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"BEYOND RELIEF: A DEVELOPMENTAL PERSPECTIVE ON FAMINE"

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## AUTHOR'S NOTE

Famine is a nasty turn of events that intrudes on our consciousness from time to time. We are shocked at pictures of starving people and reports of large numbers of acutely malnourished children, rampant disease, a rising death toll, and massive suffering in some far-off, unbenighted land. Many among us are moved to contribute to famine relief, reminded uncomfortably that famine still exists in a world "awash in grain" (Insel, 1985). 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 among us know very much about famine beyond such fleeting insights. Even fewer are aware that our collective response to famine is woefully deficient.

I have been studying famine over the last few years. I came to this topic from an ongoing interest in malnutrition as an issue in international development. Famine may be the tip of the proverbial iceberg which is chronic undernutrition, but I have learned that it is much more as well. I also sense that, 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

"Sometimes from sheer rebellion we ate grass, although it always resulted in stomach cramps and violent retching. For hunger is a curious thing: at first it is with you all the time, waking and sleeping and in your dreams, and your belly cries out insistently, and there is a gnawing and a pain as if your very vitals were being devoured, and you must stop it at any cost, and you buy a moment's respite even while you know and fear the sequel. Then the pain is no longer sharp but dull, and this too is with you always, so that you think of food many times a day and each time a terrible sickness assails you, and because you know this you try to avoid the thought, but you cannot, it is with you. Then that too is gone, all pain, all desire, only a great emptiness is left, like the sky, like a well in drought, and it is now that the strength drains from your limbs, and you try to rise and find you cannot, or to swallow water and your throat is powerless, and both the swallow and the effort of retaining the liquid tax you to uttermost."

-- Kamala Markandaya, Nectar in a Sieve  
(a novel about rural India), 1954, p. 91.

"On a battlefield men die quickly, they fight back, they are sustained by fellowship and a sense of duty. Here I saw people dying in solitude by slow degrees, dying hideously, without the excuse of sacrifice for a cause. They had been trapped and left to starve, each in his home, by a political decision made in a far-off capital around conference and banquet tables. There was not even the consolation of inevitability to relieve the horror.

The most terrifying sights were the little children with skeleton limbs dangling from balloon-like abdomens. Starvation had wiped every trace of youth from their faces, turning them into tortured gargoyles.... Everywhere we found men and women lying prone, their faces and bellies bloated, their eyes utterly expressionless."

-- A Party activist in the Ukraine,  
1932-33, quoted in *Conquest*,  
1986, p. 245.

## "BEYOND RELIEF: A DEVELOPMENTAL PERSPECTIVE ON FAMINE"

### UNDERSTANDING FAMINE

"Famine is like insanity, hard to define, but glaring enough when recognized" (Taylor, quoted in Devereux and Hay, 1986, p.4). This apt analogy speaks to a characteristic of famine which has bedeviled governments and international agencies. Not only is famine hard to define, its emergence is hard to detect and harder to forecast. Yet when in full bloom, famine is dramatically clear even to the naked eye. The camera records the obvious, galvanizing sympathy and support for the afflicted; but the camera cannot record what does not yet exist.

How to recognize famine before it is obvious is the dilemma around which this paper is constructed. The dilemma typically leaves those who would respond to famine responding after the fact rather than preemptively. Even though the international community has learned how to provide famine relief quite well, only a few members of the international community have learned how to prepare for famine and to intervene early enough so as to prevent its emergence.

This paper proceeds on the assumption that a more timely and effective response to famine requires conceptual understanding of what famine is and of how it intersects with such related concerns as chronic undernutrition and socio-economic development. Even more important is an appreciation of famine dynamics and of the need to link early warning with preparedness and response measures.

#### 1a. The Nature of the Beast

Famine may be seen as "the regional failure of food production or

distribution systems, leading to sharply increased mortality due to starvation and associated disease" (Cox, 1981, p.5). While other definitions exist as well,<sup>1</sup> this one usefully emphasizes regional, not family failure; points to the importance of markets and, by implication, of shifting market demand for different foods in addition to their aggregate supply; identifies "excess deaths" -- deaths that otherwise would not have occurred -- as the core feature of famine; and attributes those deaths to morbidity as well as to seriously reduced consumption. Indeed, most famine-induced mortality tends to occur after the worst of the food crisis is over but while the crisis of infectious disease persists (Bongaarts and Cain, 1982; see also Greenough, 1976 and 1982).

