

Famines: Causes and Impact

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Introduction

Famines are caused by a cumulative failure of production, distribution and consumption systems. That is why famines are 'community crises', where scarcity and human suffering is accompanied and aggravated by social breakdown. Communities lose their ability to support a significant portion of their members, causing accelerated destitution and fearful reactions related to one's decreasing 'command over food'. Famines are unique experiences that occupy a finite span of historical time and human experience. At the same time, they are recurring patterns that reveal insight into a society's deeper and more enduring tensions and difficulties. The notion of famine as an event (sudden crisis), process (accelerated destitution) and structure (inequalities within societal networks) creates the need for an integrated and historical-comparative approach. I explore this approach through four guiding questions: (a) How do we detect and measure famines?; (b) How do we explain famines?; (c) How do we assess the impact of famines?; and (d) How is the historical trajectory of famines related to contemporary hunger and food crises?

Detecting and measuring famines: from event to process and structure

Famine literature distinguishes between the related concepts of famine, food crisis, hunger and malnutrition. Famine is mostly understood as an event, food crisis as a process, whereas hunger or malnutrition point to structural features in society. In reality, they are interwoven concepts: “The term famine indeed represents the upper end of the continuum whose average is ‘hunger’.

Malnutrition, which eight hundred to nine hundred million people still endure every day, might be seen as slow-burning famine.” (Ó Gráda 2009: 6) Famines are mostly described as sudden shocks, often but not always linked to natural disasters (drought, temperature), ecological shocks (eruptions, blights, plagues) or man-made calamities (violent conflicts, war, genocide). Famines cause excess mortality induced by either starvation or hunger-induced diseases. A simple dearth might cause hunger, but it does not kill people; a proper famine is an event that kills. As such, it requires an acute and prolonged period of hunger since the human body can resist a lack of food intake for long periods (Livi-Bacci 1991). The relationship among famines, surplus mortality and infectious diseases is a much disputed topic. At least until the 19th century this causality is virtually non-existent (Rotberg and Rabb 1985; Bengtsson 2004: 43-44). Most so-called Ancien Régime diseases, such as smallpox, plague, malaria and typhus, are non-related nutrition diseases, in contrast to typical 19th century killer diseases such as cholera and tuberculosis. Besides significant numbers of actual or imminent deaths from starvation and/or the outbreak of famine-induced infectious diseases, common symptoms of famine crises include rising market prices, social disruption (often including food riots and increased crime against property), long-term resource depletion and an increase in temporary migration. Contemporary famine research has shifted the perception of hunger crises as natural or technical problems related to the disruption of a food system to famines as processes rooted in long-term social, economic, and political inequalities, aggravated by a lack of accountability and failed responses by public actors, and sharply exacerbated by violent conflict and war (Devereux 2007; Baro and Deubel 2006). That is why, according to this line of thinking, ‘new famines’ are almost always political events because they are almost always preventable.

Devastating famines, which kill more than a small percentage of the population, are rare in a world-historical perspective (Ó Gráda 2009: 8). Some famines, such as the Great European Famine in the early 14th century and the Irish Famine in the 1840s, stand out as exceptional in this respect. Recent research on the frequency of famines in pre-industrial Europe confirms the exceptionality of widespread famines, despite frequent crop failures and war-related disruptions to the food system (Alfani and Ó Gráda, forthcoming). In Europe, classic famine crises have been in retreat for three or four centuries. England and Northern Italy witnessed their last famines in the 17th century. Eighteenth and 19th century mortality peaks in France and the Low Countries were modest relative to previous centuries, even in the expensive years. In many European regions mortality remained sensitive to short-term variations in food prices or harvest outcomes well into the 19th century, but conditions rarely deteriorated to famine levels. In the first half of the 19th century, Europe seemed to have escaped from what Malthus called “the last, the most dreadful resource of nature.” (Bengtsson and Saito 2000; Malthus 1798). Nevertheless, a European history of (peacetime) famines extended into the 19th century with the Irish Famine of 1846-50 and the Great Finnish Famine of 1867-68. It is plausible to link the long-term reduction of the risk of famine in Europe to gradual improvements in agricultural productivity, better communications, a strengthening of local entitlement support and some gains, although modest and slow, in economic growth and living standards (Vanhaute et al.

