world population. The more pressing question is how long these levels of productivity can be maintained given the extremely high external inputs required by modern agrarian technologies. The food supply is adequate, but is it sustainable? We return to this point later.

The preceding speaks to the food security of the global community, and at that level, food security is an issue of global geopolitics, civil war, ethnic strife, power grabs, and the explicit use of famine as a political tool by corrupt warlords, religious zealots, and indigenous elites. Food insecurity can also be seen as a property of nation-states, with national variations resulting from national and cultural differences in food preferences, agricultural traditions, and farming efficiencies and inefficiencies. But increasingly, attention has turned to food insecurity as a property of households and communities—of specific families, of course, but also of neighborhoods, census tracts, even whole political jurisdictions—not necessarily because community level variables are the cause of food insecurity but because the level of communities is where solutions can be found and implemented. Molly Anderson and John Cook (1999) describe the concept of community food security as "practice in need of theory"—a possible solution looking for a proper intellectual foundation. (On the more general topic of food justice and food insecurity at the level of communities, see Broad 2016.)

The Anderson and Cook account weaves together various contemporary strands of thinking about food, access, sustainability, grassroots activism, democratic political participation, and human-scale food production systems into a tapestry of community food security. Thus, "practitioners and advocates of community food security . . . envision food systems that are decentralized, environmentally-sound over a long time-frame, supportive of collective rather than only individual needs, effective in assuring equitable food access, and created by democratic decision-making" (1999: 141). Clearly, community food security overlaps with the alternative-food movement, urban agriculture, community gardening, and a wide range of related grassroots efforts to reform food production,

distribution, and consumption. All of these issues are taken up in this book.

Even as the conceptualization of food insecurity has shifted toward individuals and families, there remains the background recognition that food availability must be connected to a system of food production and distribution. Thus, "the links between individuals or households and the larger community, the nation, and the international economy are widely acknowledged to contribute to food security" (Anderson and Cook 1999:142). The question raised in the literature on community food security is whether any meaningful or significant share of production and distribution can be localized—in other words, whether communities can become more food-sufficient than they presently are. Evidently, urbanization, culture, historical traditions, and many other factors impose limits on community food security as a food security strategy. So a key objective in most discussions on community food security is to reduce the overall level of consumption and make more efficient use of arable land, which in turn implies a shift away from meat-based diets. Thus, powerful cultural factors come into the discussion on community food security.

At least three streams of community and food activism coalesce in the movement around community food security, with the result that this type of food security means different things to different people. Indeed, "loose and shifting coalition" would be a more accurate characterization than "movement." First are the community nutritionists and nutrition educators who stress the importance of community factors in impeding or promoting food access. Their agenda is to change food preferences and eating habits, to encourage healthy eating, and to promote plant-based diets. A second group are the activists and environmentalists whose focus is typically on environmentally sound, sustainable food production. Democratic decisionmaking and grassroots activism are also important to this faction; they are leading advocates for inclusion and community participation. Also at the table are community development interests, anti-hunger and anti-poverty groups, and the immense network of emergency food providers, food bank operators, soup kitchen and food pantry directors, emergency shelter operators, and the like. The latter group is typically focused on equity in access to food. In embracing such a wide swath of community food activists and movements, community food security must struggle with competing agendas and issues.

To the extent that movements around community food security share common features, Anderson and Cook (1999:145) summarize them as follows:

- Multidisciplinary and systems approach to planning and implementing food security programs; thus, a formal recognition that no one discipline, approach, or constituency has the whole answer.
- Focus on whole communities rather than isolated sites.
- Broad community participation in issue identification, planning, needs assessment, formulation of interventions, and program implementation.
- Multisector linkages (i.e., coalition-building; inclusion of nonprofit organizations, businesses, and individuals from many different parts of the food system; a place at the table for all stakeholders).
- Emphasis on "farm-to-table" distribution, locally grown food, community gardens, farmers' markets, sustainable agriculture, and the like, in strong preference to "factory farming" and carbon-intensive distribution systems, whenever possible.
- Multiple objectives in every project, each of which should produce, distribute, or otherwise expand access to high-quality food while simultaneously creating jobs, developing community economy, promoting networking and development of social capital, and training residents in useful employment skills.
- Preference for and explicit inclusion of locally owned small businesses (versus large national and international corporations).
- Formation of food policy councils to address local policy issues.
- Emphasis on planning for the long term.