What this definition does not adequately convey is that famine is the endpoint of a lengthy process in which people in increasing numbers lose their access to food. Most famines have long gestation periods, typically covering two or more crop seasons. The descent into famine is slow and often shrouded in ambiguity, a point to which I shall return because it complicates early detection.

Moreover, famine entails more than a severe shortage of food and grotesque distortions of normal food prices. Famine features a deepening recession in the entire rural economy, one affecting production and exchange, employment, and income of farm and non-farm households alike (Sen, 1981; Greenough, 1982; Ravallion, 1987; Dreze, 1988). Landless laborers, artisans, and traders are among those most vulnerable to famine

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<sup>1</sup> See Devereux and Hay, 1986, for an extensive discussion of the various ways in which famine has been defined.

because of shrinking demand for their labor, goods, and services. Pastoralists and fishermen are also vulnerable because they rely on the exchange of meat and marine products to obtain the cheaper grain calories they require and because, in the dynamic leading to famine, the terms of trade turns sharply against what they sell relative to the grain they seek to buy. In the Bengal famine of 1943-44, for example, the price of cloth, fish, milk, haircuts, and bamboo umbrellas deteriorated 70-80% vs. grain (Mellor & Gavian, 1987). In Ethiopia animal calories normally cost roughly twice as much as grain calories, with herdsman meeting half of their caloric requirements through consumption of grain; during the famine of 1972-74 the calorie exchange rate declined as much as 84-92% against animal products in some areas (Sen, 1981 drawing on calculations by Seaman, Holt, and Rivers, 1978 and Rivers, Holt, Seaman, and Bowden, 1976). In Swaziland, cattle lost six-to-eight times their value relative to maize in the little-known famine of 1932, placing herders in acute distress (Packard, 1984). As a rule of thumb, when grain supplies and animal stocks both decline, the exchange rate worsens for animals. This double jeopardy underlies Sen's observation that the Ethiopian pastoralist, "hit by drought, was decimated by the market mechanism" (Sen, 1981, p.112; see also Wolde Mariam, 1984). By contrast, large producers of grain and grain merchants can usually ride out a famine far more successfully than others in the afflicted environment.

Similarly, the definition of famine offered above fails to capture the extent of social disintegration that usually accompanies the downward slide into famine conditions. Social reciprocities and supports crumble under

increasing stress. Hoarding and related pathologies (smuggling, black market profiteering, crime) become commonplace. The distress sale of assets (jewelry, animals, land) accelerates. Families divide in search of work or succor; wives may even be cast adrift and children sold (Greenough, 1982; Vaughan, 1987). Outmigration increases as ever more people abandon their lands, homes, and communities in desperation. Abnormally high mortality may be the hallmark of famine, but societal breakdown is its essence.<sup>2</sup>

Finally, so far as these initial observations are concerned, it is important to note that 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. It has been rare for the governments of famine-prone countries to possess the means with which to intervene so as to prevent famine. India over the last century and Botswana more recently are exceptions in this regard (McAlpin, 1983; Dreze, 1988; Holm and Morgan, 1985; Hay, 1988; Moremi, 1988; Morgan, 1988). Elsewhere the record is and has been quite dismal, while international assistance typically arrives after the worst has already happened. The usual way in which famine-prone areas become less famine prone is via economic development. In the long run, that remains the best solution even today (see Ticher, 1987). However, we now know that intervention is

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<sup>2</sup> Cox, 1981, calls starvation, social disruption, and disease the "triad of famine." All may be -- and usually are -- exceptional in scope; but of the three, only social disruption is distinctive.

possible and that it can work. Preparing for famine so as to prevent it, although not a new idea, is one that we should be thinking about and working to realize. The reasons are humanitarian, social, and economic.<sup>3</sup> We can both protect development and promote it by preparedness planning to "deny famine a future" (Glantz, 1987).

The pages that follow seek to capture the essence of famine as revealed in a vibrant literature on the topic. Themes to be addressed include lessons distilled from famine's long history, why famine is both similar to yet different from chronic undernutrition, and reasons for thinking about famine as an issue in development rather than as something to turn to when development fails. These themes enhance an understanding of famine in terms of policy responses appropriate to it, and they set the stage for section 2, which is an attempt to encourage better management of famine episodes. This section considers the dynamics of famine and issues of detection and response. It then reviews India's considerable success with famine management in comparison with what is true for much of Africa today. Section 2 concludes with some general observations about preparedness and prevention and about the role of the nutrition community in both.

