Editor’s Note: As stated so eloquently by the author of this background paper, famine is surely a special concern for the nutrition community; yet the pathogenesis, prevention, and treatment are rarely discussed in our journals. This paper will introduce the issues and form the basis for periodic reports to Nutrition Reviews’ readers on this topic.

Famine: A Perspective for the Nutrition Community*

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Famine is a nasty turn of events that intrudes on the world’s consciousness from time to time. Pictures of starving people and acutely malnourished children, rampant disease, a rising death toll, and massive suffering in some far-off land move many among us to contribute to famine relief, shocked by the paradox of famine in a world “awash in grain.” Those who think about it appreciate that famine is related to poverty, that it is often triggered by climatic instability, and that it is both an instrument and tragic by-product of political conflict. But few know very much about famine beyond such fleeting insights. Even fewer are aware that the collective response to famine is woefully deficient. Just as we in the nutrition community had to fight long and hard to get malnutrition onto the development agenda as an explicit concern of public policy, so we and others like us are going to have to labor hard again to do the same for famine. This paper is an attempt to crystallize the issues involved.

Introduction

Famine is “the regional failure of food production or distribution systems leading to sharply increased mortality due to starvation and associated disease.”1 It is the culmination of a lengthy process in which people in increasing numbers lose their access to food. Indeed, famine features a deepening recession in the entire rural economy, one affecting production and exchange, employment, and income of farm and nonfarm households alike.2–6 The descent into famine also features the disintegration of social institutions, supports, and reciprocities. Ironically, a famine occurs not only because a chain of events disposes to a famine outcome but also because nothing, or at least nothing effective, is done to break the process.

Famine in Relation to Malnutrition

Famine can be seen as the dramatic end point of a continuum featuring different degrees of malnutrition, morbidity, and early childhood mortality. Alternatively, it can be seen as a unique phenomenon with a dynamic of its own and with consequences that are exceptional. The former perspective emphasizes the common origins of malnutrition and famine in the high vulnerability and low capacity of underdevelopment. It has the merit of encouraging famine to be interpreted in its developmental context, as malnutrition now is, the endemic conditions disposing to malnutrition-morbidity-mortality disposing in the extreme to famine as well. Even the vulner-
able groups are much the same, granted that famine takes a broader toll across different age cohorts.

On the other hand, most analysts of famine prefer to emphasize its distinctiveness. In this view, famine is more than malnutrition writ large. The surge in mortality associated with famine is more epidemic than endemic.\(^1\) The circumstances of famine are more exceptional than usual, even in places where famine is recurrent. Whereas malnutrition in many societies is common even in normal times, the intake and health of some people being simply insufficient to maintain nutritional adequacy, in famine the intake and health of many collapse entirely.

A society experiencing famine is in disequilibrium, a state of breakdown. Crop production is abnormally low; employment opportunities shrink among the rural labor force; trade is curtailed; food prices rise as incomes decline relatively and for some, absolutely; the exchange rate between animal products and grain deteriorates markedly, the same being true of fish and other higher-status, if less efficient, sources of calories; and consumption is curtailed as people lose access to food. As famine unfolds, antisocial behavior—hoarding, crime, etc.—increases, social arrangements erode, people sell or abandon their assets, and outmigration accelerates. In the midst of all this malnutrition rates soar, infectious diseases spread, and people die in unusual numbers.

The advantage of separating famine from malnutrition should be apparent. Malnutrition coexists tragically with steady-state conditions that are normal, familiar, and not easily subject to change. Famine is change in the wrong direction. It is, moreover, a jolt that overwhelms social institutions even as it victimizes individuals. If malnutrition is a constraint on development, as nutrition advocates have claimed, famine is the bottoming out of development. If the principal effect of malnutrition is functional impairment followed by mortality, the principal effect of famine is mortality followed by acute dependency on the part of survivors. Ironically, the deaths associated with famine may be fewer than the deaths associated with malnutrition, but they are more concentrated in space and time. Unlike malnutrition, famine wreaks social and economic havoc. Also unlike malnutrition, famine disposes to political instability. Following the Great West African Famine of 1968–1974, for example, every national government in the Sahel except Senegal’s fell in successful coup attempts, as did the regime of Emperor Haile Selasse in Ethiopia.