2007: 35–6). Changes to the social and economic order in Early Modern and Modern Europe gradually transformed the pattern and degree of vulnerability from 'exogenous' epidemics and local subsistence crises to new, structural forms of poverty and disease including airborne infections (Walter and Schofield 1989: 66–7). Proletarianization of labor and commercialization of goods and services created new forms of vulnerability such as insecure labor exchange entitlements and a growing dependency on often unstable markets. This created the need for new public goods and better, more inclusive protective systems, and established the foundations for Europe's 20th century welfare states.

Europe's 'escape from famine' after 1850 was accompanied by a massive increase in food availability, better food security, declining relative food prices and a shrinking agricultural population. Within a rapidly changing, globalizing and ever more unequal world, Europe could support its process of de-agrarianization with massive and cheap imports of raw materials and basic food stuffs and an impressive export of tens of millions of surplus laborers to the 'neo-Europes'. In some of these peripheries, local and regional food systems collapsed. The commodification of smallholder production, the addition of millions of tropical cultivators into the world market, and the weakening or destruction of local and state-level autonomy by colonialism and imperialism tended to undermine traditional food security outside Europe (Davis 2001; McMichael 2013). Due to this round of imperialist globalization, counted in absolute numbers, the damage wrought by famine was higher than ever in the 19th and early 20th centuries. Famine mortality in India and China amounted to at least 30 million people between 1870 and 1910. It seems like the world history of famine had its final 'big bang' in the 20th century. Absolute numbers of famine victims have never been higher (estimated at 70 to 80 million), with outliers in the USSR in 1921–1922 (six percent of the population) and 1932–1933 (four percent), Bengal in 1942–1944 (three percent), China in 1959–1961 (two percent) and North Korea in 1995–2000 (three to four percent) (Ó Gráda 2007: 25–30). The damage caused by poor harvests was greatly exacerbated by political action, especially 20th century totalitarianism. Famine-related mortality declined rapidly after 1960. Famines that killed more than a small percentage of the total population became unusual. This, in turn, gave rise to the dream that hunger and famine could be finally eradicated on a global scale. This is not yet the case. Famines still threaten large populations in the Sahel region and the Horn of Africa. Hunger, often referred to in terms of food insecurity, is still affecting around 11% of humanity, mostly small-scale farmers in developing countries, and is most prevalent in sub-Saharan Africa (FAO 2014). This highlights the discrepancies and inequalities that are part and parcel of the global food system as it functions today.

Explaining famines: from crop failure to community crisis

Famines are regional crises. One might even claim that famines are regional crises that can only be understood via the 'local story' (Solar 1997: 123; Maharatna 1996: 179–195). The European Potato Famine in the 1840s was an enormous shock because of the widespread and massive increase in potato consumption after 1750 (Mokyr 1985; Vanhaute et al. 2007). Nevertheless, the impact of the potato blight differed widely within Western Europe. There were marked differences between Ireland and the rest of Northwestern Europe and between Eastern and Western Ireland, between the Scottish Highlands and Lowlands, between Inner-Flanders and South Belgium, between clay and

sandy regions in the Netherlands, and between East and West Prussia. This implies that the causes and effects of the subsistence crisis of the 1840s cannot be evaluated on a national or international scale. Moreover, these regional stories have to be understood within different spatial dynamics: international (the dispersion of the blight, international trade, market integration); national (state policies); regional (regional socio-agro-systems); and local (local communities, local elites, households). By combining the regional stories, the impact of the European Potato Famine can be attributed to five proximate factors that contributed to a diversification of the effects of the famine. (1) The first important trigger was the failure of the 1846 wheat and rye harvests. Those failures extended all over Europe, and grain prices everywhere were affected. The price increases led to panic, popular unrest, and privation. (2) Most of the excess mortality was due to the failure of the potato crop in combination with the failure of grain crops. The timing and size of the harvest losses varied greatly across regions and countries. (3) Wherever the potato was omnipresent in the people's diet, its failure resulted in severe hardship and in excess mortality (Ireland, Flanders, the Scottish Highlands, the Netherlands, and Prussia). (4) Vulnerability to famine was severely aggravated when rural household incomes were less diversified (e.g. in Ireland) or when alternative income possibilities were decimated (e.g. the disappearance of household-based flax industries). (5) The strength of local relief systems and the entitlements status of the poor, together with the impact of protective state action, was paramount in reducing the direct impact of the famine.