The last point deserves emphasis. When groups focusing on community food security (say, local food policy councils) convene, there is a recognition that nothing is going to change overnight. The world obviously depends upon industrial-scale farming and international systems of transportation to feed its population—that will remain true for centuries. At the heart of the matter are people's food preferences, and these too will change only over the long term. About 5 percent of the US population say they are vegetarians when asked in national surveys (a number that has stayed constant for at least the past ten years). Getting this figure to 10 percent or 15 percent would be a serious challenge; getting it up to half, nearly insurmountable. Thus, the explicit focus is on the long term.

In the short term, the cause is hopeless. And the problem with the long term, of course, is that one in seven American households is food-insecure *now*.

Ironically, community food security does not address the food security issue. It is about cultural change, not about feeding today's population. It is a utopian vision, not a concrete plan to reduce food insecurity on a scale of years or decades. The emphasis on locally grown food, for example, ignores the economic inefficiencies of these modes of production; the emphasis on grassroots activism and democratic decisionmaking forgets that leaders always emerge in any organized activity (this is Robert Michels's "iron law of oligarchy"); the advocacy for plant-based diets ignores the explicit food preferences of 95 percent of the US population.

Food as Economic "Entitlement"

Economists who have written on food insecurity owe a great debt to Nobel Prize–winner Amartya Sen's seminal 1981 book *Poverty and Famines: An Essay on Entitlement and Deprivation* and a follow-up chapter on "Food, Economics, and Entitlements" in his 1991 book coedited with Jean Drèze, *The Political Economy of Hunger*.

Sen's analysis begins with the observation that famine is less a problem of food production than a problem of who is and is not *entitled* to the food that is produced. Here, entitlement has a strict economic meaning and is not construed in the colloquial sense (i.e., in the sense that all people deserve some basic quantity of food). Economic entitlements to food are secured either through direct ownership of food (i.e., food producers, farmers) or through the conversion of wealth or income to food (everyone who does not directly produce food but must enter exchange markets to obtain it). As the world's agrarian (peasant) population has declined because of urbanization and increased agricultural productivity, those whose entitlements to food depend on their wages have increased. Famine, in this view, is a crisis in the entitlement to food, not usually a crisis of production.

Prior to Sen's analysis, economic studies of the world's food situation basically asked whether the world food supply was or was not growing faster than the population, reflecting obvious Malthusian influences. Political responses were largely confined to increasing food outputs. Sen's perspective called attention to the irony that,

whereas global food production easily outpaced global population growth (in the 1980s and 1990s and even today), various regions of the world were wracked with widespread hunger and famine.

Cases in point were the Bengali famine of 1943, the Ethiopian famine of 1973, and the Bangladeshi famine of 1974 (Sen 1981). In these years and places of widespread starvation, food output had actually increased. The same was true of the various Horn of Africa famines discussed earlier. The 1969–1971 and 1980–1982 famines in the Sahel saw 5 percent declines in food production in Chad and Burkina Faso, a 7 percent decline in Senegal, a 12 percent decline in Niger, a 17 percent reduction in Mali, an 18 percent reduction in Ethiopia, and a 27 percent reduction in Mauritania. Millions starved in these famines. Yet, in the same years, there was a 5 percent decline in food production in Venezuela, a 15 percent decline in Egypt, a 24 percent decline in Algeria, a 27 percent decline in Portugal, a 29 percent reduction in Hong Kong, a 30 percent reduction in Jordan, and a 38 percent reduction in Trinidad and Tobago—but there was no famine in any of these nations.

Aside from factors of civil war, ethnic strife, and political corruption, a key difference in these examples is that the African nations of the Sahel relied primarily on food production as a means of obtaining income for exchange, whereas the economies of the other nations were more diversified. So when the agrarian sector collapsed, so did the entire economy. All forms of entitlement disappeared. In more diversified economies, food entitlements (aggregate incomes) were less drastically affected, and starvation was avoided.