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<sup>3</sup> One might also add political reasons for preventing famine, which in modern times has become a major source of political instability. Following the Great West African Famine of 1968-74, for example, every national government in the Sahel excepting Senegal's fell in successful coup attempts, as did the regime of Emperor Haile Selassie in Ethiopia.

1b. The Lessons of History

Famine has a long history. Reference to famine appears in the Book of Genesis, when Joseph interpreted another man's dream as meaning seven years of food scarcity to follow seven years of plenty and persuaded Pharaoh to store grain (an early example of preparedness/prevention). Famine is believed to have contributed to the decline of the Roman Empire and to have visited the Mohenjo Daro and Harappa civilizations in ancient Asia (Carlson, 1982). The early kingdoms of Ghana, Mali, and Songhay in western Africa experienced localized famines (Franke and Chasin, 1980), while in Ethiopia there have been at least 30 major famines over the past five centuries, including the Great Famine of 1888-92, triggered by a rinderpest epidemic that decimated cattle herds and cost more than a million human lives, almost 20% of the country's population at the time (Pankhurst, 1966). India has had 127 famines since 298 B.C., 32 in the 19th Century alone (Greenough, 1976). China is said to have experienced one famine per year, on average, between 108 B.C. and 1911; in 1876-79 some 9-13 million people died in northern China in what might be the largest famine of the 19th Century (Carlson, 1982). The most celebrated famine of that period, the Irish Potato Famine of 1846-48, resulted in only one million deaths out of a total population of eight million, although another million emigrated, leaving Ireland with only three-quarters of its original population (Woodham-Smith, 1962). History's most severe famine occurred in Europe during the Great Bubonic Plague of 1345-48, which so disrupted the sowing and harvesting of crops that 43 million people died of disease and starvation, including two-thirds of the Italian population (Mellor and Gavian, 1987). (Little wonder that during the Middle Ages famine was

considered one of the four horsemen of the Apocalypse!) The 20th Century's greatest famine occurred not in India or Africa but in the People's Republic of China between 1959-62 during the Great Leap Forward, in which 30 million people perished (Ashton et al., 1984; see also Coale, 1981 and Aird, 1982).

Several points are worth making based on the historical record. First, famine knows no ideology and has no politics. Russia, for example, experienced 74 famines between 971 A.D. and the Revolution in 1917; the Soviet Union has since weathered three significant famines, in 1921-22 (5-9 million deaths), in 1932-33 (5-11 million deaths), and in 1946-47 (2-5 million deaths) (Dando, 1981).<sup>4</sup> A possible exception to the apolitical character of famine is that it would appear to be much less likely to occur in a stable, functioning democratic system, presumably because rural interests are well represented and because opposition parties and a free press sound alarms that invite government action to forestall its emergence (Sen, 1987; Mellor and Gavian, 1987; Dreze, 1988). A definite qualification is that famine is both associated with and accentuated by warfare (the Soviet Union after both world wars; Holland, Leningrad, and Bengal during World War II; Ethiopia and the Sudan today) and by politically inspired social engineering (the collectivization of Soviet agriculture; the rapid expansion of communal farms during the Great Leap in China; and the near miss resulting from dislocations induced by the Khmer

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<sup>4</sup> Renewed famine in the USSR is predicted by Soviet economist Vladimir Tikonov, a member of the recently elected National Congress, unless radical changes in the economy are achieved (New York Times, June 18, 1989, p.8). Most analysts, however, believe that the Soviet Union's easy access to world grain markets should be adequate to compensate for deficiencies in domestic food production.

Rouge in Cambodia).<sup>5</sup>

Second, famine is inversely related to development. It thrives on generally low-yield agriculture whose performance is contingent on highly variable rainfall; on segmented, locally confined markets requiring self-provisioning of carryover stocks of grain; on restricted opportunities for employment, including alternatives to usual employment when it collapses; and on incomes that are seldom above subsistence and assets that are either too few to protect people in times of stress or are not fungible for food. Vulnerability to famine is greatly reduced as economies expand, raising incomes and options for employment; as transportation and communications integrate markets and permit the flow of goods and services, especially food, over very much larger areas -- railroads, cargo ships, paved roads, trucks, mail service, the telegraph and telephone being important instruments for the prevention and alleviation of famine; as education expands, creating new capacities and career options; and as governments themselves develop, broadening the services they provide on a regular basis and enhancing their ability to intervene in times of crisis.<sup>6</sup>

Again, however, there are at least two qualifications to be made. One is that the commercialization of agriculture would appear to be associated, for a time at least, with increased vulnerability to famine as monocropping

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<sup>5</sup> Concerning the latter three references, see Conquest, 1986; Ashton et al., 1984; and Shawcross, 1984.