Additionally, famines are regional events that can only be understood within long-term socioeconomic processes that accelerate destitution of society's most vulnerable groups. Persistent food insecurity in nowadays sub-Saharan Africa, most importantly with the rural populations, is rooted in structural vulnerabilities that limit their access to resources (Baro and Deubel 2006). In the last decades the Sahel has become the most infamous famine-prone region world-wide, frequently invoked as a classic model of uncontrolled demographic growth, poor land use, long and short-term climatic change, and corrupt regimes. Others have stressed that drought and famine have been part of a lengthy process of ecological deterioration that is directly related to the growing impact of global capitalism and to the lack of accountability of local, national, and global governmental and non-governmental agencies (Frank and Chasin 1980; Watts 1983 (2013); De Waal 1997). Strategies of adapting household farming and income practices in the face of climatic variability have to be understood within the historical process of incorporation of African peasants into the global circuits of capitalism and the unbalance between peasant subsistence and consumption.

These examples clarify that famines are related to ecological and institutional dynamics, structural vulnerability, social inequalities and struggles over land and natural resources. Scales of analysis, both in space and time, should be multiple. Central are the household and community livelihoods - the capabilities, assets and activities required for a means of living. They comprise multiple sources of entitlement, based on the household's and community's endowments and their position in the legal, political, economic and social fabric of society (Baro and Deubel 2006). For many years, the central focus in historical famine research (triggered by a Malthusian and a Marxist perspective) was on macro processes such as the relationship between famine crises and demographic crises, and the impact of subsistence crises on revolutionary political events (Vanhaute 2011). This approach encouraged research to identify and measure crop failures, price fluctuations, demographic crises and political uprisings. In the 1970s, following E.P. Thompson's moral economy approach, attention in food crisis research shifted to urban markets and the dialectical relationship between collective

and public actions (Tilly 1975; Walter and Wrightson 1976). Historians and social scientists redefined famines as intertwined communal processes. The vulnerability of local societies to economic distress is not solely a function of population numbers, markets and prices. It is related to a cluster of at least three critical factors: the impact of the crisis; the existing social; and economic order, and the way people are able to keep control of their own fate, within the household and in the local and regional communities. The collective level includes the impact of social differentiation and power relations (along the lines of income, gender and age), the strength of local institutions, and the organization of the regional economy.

This more comprehensive interpretation of famines was largely triggered by publications written by the Indian economist Amartya Sen who, in his famous work *Poverty and Famines*, shifted the focus of famine research from the availability of food to the entitlement of food: “Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat” (Sen 1981: 1) (also see Pritchard, Chapter 1, this volume). To understand famine we need to understand both ownership patterns and exchange entitlements, and the forces that lie behind them. Like the paradigm of the moral economy, this approach highlights individual agency, the actions and reactions of women and men with regard to a decreased ‘command over food’ (Ravallion 1997: 1206–7). The entitlement approach stresses the meso-level of command over food that is inserted between the macro and micro-levels of availability of food and individual suffering. This shifted the prime focus from the availability of food (a production-based approach) to the distribution of food (a market-based approach). One new line of research favored the individual actor, with the lack of purchasing power and/or property rights and entitlements as a main cause of vulnerability. Another one looked at the functioning of food (grain) markets. A disturbance of the ‘Smithian’ open and competitive markets is seen as one of the main causes for a decline in food entitlements (Persson 1999). Sen first applied this entitlements approach to the Great Bengali Famine of 1943-44 (Sen 1981; for a revision see Ó Gráda 2015). He argued that hoarding, speculation and misjudgment on the part of the producers and merchants, at the expense of the rural poor, caused the crisis. This forced prices much higher than justified by food availability, closing the markets for the poor and killing over two million of them. Later on, the importance of institutions (such as households and village communities) in determining entitlements has also been taken into account (Devereux 2007). This transfer-based approach highlights internal household power relations, community networks, entitlements generated from communal property regimes, and rights or claims over resources that are held collectively. All these debates reinforced the interpretation of famines as community crises, where scarcity and human suffering is accompanied and aggravated by a social breakdown, causing communities to lose their ability to support their vulnerable members. That is why famines are unique experiences that occupy a finite span of historical time and human experience while also being recurring patterns that reveal insight into a society’s deeper and more enduring tensions and difficulties (Murton 2000: 1414).