Sen's essential contribution was to construe food insecurity as an issue of entitlement, or in a more common term, wages, and thus to render the issue as a poverty problem and an element of social stratification. The supply of food and the distribution of entitlements to food are not the same thing and, indeed, may be only loosely related. The implication is that a proper understanding of food insecurity must take wages, prices (of food and other essential commodities), and employment into account, not just the efficiency of the agrarian economy.

Sen's analysis has been influential in how advanced societies think about famine relief. A key implication is that cash is a reasonable alternative to food aid, a position that has been adopted by Oxfam and other international aid agencies. When the developed economies ship boatloads of food to famine-stricken areas, it stimulates government

corruption and inefficiency on the receiving end, poses transportation issues in getting food into the stricken regions, and forces the population into relief camps where food can be distributed more effectively. Cash avoids these inefficiencies, prevents the movement of food out of the affected regions, and encourages employment and infrastructure investments by pushing more money into the local economy.

The parallel to food insecurity in the United States is intriguing. If food insecurity results from a lack of money (entitlement), the solution is to give food-insecure people more money. But here we confront a profound political and cultural issue, namely that we don't trust poor people with our money. So we have stumbled upon a deep theoretical link between Sen's analysis of global famine and the problem of food insecurity in the United States: cash may work better than food in both cases.

Indeed, the point generalizes. We have no issues depicting food insecurity in the less developed world as the result of politics, civil war, ethnic inequalities, and the like. But is the situation that much different in the advanced economies such as the United States? We will see in the next chapter that the strongest correlate of food insecurity is poverty. Poor people in the United States are cut off from the country's agricultural bounty no less than from all the other resources abundantly available to the middle class. Racial and ethnic correlates run along the predicted lines: whites thrive, while African Americans and Hispanics suffer. The major national effort of the United States to alleviate food insecurity among the lower classes is SNAP (Supplemental Nutrition Assistance Program), or food stamps, and conservative politicians at all levels have tried to gut the program at every opportunity and to demonize those who benefit from it. Since there is plenty of food to go around, how do we escape the conclusion that the US food insecurity problem also results from corrupt, self-satisfied, zealous, and indifferent elites?

An Anthropology of Resource Scarcity

An anthropology of food and water (resource) insecurity has been advanced by Amber Wutich and Alexandra Brewis (2014), focusing on three questions: What factors make communities vulnerable to resource scarcity? What strategies do households adopt to cope with

resource insecurity? And what are the effects on individuals when their capacity to cope is overwhelmed?

There are about a billion people in the world who are chronically hungry and about a billion who lack access to safe, potable water, with considerable overlap between the two groups. Wutich and Brewis adduce three general propositions, each corresponding to one of the three theoretical questions that animated their research. First, defective institutional-scale factors make communities vulnerable to scarcity. The authors discuss five institutional factors that increase a community's vulnerability: basic ecology, population, governance, markets, and entitlements (the latter in the Amartya Sen sense). Ecology determines agricultural productivity; population sets the number of mouths to feed. These are described as necessary but insufficient conditions for resource scarcity. With respect to governance, "government policies can create food insecurity (e.g., agricultural or development policy) or fail to prevent it (e.g., food supplementation)" and are thus sufficient to "predict or explain some, but not all, community-level patterns of vulnerability to resource insecurity" (2014:447). Ditto for market factors such as hoarding, inflation, price increases, and market manipulation. Such factors sometimes explain all, sometimes much, and sometimes none of a community's vulnerability.

Following Sen, the interesting action in the institutional sphere is said to lie in entitlements—direct agricultural production, trade in resources, labor, wages and socioeconomic inequalities. The key insight here is that "scarcity is a problem of who gets a resource, not how much of it exists," in short, a problem of inequitable distribution, not insufficient production. "Entitlement failure may be sufficient to predict or explain many community-level patterns of vulnerability to resource insecurity" (2014:448).

Second, just as communities vary in their vulnerability to scarcity, so too do households vary in adaptive responses. Prior research suggests four key adaptive strategies: intensification, modified consumption, migration, and reprioritization or abandonment. Intensification means an intensified effort to obtain more food or water, such as by more labor-intensive farming of less productive lands (community gardens?), foraging (dumpster-diving?), increased efforts to generate income with which to buy food (panhandling?), or the sell-off of assets (pawnshops?). Our parenthetical comments acknowledge the potential relevance of these strategies even in the postindustrial economies.