<sup>6</sup> The singular importance of transport in famine reduction has been noted by many analysts and is analyzed at length in Hurd, 1975 and McAlpin, 1983. Vulnerability to famine is addressed by most of the authors cited in this paper, but empirical assessment remains difficult.

replaces multi-crop and multi-plot modes of production and as food prices become more volatile, alienation of land accelerates, and social supports decline in the face of expanding market-based transactions (Alamgir, 1981; Leibenstein, 1982; Packard, 1984; Timberlake, 1985; Devereux and Hay, 1986). Second, not all development is equally beneficial. Development that widens disparities in society without strengthening the base does little to reduce vulnerability to famine. Export-oriented agriculture may actually increase vulnerability (Lofchie, 1975; Lappe and Collins, 1977; Franke and Chasin, 1980; but note Pinstруп-Andersen, 1983).

Third, with rare exception famine is a rural phenomenon. This is paradoxical, perhaps, inasmuch as it is the areas that grow food which are most likely to experience the starvation, disease, and death associated with famine. The reasons lie in rural poverty, the market draw of urban wealth, and -- more often than one might think -- the procurement policies of government (Bates, 1981; Greenough, 1982; Wolde Mariam, 1984 and 1987).

Fourth, also with rare exception, such as several noted above, famine takes as its toll only a small percentage of the total population, granted that it destitutes large numbers of others. The Bengal famine of 1943-44 killed roughly 3.5 million out of a rural population of 55 million (Greenough, 1982; nationalist opinion in India claims as much as 5 million). The famine that struck Bangladesh in 1974 resulted in at most 1.5 million deaths, or 2% of the population (Bongaarts & Cain, 1982). Mortality associated with the Ethiopian famine of 1972-74 was only 200,000 in a population of 27 million (Sen, 1981), while that in the Sahel during the Great West African Famine of 1968-74, "among the greatest tragedies of

the 20th Century" (Franke & Chasin, 1980, p.5), amounted to only about 100,000 (mostly pastoral nomads) out of 25 million population. Even China's massive famine of 1959-62, the one that produced 30 million excess deaths, amounted to less than 5% of China's total population of 647-654 million people at the time. The numbers may appear large, and they certainly are tragic; but proportionally they are surprisingly modest.

There is an interesting corollary to this point. The numbers who die in famine are typically such a small percentage of the total society that famine rarely plays the role defined for it by Thomas Malthus back in 1798, the role of "natural regulator" of overpopulation.<sup>7</sup> Famine is not nature's way of restoring the balance between population load and the carrying capacity of land. To illustrate, the Bengal famine of 1943-44 was no longer statistically discernible by the time of the censuses of 1961 in West Bengal and East Pakistan. Population was right back on trend line, even above it, as if the famine had not occurred. The reason is that the age groups most likely to perish in famine are the very young and the elderly. Adults in their reproductive years are the most likely to survive, and the many that do quickly make up their losses (Bongaarts & Cain, 1982). As Table 1 below demonstrates, the same thing happened in China in the aftermath of the Great Leap famine. The high mortality and reduced fertility of the famine triggered a boom in births immediately thereafter, to the point where 36.6% of the deficit was erased within three

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<sup>7</sup> A good critique of Malthus' theories about population appears in Devereux and Hay, 1986.

years and the previous trend line exceeded within 20 years, as in Bengal (Ashton et al., 1984). The famine deaths in Bangladesh in 1974, 1.5 million (2% of the population), were outstripped by a population growth rate of 3%, meaning that these excess deaths were compensated for in less than one year. To the extent that overpopulation is a serious problem, famine is not a solution.<sup>8</sup>

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TABLE 1 HERE

Fifth and finally, there would appear to be a historical trend reducing the frequency, severity, and geographical scope of famine.