**Famine in Relation to Development**

The problem with treating famine as aberration and breakdown is that this perspective drives a conceptual wedge between famine and development. To be sure, famine undermines and erodes development, just as development is clearly the best and perhaps only long-term solution to famine—the economic immunization, as it were. In the short run, however, the exceptionality of famine tends to divorce it from development. In normal times governments and international agencies pursue development. When famine strikes, they are forced to switch gears and provide relief. The switch may be necessary, but it is also usually unwelcome. Institutional mandates are altered, agendas disrupted, resources diverted, and personnel redirected. Development is put on hold. The relief offered assumes the aura and often the frenzy of crisis liquidation. When the worst is past and as many lives as possible have been saved, governments and donors alike return to what they really care about, development. The aberration of famine elicits, at best, an exceptional response. Not only is famine relief not part of development, it is at the cost of development. The irony becomes a dilemma. A keener understanding of famine, highlighting its distinctiveness vis-à-vis chronic malnutrition, disposes to removing it as a concern in development and to a very limited response in the form of relief. Appreciating this distinctiveness has the unhappy corollary of encouraging famine to be viewed, in

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policy terms, as something unto itself and, by extension, as something other than development. Development is a positive; famine is a negative. Development is ongoing; famine is episodic. Development exalts professionalism; careers are built in its name. Famine exalts humanitarian mercy; here today, hopefully unnecessary tomorrow. With relief provided and lives saved, one can—even should—fold one's tent and go home. By contrast, one is in development for the long haul.

So powerful are these distinctions that organizations divide in their orientation, some emphasizing relief (e.g., the Red Cross, the U.N. Disaster Relief Organization, and the U.N. High Commissioner for Refugees), and many more emphasizing development. An increasing number of organizations engages in both activities (the U.S. Agency for International Development, UNICEF, Oxfam, SAVE, Catholic Relief Services, to identify just a few), but with a clear preference for development. Indeed, it is not uncommon within the same organization for relief and development to be separate responsibilities performed by different units with their own staffs and budgets, thereby institutionalizing the distinction itself. The bottom line is that development is the more rewarded focus. One turns to relief and relief workers when disaster strikes.

None of this is unreasonable, but it is counterproductive in the case of famine. One problem with the relief response to famine is that famine, a slow-onset disaster, is lumped together indiscriminately with such quick-onset disasters as earthquakes, floods, and typhoons. Because the latter happen suddenly, one has little option but to respond after the fact. Because they tend to be natural events of unusual force, there is not much one can do to prevent or mitigate them in advance; picking up the pieces (i.e., relief) is about the only option. By contrast, famine's slow gestation offers the opportunity to intervene before relief becomes necessary. However, for this opportunity to be realized, one must detect famine before it emerges in full bloom, and one must be prepared to respond quickly and effectively so as to prevent its emergence.

India's Historic Famines vs. African Famines Today

The difficulty of linking detection and response is best conveyed by contrasting India's past experience with famine management and the situation in much of famine-prone Africa at the present time. India developed its celebrated Famine Codes as early as 1880 and has used them and their descendants to considerable advantage ever since. In Africa only Botswana has something similar, although Kenya, Zimbabwe, and Cape Verde are making good progress.

In India detection and response were the responsibility of the same individuals, who typically were district-level officials. For Africa, detection and response are the responsibility of different individuals, the most authoritative of whom are usually located far from the scene of stress. The leading detectors today are the Global Information and Early Warning Unit in FAO, Rome; contractors for USAID's FEWS (Famine Early Warning System) project; some units of national governments such as the Relief and Rehabilitation Commission in Ethiopia (recently replicated in the Sudan); and various PVOs-NGOs (private voluntary organizations—nongovernmental organizations) with a presence in famine-prone areas. Unfortunately, the power to act definitively diminishes with closeness to the problem.

In India the basis for both detection and response was the exercise of human judgment informed by on-the-ground observation and contextual understanding. While monitoring market prices (especially for grain and livestock), the crime rate, migration, and deaths, "intelligent apprehension" was clearly preferred to "too mechanical obedience to rule." Famine detection for Africa relies heavily on satellite surveillance combined with computer processing of quantitative data from the field. Detection is grounded in the analysis
of vast amounts of data derived from multiple sources, all of which must somehow fall into place and provide a clear, coherent picture of what is happening. It seldom does. Moreover, those who detect must persuade those with the authority to sound the alarm, while those who sound the alarm must persuade those empowered to authorize a response. The key detectors, alarm-sounders, and response decision-makers are located in national capitals at best, more typically in donor agencies and governments outside the country.