Modern famines are typically regarded as avoidable humanitarian crises, or more bluntly, as crimes against humanity. That is why contemporary famine research has moved towards a political theory of famine prevention (De Waal 1997). When looking at the relationship between famine, hunger and poverty, new questions arise. The fact that fighting famines did not prevent the spread of endemic hunger remains one of the most puzzling paradoxes of our times. According to Amartya Sen (1990: 376), endemic hunger “kills in a more concealed matter... It all happens rather quietly without any

clearly visible deaths from hunger... While regular hunger is largely a result of inadequate entitlements on a continuing basis, famines are the result of disastrous declines of entitlements that typically occur rather suddenly." Over time, the predominant character of hunger seems to have shifted from frequent food shortages to chronic food poverty. This change of scale has placed an unprecedented number of people at peril of hunger at the same time (Newman 1990: 394–401; Dando 1980: 90–1). By placing famine in a broader perspective of societal changes and global food security, the very character and perception of the concept changed. From "an endemic disease in peasant societies" (Arnold 1988: 50) and "incorporated into man's biological regime," (Braudel 2002: 73) famine and hunger have shifted to powerful weapons in the ideological debate about contemporary society.

Assessing famines: from natural disaster to resilience and vulnerability

The notion of famine as an event (sudden crisis), process (accelerated destitution) and structure (inequalities within societal networks) creates the need for an integrated and historical-comparative approach. This includes individual and household coping strategies that deal with acute forms of stress as well as reactions from public authorities (Howe and Devereux 2004). It is often assumed that during famine crises existing market and non-market institutions for assistance, credit and insurance perform less well, or even collapse. Patronage lineages succumb and alternative, 'anti-social' behavior increases. This is certainly not always the case. What is the role played by these networks in periods of severe social stress? To answer this question, famine research must also concentrate on cases where food crises did not kill on a massive scale, or where crop failures did not result in a genuine famine. Limiting research to extreme situations risks narrowing the focus to the character of the event rather than to structural variables such as mechanisms of resistance and adaptability (Vanhaute and Lambrecht 2011).

Why do famines occur, and what is their impact? On the most basic level, the direct impact of a subsistence crisis is expressed in measures of food availability decline (crops and livestock production, market provisioning), human suffering (mortality, health and disease), and demographic adaptive strategies (marriage, fertility, migration). On a second level, we need to understand formal and informal collective coping strategies. How do local populations, as a group, cope with the sudden stress of a (possible) hunger crisis, and how do local, regional, and national authorities react to this threat of famine? We differentiate between collective risk management strategies for coping with shocks and for mitigating risk, and public actor interventions. Short-term and long-term collective strategies include adaptations of demographic behavior and consumption patterns, intensification and diversification of the use of family labor, selling assets and land, and reconfiguring relief, credit and protection systems. Public interventions range from direct intervention and public investment to market regulation and revised entitlement structures.

Coping is defined as the manner in which people act within the constraints of existing resources on the one hand and the entitlements they receive to command them on the other hand. Coping strategies are embedded in existing societal agreements such as accessing markets, exercising rights, calling upon obligations or moral duties, and strengthening and enlarging networks of patronage and social support. Household resources for coping with famine include labor, land, tools, seed for crops,

livestock, draft animals, storable food stocks, cash and valuables that can be sold. The most common household strategies are adaptations of demographic behavior and consumption patterns, intensification and diversification of the use of family labor, and selling assets and land. Group-based coping strategies point at relationships related to exchanging these assets. These strategies can be either defensive and protective or active and offensive. Securing basic needs goes together with an appeal to guarantee the basic rights of entitlement. If this fails, new forms of coping strategies can break the former rules by circumventing legal and moral laws or by physically leaving the livelihood. They point at a (partial) breakdown of societal structures. Research on the impact of contemporary crises and natural disasters on household coping strategies reveals a multitude of risk management arrangements on both a household and a collective level. In most famine prone regions, rioting and petty theft rose sharply; the character of crime changed too. Collective food riots were more likely the product of minor hunger and deprivation than of real starvation. Figure 3.1 summarizes the range of choices households and groups have for managing risk in crisis situations (immediate shocks and longer-term crisis situations). The use and effectiveness of these protection strategies depend on the impact of the crisis, the compatibility of individual and household-based choices and the efficiency of public actions. Strategies may also conflict with short-term and long-term goals: reallocation of intra-household labor input and/or food intake can save assets but can harm long-term health, especially of children; selling assets can jeopardize the survival of the farm; violating moral standards in using collective goods can harm future participation in credit networks or group-based insurance regulations; and adjustments in fertility strategies can affect long-term household labor supply. Public interventions during a period of sudden crisis also have multiple dimensions, as shown in Figure 3.2. We distinguish between short-term actions (relief transfers, market regulation and price subsidies), middle-term interventions (investments in public works and employers business), and long-term initiatives (strengthening credit networks, schooling and health care facilities). They all put serious pressure on public assets, so choices are often weighted in favor of immediate implementation and effects.