Whereas famine once covered all geographical areas and touched most human populations at one time or another, today it is confined mostly to the semi-arid and conflict-riddled countries of Africa.<sup>9</sup> This is not to

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<sup>8</sup> For a slightly hysterical argument to the contrary, see Paddock and Paddock, 1967. The seriousness of population pressures on land as a factor enhancing vulnerability to famine is soberly assessed in Timberlake, 1985 and many other sources. A good distillation appears in Devereux and Hay, 1986.

<sup>9</sup> Cox, 1981, notes the existence historically of two famine belts, one stretching from Ireland across northern Europe to Siberia and China and the other extending from Africa across South and Southeast Asia. Famine seems to have been much less common in the Americas. Kates and his associates, 1988, have discerned a fairly steady decline in the numbers of people victimized by famine during the last four decades. Although comforting, their assessment is influenced by the unusually large famine in China in the early 1960s and by the shift in famine's locus from Asia to Africa. On the other hand, one veteran observer (Dando, 1988, p.19) believes that "Famines of the future will last for extended periods of time, cover broad geographical areas, including major metropolitan regions, encompass many nations and involve truly vast populations."

TABLE 1: THE EFFECTS OF THE GREAT LEAP FAMINE ON CHINA'S POPULATION SIZE ARE NO LONGER EVIDENT

| <u>Year</u> | <u>Population (millions)</u> | <u>Population Change (millions)</u> |   | <u>Trend Line Population (millions)</u> |
|-------------|------------------------------|-------------------------------------|---|---|
| 53-4        | 582.6                        |                                     |   |   |
| 54-5        | 594.7                        | +12.1                               | } Trend line is approximately 13 million added to the population each year. |   |
| 55-6        | 608.3                        | +13.6                               |   |   |
| 56-7        | 620.3                        | +12.0                               |   |   |
| 57-8        | 633.7                        | +13.4                               |   |   |
| 58-9        | 647.3                        | +13.6                               |   |   |
|             |                              |                                     | <u>Difference from Trend Line</u>   |   |
| 59-60       | 653.5                        | + 6.2                               | - 6.8   |   |
| 60-1        | 651.0                        | - 2.5                               | -15.5   | } -45.6                                 |
| 61-2        | 646.6                        | - 4.4                               | -17.4   |   |
| 62-3        | 653.7                        | + 7.1                               | - 5.9   |   |
|             |                              |                                     |   | 699.3                                   |
| 63-4        | 677.4                        | +23.7                               | +10.7   | } +16.7                                 |
| 64-5        | 696.4                        | +19.0                               | + 6.0   |   |
|             |                              |                                     |   | 712.3                                   |
|             |                              |                                     |   | 725.3                                   |
|             |                              |                                     | <u>Deficit = 28.9</u>   |   |
| Mid 1982    | 1,000.0                      |                                     | Excess = 40.7   | 959.3                                   |
| Mid 1984    | 1,034.5                      |                                     | Excess = 49.2   | 985.3                                   |

Source: Calculated from Ashton et al. (1984).

say that famine no longer exists elsewhere; it is to say that the likelihood of its occurring is very much lower elsewhere, except possibly Bangladesh.<sup>10</sup> Most societies have learned how to compensate for the weather and to protect those victimized by its adversities. When the rains fail in Holland (one of the most densely populated countries in the world) or the American South, nobody starves; when the rains fail in the Sahel (among the least densely populated regions in the world) and in Ethiopia, people starve in large numbers, just as they used to in much of Europe, Russia, and India. Outside of Africa, famine today denotes severe social dislocation, failed information systems, and government paralysis -- in combination threatening but rather low-probability circumstances. Even in Africa famine is associated more with conflict than with nature. The extended drought of the early-mid 1980s affected 31 countries, but famine emerged in only five: Chad, Sudan, Ethiopia, Mozambique, and Angola, the most war-wracked countries on the continent (Glantz, 1986).<sup>11</sup> On the other hand, Africa's distinctiveness at the present time is a function of all the major elements of famine: weak economies, weaker governments, social institutions in transition, crisis-prone environments, and a propensity to protracted political conflict. The rest of the world, Bangladesh included, is fortunate in comparison.

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<sup>10</sup> Bangladesh is a mixed case. Governmental capabilities to detect and respond to incipient famine are much improved (Cutler, 1985; Clay, 1985), but political will remains suspect and the country continues to be extremely prone to flooding and other disasters.

<sup>11</sup> Drought used to be considered the principal cause of famine. This is no longer the case (Lofchie, 1975; Greenough, 1976 and 1982; Sen, 1981; Dando, 1982; Timberlake, 1985; Glantz, 1986 and 1987).