The divorce of detection and response in Africa today, along with the removal of both from the afflicted area, leaves response at the mercy of political considerations that go far beyond famine itself. In effect, famine response gets embroiled in and subsumed under broader diplomatic and strategic relationships informing the international system. In colonial India, by contrast, preventing famine deaths became a stated objective of government policy, with a clear mandate given to district and presidency officials to intervene as necessary, no questions asked. The authorities were expected to declare famine so as to prevent famine from occurring. In independent India, notwithstanding some retreat from rhetorical commitment, the existence of an open, competitive political process, representation of rural areas and interests, unfettered parliamentary debate and disclosure, and a free press serving as watch-dog and instrument of accountability have perpetuated the incentives to detect, acknowledge, and respond earlier rather than later, with the government’s reputation at stake based on how well it performs.

In India it became the responsibility of local government to prepare for incipient famine by designing interventions (notably public works to shore up employment and earnings, food relief, and loans to farmers) and to stockpile the material necessary to activate them in advance. India’s several Famine Codes varied over space and time but typically featured four types of intervention: 1) provision of employment on public works schemes, with compensation calibrated to food needs based on age, sex, pregnancy, and lactation; 2) a village dole for those unable to work or without support, with village headmen held responsible for any deaths among them; 3) takavi, or loans to agriculturists to stay in production, provide employment, protect livestock, and improve production potential through leveling, bunding, well digging, etc.; and 4) more takavi for purchase of seed and cattle so that farmers could recover from protracted drought and rebuild working capital. Over time, takavi became the preferred approach because of its effectiveness and low administrative costs. In effect, the Famine Codes sought to protect market demand for food by sustaining purchasing power and to preserve, restore, and enhance productive assets. Since independence, the arsenal has been expanded to include food subsidies through Fair Price Shops, child-feeding programs, health interventions, and, more recently, guaranteed employment schemes. The remarkable thing is that such a comprehensive strategy could be undertaken on such a large scale so often and with such telling results in such a poor country.

Little such preparedness planning exists in Africa today. Famine-prone African countries are painfully dependent on international sources of supply for food, medicine, transport, and intervention management. These usually arrive on the scene after famine has already peaked.

In India the response to famine was early and preventive in character, with relief provided only to the truly destitute and dependent. In Africa the emphasis is on relief (understandably, given the lateness of the response). By the same token, development in India became quite explicitly oriented to the prevention of famine, as illustrated in construction of the South Maratha Railroad a century ago. In Africa development policy is only tangentially related to famine, notwithstanding a growing interest in “food security.” Attention to vulnerability to famine—who, where, when, why—by
African governments is nascent, as is the intent to build capacities to intervene so as to prevent famine. International assistance to famine-prone African countries has been too niggardly (and off the mark) to be of much help.18-20

In India rehabilitation was built into famine intervention. In Africa rehabilitation is contingent on favorable circumstances (such as people being able—and willing—to return to their homes), institutional mandates, and the necessary resources. Rehabilitation often does not happen.

India's overall record in dealing with famine is exceptional. Africa's record and that of the international community tend to be poor except in the provision of relief.6 The reasons are not difficult to fathom and go beyond India's impressive development of infrastructure and operational capacity. In India the problem and solution have been closely linked, with both being local. India has been prepared to intervene against famine early and fast. The decision to intervene was and, to a lesser extent, still is made by responsible officials on the scene, while the criterion for decision remains human judgment, not vast amounts of quantitative and scientifically derived evidence based on high-tech methodologies, which, in practice, tend to be treated as substitutes for judgment as much as aids to decision.

These observations are summarized in Table 1. Ironically perhaps, the burden of the historical record is that effectiveness is inversely related to technological sophistication. India historically has made the best of poorly developed technologies, vast and varied areas of responsibility, and the need for considerable devolution of discretionary latitude onto local officials. Africa's dilemma is that it confronts the persistent specter of famine at a time when everything—detection, decision making, response—has been internationalized, to say nothing of computerized and politicized. As a solution of the last resort, this is a major asset. As a solution of the first resort, it is a major liability.