<FIGURE 3.1 and FIGURE 3.2 HERE>

Why are some communities vulnerable to crisis? Why do some cope better with famine than others? Much of the existing scholarship on the resilience or vulnerability of communities focuses on exogenous conditions. Communities that are vulnerable to crisis have to contend with an assortment of difficult environmental, political, or economic conditions, such as ecological disasters, famine and war (Curtis 2012: 18-34). However the roots of the level of resilience and vulnerability are internal. Vulnerability, the link between risk and the precariousness of people's livelihood, has always been part of human societies. Throughout history, the most powerful answers have been found in diversifying income and coping strategies and safeguarding access to resources, land and common goods. Food shortages only become a famine when an accelerated process of rising individual malnutrition and household destitution occurs simultaneously with (partial) societal breakdown. In most cases in history, the impact of famines could be absorbed within the local and regional communities. They seldom had lasting effects on societal developments and population growth

(Devereux 1993; Howe and Devereux 2004; Ó Gráda 2009: 1–25). The threats to individual ‘lives’ (malnutrition, suffering) are usually countered by adaptations in peasant ‘livelihoods’ (informal and formal coping and protection systems). Famines triggered by harvest failures only occur when societal institutions fail. The faltering or breakdown of markets, labor, credit and protection systems cut households off from their income and endowments. Individual, household and local coping strategies such as public credit, insurance and support systems (in other words, peasant survival systems) determine the outcome of a decline in food availability (Osmani 1998: 172-174; Skoufias 2003: 1087-1102).

In short, vulnerabilities to food shortages depend on three critical factors: the scope of the food crisis; the resilience of systems of collective risk management (household and local community); and the impact of public actor interventions (social and economic organization via institution arrangements and social power relations). This can be expressed via three questions:

- What are the problems related to the supply and availability of food (a production-based approach)?
- What are the problems related to the distribution of food (a market-based approach; markets and entitlements)? and
- What are the problems related to the control and regulation of food (a transfer-based approach; local and extra-local public institutions, rules of access, control and extraction/taxation)?

Recent research has pointed at the positive role of social and economic equality and public accountability, allowing societies to better deal with potentially disastrous shocks and calamities (Bankhof et al. 2004). The way society is organized has a big impact on the strategies those societies devise for exploiting and managing their resources. This in turn dictates the extent to which some communities are stable and resilient over the long term while others are vulnerable to failure and even collapse (Curtis 2012: 79-80). Recent famine research has substantially increased our understanding of the way famines, or the threats of famine, ‘work’ within specific societal contexts. It shows that the impact of hunger crises in rural societies is directly, but inversely, related to the level of stress absorption and risk spreading within the local village communities (Vanhaute and Lambrecht 2011). In Flanders for example, intra-village distributional networks changed profoundly between the middle of the 18th and the middle of the 19th centuries. Local management strategies shifted from predominantly informal networks to predominantly formal institutions. This transition is rooted in structural changes in Flemish rural society in the 18th and 19th centuries, and it contradicts the traditional vision of a more or less straightforward shift in crisis management from rural, local and informal to urban, supra-local and formal. The food crises of 1740 and 1845-1847 in the Southern Netherlands were severe, but did not turn into famines in the traditional sense. The peasant economy and village society were able to absorb the main shocks of these crises. Further comparative research must deepen our knowledge regarding the impact of peasant versus commercialized agriculture on a society’s vulnerability to famine.