1c. Famine in Relation to Malnutrition

Famine can be seen as the dramatic endpoint 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 vulnerable 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 (Cox, 1981). 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 entitlements of some people simply being insufficient to maintain nutritional adequacy, in famine the entitlements of many collapse entirely.<sup>12</sup> A society

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<sup>12</sup> The concept "entitlement" is Sen's (1981; see also 1987). It is empirical, not normative, and refers to what different people can reliably command and expect to command in normal times. Entitlements to food are based on endowment, what people own and what they produce, as well as on what they are able to acquire in exchange for their employment and income, as mediated by prices. Following Sen, analysts of famine often refer to three types of entitlement: direct (endowment), exchange, and dependency, the latter referring to what children and other dependents can command in the social system.

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, anti-social behavior -- hoarding, crime, and the like -- 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, the silent holocaust, 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 (for example, Belli, 1971; Berg, 1973 and 1981), 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 less 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 (see footnote #3).

1d. 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-a-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 policy terms, as something unto itself and, by extension, as something other than development. Development is a positive, famine a negative. Development is on-going, 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, UNDR0, and the UNHCR), many more emphasizing development. An increasing number of organizations engage in both activities (USAID, UNICEF, Oxfam, SAVE, CRS, 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.<sup>13</sup>

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<sup>13</sup> The literature on disaster management does discuss preparedness and prevention quite prominently (see, for example, Stephens and Green, 1979; Cuny, 1983; and Comfort, 1988); but except in the case of flooding, most preparedness for quick-onset disasters necessarily emphasizes relief.

Three points are worth stressing in this regard. First, one opts for relief when nothing else is really possible, or when all else fails. Second, because -- as noted above -- famine is more man-induced than a cruelty of nature, it is far more subject to manipulation than, say, a volcanic eruption or cyclone. Third, and most important, famine's rather lengthy gestation offers the opportunity to intervene before relief becomes necessary.

This last point merits elaboration. Because famine is a slow-onset disaster, it is possible in any given setting to chart the processes leading to famine and to identify the critical indicators that a famine dynamic is underway. This is the promise of early warning systems. Similarly, with detection it becomes possible to respond early in the process and thereby, hopefully, to snuff it out. This is what has happened in India over the past 100 years (excepting 1943): the authorities declared famine so as to prevent famine from occurring.<sup>14</sup> (In Africa, by contrast, the tendency is to respond with relief after the worst has already happened.) By extension, it becomes possible to prepare for famine by planning for it in advance. Interventions can be designed and strategized, necessary materiel stockpiled, and personnel trained for the tasks to be performed. Again, India's experience is instructive (Berg, 1973; Singh, 1975; McAlpin, 1983; Dreze, 1988).

Because prevention is possible, it makes no sense to confine the

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<sup>14</sup> India's approach to famine management is summarized in section 2b below. In 1943 the Bengal Government refrained from declaring famine because it did not have the wherewithall with which to intervene, the declaration of famine being an official act with powerful implications.

response to relief, especially inasmuch as famine entails such high human, social, economic, and political costs. Ironically, from a developmental perspective, the principal reason for treating famine as a development issue is to protect development. At the very least, a preventive famine policy is insurance against development being severely undermined. When integrated with development, a preventive famine policy has the potential to go beyond protecting the downside to include building the upside. This is because famine is a function of underdevelopment in a much broader sense than poverty alone. Famine thrives on poor transport, weak communications, market segmentation, and limited options for alternative employment and protection of income. It also thrives on governments whose operational capabilities do not allow for timely and effective intervention. (Despite its poverty, India has excellent transport, well developed communications, integrated markets, and an official capacity to provide food and health care, launch public works, expand employment, protect income, and provide loans to farmers so that they can retain or replenish their productive assets.) All of these concerns are central to development, or at least to concepts of development which go beyond urban-centered industrialization.