Modified consumption is either eating less (cutting back on portion size or on the number of meals) or eating foods one would not normally consume. "Food-insecure households eat stigmatized or proscribed foods, sometimes called 'famine foods,' when preferred foods are unavailable" (2014:449). In contemporary advanced societies, this would include discarded food items (dumpster-diving) or, more generally, free-food programs: food stamps (SNAP), soup kitchens and congregate feeding programs, food pantries, Meals on Wheels, and the like.

Migration strategies include fostering out children, either temporarily or permanently, seasonal or temporary migration to more food-secure regions, or permanent resettlement. Intra-household reprioritization and abandonment are related strategies that involve denying resources to some to ensure that the needs of others are met (parents who go hungry so their children may eat), attending to the needs of some householders while ignoring others, or even abandoning the household's weakest members. These strategies alert us that resource scarcity may stimulate dysfunctional family dynamics, with negative effects on the family and its members.

Third and finally, individuals within resource-scarce households and communities vary in how they react to their situation. "Food insecurity is well-established as a trigger for rising levels of emotional distress and mental ill health, especially anxiety and depression" (2014:451). The intervening factors are uncertainties in the environment and stigma and shame within individuals. Perceptions of social injustice may also play a part. This hearkens back to the Maslovian theory that lower-order needs must be satisfied before consciousness is freed to pursue emotional well-being and other higher-order goals.

Conclusion

Seven key points have surfaced so far. First, food security and insecurity can be conceived as properties of specific individuals and households, of whole communities, of nation-states, or of the entire global food production and distribution system. The history of the concept has seen an evolution from broader to narrower conceptualizations, so most current research focuses on the food insecurities of individuals and families, a tradition followed throughout this book.

Second, despite half a century of pronouncements about ending hunger, the problem of food insecurity has proven obdurate even in affluent democracies. In the United States, the food-insecure proportion is in the vicinity of one in five to one in seven, and although these numbers are lower in places like Australia or Great Britain, no nation has been able to expunge food insecurity entirely.

Third, the food insecurity of people and households is now defined throughout the advanced English-speaking societies by a series of survey questions developed by the USDA. (In the developing world, different measures are needed.)

Fourth, judged locally, globally, or anywhere in-between, and with only rare exceptions, food insecurity is a problem of distribution, not of production. The planet produces plenty of food to go around, even at high levels of consumption. Periodic famines result from politics and the use of famine as a political instrument, not (usually) from crises of agricultural productivity.

Fifth, an economic analysis of food insecurity shows it to be an issue of food entitlements. In peasant and agrarian economies, entitlement is accumulated via direct production of foodstuffs, but for the vast bulk of the urban population, entitlement is accumulated via earnings and is indexed by income. In the United States, virtually everything the country does to address issues of food insecurity constitutes food aid rather than cash assistance (see Chapter 6). Is the US system of emergency food and food distribution the metaphorical equivalent of boatloads of grain rotting in the ports of Mogadishu? There is probably as much truth as simile in this comparison.

Sixth, in the United States and elsewhere, a principal response to food insecurity has been the movement around community food security. In Sen's terms, this movement can be analyzed as an effort to increase food entitlement via increased direct production of food. But while virtually any community could be reorganized to satisfy a larger share of its food needs, there are serious issues with this approach. Most food-insecure households will not be willing or able to grow the food they need.

Seventh and finally, communities and families vary in their susceptibility to resource scarcity, in their adaptive (or maladaptive) responses, and in how they are affected by their scarcity experiences. These points direct our attention to "modified consumption" and internal family dynamics as relevant household adaptations, and to

the effects of food scarcity on the physical and emotional well-being of its victims.

Notes

1. All information on the early history of the USDA program is taken from https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/history-background.

2. In metropolitan areas, a food desert is a low-income census tract where at least a third of the residents live a mile or more from the nearest full-service supermarket; in nonmetro areas, ten miles or more. The USDA's Economic Research Service estimates that 23.5 million people live in food deserts, so the contribution of food deserts to the overall rate of food insecurity could be quite substantial.

3. While this book was in preparation, Wright was the director, Donley the associate director, and Strickhouser the project manager of the ISBS.

4. The novel was first published in 1962. The authorized English edition was published in 1991. The quotation appears at location 1946 in the Kindle version of the book.