Over time, the continued erosion of the family basis of livelihoods has created new forms of vulnerability. In large parts of the Global South, vulnerability has switched from a temporary to a structural state of being in the last few decades (Ellis 2006: 393). This is countered by an

intensification of old and an introduction of new forms of livelihood diversification such as taking up non-farm activities and relying on non-farm income transfers. The income of rural households has become less based on farm activities and the exploitation of households' own assets. This erodes former household and village security mechanisms and affects peasants' ability to overcome short-term economic stress, such as harvest shortages or variations in income or food prices from one year to the next or within even shorter time spans (Bengtsston 2004: 33-5; Vanhaute 2012). Three decades of economic liberalization and institutional restructuring – and an intensified involvement in markets - for commodities, credit, technology, land, and services of all kinds – have created growing and interconnected vulnerabilities and new risks. New forms of more politicized representations of smallholders and organized peasant reactions such as Via Campesina try to formulate an answer to the dominant framing of agricultural modernization and the neoliberal mode of food production (Desmarais, 2007) (see McMichael, Chapter 4, this volume). Food sovereignty, control over one's own food production and food markets, is put forward as an alternative for food security; a concept agnostic about food production systems. A call for localizing food power implies support for domestic food production and promotion of the return to smallholder farming (Holt-Giménez 2008 13–4).

Then, now and next: from famines to food crisis

By historical standards, the famines of the past few decades have been small crises. Regional crop failures remain a threat, but a combination of public action and food aid is able to mitigate immediate mortality. Although non-crisis death rates in hunger stricken regions like sub-Saharan Africa remain high, excess mortality due to famine tends to be low unless linked to war. The fact that contemporary famines have become less frequent and less severe is a success story of world historical proportions. However, it is only a partial success story. Famine has not been eradicated yet, and remains an imminent threat in parts of Africa. Moreover, food security is threatened by new forms of vulnerability. The globalization of the problem of hunger and a proliferation of the largest famines ever between 1870 and 1960 is closely related to the emergence of a global food system from the second half of the 19th century (Davis 2001; Ross 2003; McMichael 2009). This food system intensified after 1950 with the internationalization of inputs to the food system and of food itself, with the rise of agribusiness, and with the seductive call for open markets and agricultural specialization as engines of development from the 1980s. The liberalization of food markets and the expansion of this 'corporate food regime' over the last three decades have thoroughly affected the nature of food chains and the peasantry's position herein. The policy of deregulating and opening up markets served the goal of fighting hunger by multiplying supplies and lowering prices. The stretching (and commodification) of food chains, the delinking of production from consumption and the concentration of control and decision making have generated an unprecedented flow of cheap foodstuffs while aggravating vulnerabilities within the food regime (Akram-Lodhi and Kay 2010; Exenberger and Pondorfer 2013). It has become clear that unstable markets and price volatility affect the food security of millions of families, both in cities and the countryside. The remaining world peasantries are not protected in the integrated global market and have to rely on ever more insecure income resources. These changes affect the entitlement position (of food, income, access to land and credit, etc.) of an unprecedented number of people.

Even though the average per capita food supply rose by one fifth between 1960 and 2000, the number of undernourished people doubled. This means that the ratio has been stabilizing at around 12-15% of the world population for some decades now.¹ On top of this, rapidly rising prices of agricultural commodities triggered in 2007-2008 a new 21st century food crisis (raising the number of undernourished people but not causing new famines). At the start of the new millennium, food was cheaper than at any time in modern world history (Moore 2015). After 2002 world food prices ticked upwards, slowly at first, then accelerating. Prices peaked in 2008, and again in the early months of 2011. According to the Food and Agricultural Organization of the United Nations, in 2014 average real food prices are 50% higher than before 2007-2008. According to many observers, the new global food crisis symbolizes the end of 'cheap food' and the persistence of higher and more fluctuating retail prices of agricultural foodstuffs, turning into a structural and even systemic crisis (Johnston et al 2010: 69-71; Moore 2015). This challenges one of the basic pillars of the European development project, which is based on a combination of open labor markets, generalized national protection systems and general access to cheap food. While the prospect of access to a fair (family) wage income and to guaranteed social protection dissolved in the 'lost decades' of the 1980s and 1990s (when the funding of agricultural research fell dramatically), the structural break in the food price index in recent years demystifies the promise of an end to hunger via unrestricted global food markets.

This recent food price crisis reveals the vulnerability of global food chains in the early 21st century. Rising prices are not the result of disturbances in local supply and demand; they are triggered by global market fluctuations and price settings. According to international organizations, the first 21st century food crisis is man-made. Short-run overshooting (bad harvests, low food stocks, export bans, speculation) interferes with long-run negative shifts (population growth, declining stocks, rising demand for animal feed, biofuel policies). This combination is intensified because agriculture has been neglected in development theory and policies over the last 30 years (the 'lost decades'), because productivity gains are declining, and because the impact of climate change is rising. Whatever the causes, it becomes clear that the 'green revolutions' of the 1970s and 1980s have run out of steam (see Halberg, Chapter 11, this volume). The question as to whether new technological fixes can revitalize agricultural productivity gains remains unanswered.