Preparedness and Preparation

If the situation just outlined is to improve, both responsibility and capacity to cope with famine must be returned (or created) within African countries. Other changes will be necessary as well. All too often, as things now stand, climatic stress triggers a food crisis that threatens famine conditions before the alarm is sounded and remedial action can be taken. Governments have been known not to respond rapidly because the signals are ambiguous, their capacity to act is severely limited, the stigma associated with acknowledging famine conditions is unwelcome, even risky, and because they are preoccupied with other matters (notably conflict and survival). Similarly, the capacity of international actors to respond early is inhibited by the norm of intervening in countries only on request; by political considerations and the cumbersome politics of their own decision-making processes; by weaknesses in management and logistics; and in the case of many PVOs, by their physical isolation on the ground and limited influence on those at higher levels whose authorization is essential to preventive action.11,12,21-23

The results are disastrous. When the alarm is weak and the response late, people die in tragic numbers, development is derailed, and with their assets compromised or lost the vulnerability of survivors to future shock worsens. Ironically, while even the poorest Asian countries have learned how to prevent, and when necessary to manage, famine, most African countries have not. Helping them to do so is a major challenge of our time.

Strengthening early warning is one approach to improving the situation. Clearly, it is better to have than not to have an alarm that, when sounded, is accurate, loud, unambiguous, and as free as possible from the delays and distortions caused by interpretations at different units and levels of government.24,25 Moreover, as a means of overcoming political inhibitions to taking action when famine signals appear, improved early warning may well be an es-
TABLE 1
Famine Detection and Response in India and Africa

<table>
<thead>
<tr>
<th>Detection</th>
<th>India Historically</th>
<th>Africa Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Mode</td>
<td>Ground observation</td>
<td>Satellite imagery complemented by ground observation</td>
</tr>
<tr>
<td>b. Who's responsible</td>
<td>Local officials</td>
<td>International agencies; in some cases national governments, in others NGOs on the scene</td>
</tr>
<tr>
<td>c. Technology</td>
<td>Human judgment</td>
<td>Computer analysis of GIS and other quantitative data</td>
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<table>
<thead>
<tr>
<th>Response</th>
<th>India Historically</th>
<th>Africa Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Preparedness to intervene</td>
<td>Yes, both strategically and materially</td>
<td>Very limited in advance; reliance on ad hoc marshaling of resources once crisis is clear</td>
</tr>
<tr>
<td>b. Who's responsible for response decision</td>
<td>Local officials initially; state and national officials subsequently</td>
<td>National governments and international agencies in either order</td>
</tr>
<tr>
<td>c. Response in relation to detection</td>
<td>Very rapid, often immediate</td>
<td>Slow; time lag for international shipment, amassing resources, and establishing organizational capacity on the ground</td>
</tr>
<tr>
<td>d. Resources to apply</td>
<td>Local initially, national and international subsequently as necessary</td>
<td>Mostly international, some national, almost none local</td>
</tr>
<tr>
<td>e. Type of response</td>
<td>Prevention primarily, relief as necessary, rehabilitation built into both</td>
<td>Relief primarily, rehabilitation as possible</td>
</tr>
<tr>
<td>f. Effectiveness in preventing/mitigating famine</td>
<td>Very effective typically</td>
<td>Not effective at all; assistance after the fact</td>
</tr>
<tr>
<td>g. Effectiveness in curbing famine deaths, restoring health</td>
<td>Modest to considerable</td>
<td>Considerable to exceptional</td>
</tr>
<tr>
<td>h. Effectiveness in rehabilitating famine victims</td>
<td>Considerable, part of intervention strategy</td>
<td>Varied, often left to chance or a function of circumstances</td>
</tr>
<tr>
<td>i. Perceived relation of famine response to development</td>
<td>Close relationship in terms of both prevention and restoration</td>
<td>Tangential relationship, relief seen as a discrete agenda</td>
</tr>
<tr>
<td>j. Actual relation of famine response to development</td>
<td>Close: development protected and promoted</td>
<td>Marginal; development returned to after relief completed</td>
</tr>
</tbody>
</table>

Essential first step to preventing climatic disturbances, crop shortfalls, and rising grain prices from resulting in famine.

By itself, however, early warning is not enough. For detection to trigger timely and effective action, there must be a capacity to act in the form of preparedness plans and stockpiling of material resources required to activate them. Building and/or strengthening national and regional capacities to detect famine dynamics early in the process and then to act quickly in a manner appropriate to the situation, based on response options that have been well thought out in advance, is essential to arresting the dynamic before it gets out of control. Early warning that is not well integrated with decision-making and response
mechanisms, especially within famine-prone countries, is unlikely to achieve its objectives.

Four considerations are relevant here. First, reliance on international assistance for coping with famine is time-consuming and costly. Such assistance has an important supportive role to play; but the more prominent it is in the overall effort, the less likely it will be employed as an instrument of prevention. Witness the differences between Bihar and Botswana, both of which featured considerable international assistance used preventively as part of a broader indigenous effort, as against Ethiopia and the Sudan, where international relief has necessarily played a predominant role. Moreover, the tragedy of famine is compounded when the international community must itself marshal its resources, create the management, develop the logistics, and establish its own operational capacities in faraway places virtually from scratch.

Second, in famine prevention, as in other areas of development, it is helpful not to overstate the importance of new technologies and methodologies. As with international assistance, they help but seldom solve. India’s Famine Codes worked in the absence of both. They worked because an effective decision-making system was developed and because preplanning anticipated crisis needs and made possible a focused response, with the wherewithal already on hand for immediate use. The need is to build similar decision-making and response capabilities in African countries.

Third, whereas considerable effort is going into monitoring, surveillance, and early warning systems, very little is being done on preparedness. Governments and international donors continue to ricochet from development as a long-term solution to famine relief as a form of crisis liquidation in the present. The medium term is not being addressed adequately, nor is how to build famine preparedness into development in such a way that the two become allies instead of competitors, enabling preparedness to enhance prevention while at the same time serving as an important insurance policy against development’s bottoming out in the face of recurring famine. For much of Africa especially, as noted by a distinguished nutritionist, Jean Mayer, more than a decade ago, it simply makes no sense to treat famine as an “unexpected crisis, as something to react to when it occurs rather than as a likelihood to be planned for in advance.” Famine preparedness is essential to alleviating human suffering, minimizing excess deaths, and protecting investments in rural development.

Finally, for decision makers to respond in an appropriate and timely fashion, they must have confidence in those whose assessments invite a decision to intervene. Even more important is the capacity to respond. This means a well-considered arsenal of options at the leadership’s disposal, the financial and material resources with which to act, and administrative mechanisms capable of doing the things that need to be done. Without preparedness plans, everything is ad hoc. Without material and the administrative capacity to move quickly, preparedness plans are just good ideas on paper.

In sum, early warning is only the beginning. The major agenda that necessarily follows is to build the human and institutional capacity to plan for famine and, when the alarm sounds, to implement a well-conceived response for which the appropriate preparations have already been made. The key to famine prevention and management is a response that is both timely and effective. Easy as this may be to assert, it takes a lot of hard work to realize. Strengthening mechanisms to facilitate timely decision-making and developing national preparedness plans are the critical next steps if detection is to result in action. If these things do not happen, the countries in question and the international donor community will benefit little from improved early warning.
The Role of the Nutrition Community

I would like to conclude this paper on a somewhat provocative, introspective note. Because the recent International Congress of Nutrition included famine management on its agenda, the question appropriate to raise now is: What can we as a professional community do to encourage and facilitate the prevention of famine? My answer may surprise.

The role of nutrition in famine is well known, if only because starvation is the ultimate nutritional insult. In addition, nutrition clearly plays a major role in famine relief and in the monitoring of populations at risk, including refugees. On the other hand, if the role of nutrition in famine management is important, it is also counterintuitive. Ironically, the importance of nutrition as a factor in famine detection and response is inversely related to quality of performance. That is, the later the response to famine conditions, the more useful signs of nutritional stress become in detection and the more prominent nutritional considerations become in relief. Conversely, when early warning triggers early response, indicators of stress antecedent to nutritional decline will be more prominent and the response itself will feature interventions intended to protect food supplies, contain food prices, maintain market access, and ensure market functioning rather than to manipulate nutrition per se.

This is not to say that the nutrition community has only a marginal role to play. On the contrary, protecting nutritional status is a major objective of famine management, even preventively, as the cases of India and Botswana reveal so clearly. Nutritional criteria are central to food distribution, rationing, and even compensation in work schemes. Moreover, it is nutrition monitoring, particularly of children, that provides the penultimate evidence as to whether populations are succumbing to famine or holding their own in adversity. Short of nuclear war, famine is the ultimate scourge of human populations. Short of physical torture, it is the cruelest way to die. Famine is an unnecessary tragedy that simply should not be permitted to happen in an interconnected world of plenty. If the worthy motto of the International Congress of Nutrition ("New Era! Global Harmony Through Nutrition") is to have any meaning at all, surely it lies—first and foremost—in putting an end to famine once and for all.

We are among the few professional communities well positioned to assert leadership. The task will not be easy, but it is absolutely essential that we undertake it.

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