Conclusion

Famine, hunger and food crises are related societal phenomena, but most of the time they have been analyzed and interpreted from different viewpoints or realities. Temporal impacts and spatial scales differ enormously between short-term famines, middle-term food crises and long-term hunger and food insecurity. New famine and food studies have the potential to incorporate these different scales of analysis (local and global, event, process and structure). The first global food crisis of the 21st century is a powerful incentive to bring this knowledge and these insights together. It teaches us that sustainable food security in a globalizing world cannot be obtained by a further expansion or intensification of the 20th century global food market. The extent of a lingering global food crisis calls for answers on a global level. However, these global answers are rooted in local knowledge. The

appropriate site for reshaping global food relations in more sustainable ways lies outside the global scale of nowadays food regimes. It is sited at the local, regional, communal and ecologically-embedded level of food relationships (Friedmann 1993).

The fight against world hunger in the 20th century has shifted the notion of protection or food security from the preservation of peasant-bound production systems to general access to cheap market goods. This change came at a high price; it primarily affects the remaining peasant populations and the global natural commons. The 21st century food crisis reveals that the policies of high production growth rates and low world prices are a dead end solution. It amplifies the call for new, more powerful institutional arrangements that strengthen the accountability of public authorities and reinforce rural communities and national regulations in order to facilitate and empower the interests of small farmers and agricultural laborers. What is needed is not less but more protection of rural producers, local agricultural production systems and sustainable ecological development. This observation fundamentally questions the traditional conceptualizations of development, food production, famine prevention and social protection.

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Figure 3.1.
Collective risk management strategies in crisis situations

Household based	Group based
Strategies for coping with shocks	
Reducing food consumption	Relief systems, transfers from networks of mutual support
Intensification of labor input	Common property resource management
Temporary and definitive migration	Collective actions
Loans	
Sales of land/assets	
Insurance mechanisms/strategies for mitigating risk	
Family and demographic strategies	Social and reciprocal networks
Crop and plot diversification	Protection and insurance mechanisms
Income diversification	Credit associations and relations
	Securing rights of property, tenancy and access

Source: Adapted from Skoufias, 2003: 1090, and Vanhaute & Lambrecht, 2011: 158.

Figure 3.2.
Public actor interventions in crisis situations

Type of intervention and beneficiaries	Possible advantages	Possible disadvantages
Short term		
Immediate relief transfers (food aid, cash transfers, allowances)	Meet critical household needs, can be implemented quickly	Can distort labor markets, can thwart existing assistance networks
Commodity price subsidies, market regulation (food, housing, energy)	Meet critical household needs, can be implemented quickly	Can distort commodity markets and price setting
Medium term		
Public investments/public works	Can be quickly implemented, and reduced after crisis Investment in land/ infrastructure	Can distort labor markets, administrative overview
Employer subsidies	Can be quickly implemented, securing/ rising employment	Can distort labor markets and employer incentives
Long term		
Strengthening credit networks (supporting credit systems), small credit funds	Can sustain and promote human and physical capital, can strengthen community networks	Difficult to implement in crisis situations, administrative costs
Targeting human development (schooling, health care)	Supports long-term human and physical capital	Dependent on existing infrastructure, high investment and monitoring costs

Source: Adapted from Skoufias, 2003: 1094–6, and Vanhaute & Lambrecht, 2011: 159.

ⁱ Estimates of ‘undernourished population’ from FAO Statistics: 300 to 500 million in the 1960s (10–15% of the world population), 535 million in 1972–1974 (14%), 580 million in 1979–1981 (13%), 840 in 1990 (16%), 820 in 2000 (13%), about one billion in 2009 (15%), and 805 in 2014 (11%). Earlier estimates are from David Grigg (1985), and from Lucile F. Newman (1990 395–6). Due to the numerous revisions in the FAO definitions of undernourishment and malnourishment, the figures keep fluctuating and lose reliability (e.g. the adaptation of the 1980 numbers from 580 to 900 million, and of the 1992 numbers from 786 million to 1015 million in the latest FAO reports; see *The State of Food Insecurity in the World 2014*, FAO World Food Program, and M. Caparros, *Counting the Hungry*, New York Times, September 28, 2014).