In sum, the opportunity exists to make famine policy preemptive and not merely reactive. At the same time it is possible to make preparation for famine an ally of development, indeed a core component of development, as against being an alternative to it. Greater international effort is called for to help the governments of famine-prone countries to think this way and act accordingly. Clearly, for donor agencies to help in this fashion they

need to think this way and act accordingly themselves.<sup>15</sup>

There is a final linkage between famine and development. Preparedness planning and preventive efforts may fail to arrest the onset of famine, in which case relief becomes necessary if lives are to be saved and health restored. Unfortunately, the divorce between relief and development renders relief a discrete activity that is appropriately terminated when its immediate purposes have been served. (Alternatively, relief chugs along, especially in refugee camps, a holding pattern with no end in sight.) The problem is that even successful relief does little to rebuild the future; it makes a future possible, but relief itself does not make famine victims, particularly the uprooted, viable once again. In fact, it is a pervasive characteristic of famine that it leaves its surviving victims very much worse off, economically and in other respects, than they were before. As Mellor and Gavian note (1987, p.541), "Famine conditions redistribute incomes away from the poor, dealing them a smaller proportion of a shrinking pie." Without asset regeneration famine has lasting effects.

Nor is rehabilitation a sufficient answer. Rehabilitation -- return to land and home; recapitalization of herds, seeds, and implements; restoration of previous means of livelihood -- simply recreates the status quo ante in most instances. That is better than relief alone, but it

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<sup>15</sup> Parenthetically, it is a sad commentary on USAID's FEWS (Famine Early Warning System) project that its principal objective is to facilitate American decision-making so as to trigger a more timely release of food aid. As worthy a concern as this is, it is steeped in a relief mentality and, moreover, does virtually nothing to build detection and response capacities in the participating African countries. Some movement in the right direction is anticipated in Phase II of the project.

hardly addresses the vulnerability that pushed people over the brink the last time.

What it all comes down to is this: Famine relief should be seen as the first step back to development. It is not an end unto itself but the essential precondition for recapturing development and perhaps even redirecting development so that it explicitly and purposefully reduces vulnerabilities and creates new capacities (Taylor, 1978; Independent Commission, 1985; Anderson, 1985; Anderson and Woodrow, 1988). Only when relief is linked to development will people be better able to withstand future shocks disposing to famine and will governments be better able to intervene to help them do so. The linkage is more than sequential -- relief, rehabilitation, development; it is iterative. How relief is organized and implemented, including provision of health care and uses of food aid, can themselves be shaped by the development goals to which they are tied (see, for example, Hay, 1986).

In sum, the famine-development linkage is two-fold. The development process best obviates the need for famine relief when it enhances productivity, builds market strengths, expands opportunities in society, strengthens income generation in rural areas, and provides basic services (nutrition, health, education) to all. In famine-prone countries these processes are best supported and protected by having well considered preemptive interventions available and the means with which to activate them. Famine prevention insulates development from acute accelerating stress. If famine conditions emerge anyway, their effects can be mitigated by these measures. Then, if relief is necessary, it can be tailored to

promote a rapid return to development. So simple are these notions that the amazing thing is how rarely they are put into practice.

Re-linking famine and development will both encourage and facilitate a more effective response when famine looms on the horizon. Just as there is a need in agriculture to reintegrate production and consumption, food and nutrition, so there is a need to incorporate famine policy into the mainstream of development.

## 2. TOWARD IMPROVED MANAGEMENT OF FAMINE

A better understanding of famine will not result in better famine management in and of itself. Also necessary are an appreciation of the dynamics disposing to famine, of issues pertaining to detection and response, and ultimately of the need for preparedness and prevention. This section addresses these themes and explores some significant differences in how famine has been managed in India over the past century as against how it is being managed in Africa at the present time.

### 2a. Famine Dynamics, Detection, and Response

Because famine does not happen suddenly but instead has a lengthy gestation, it is helpful to get a fix on the dynamics disposing to famine. Doing so is more than a theoretical exercise, for it suggests indicators appropriate to detecting the process as it unfolds. To the extent that early detection facilitates early response, detection becomes an important element in any strategy of famine prevention. The several famine early warning systems now in use are based on the proposition that information is the key to action (a half-truth to which we shall return) while also inferring, and at times testing, the dynamics and indicators in question.

Analyses of famine over the past decade have greatly enriched understanding of famine dynamics, but at the same time they have confounded the quest for effective early warning by expanding enormously the type and number of variables to monitor. When famine was attributed primarily to natural causes (drought, flooding, locusts, etc.), one could focus on them and work on predicting their emergence. When famine was interpreted as reflecting a downturn in food availability, it was possible to concentrate

on crop failure and then attempt to counter local shortfalls with supplies brought in from outside. Indeed, the two perspectives went nicely together: climatic instability explained variations in food production, with famine resulting when shortfalls were not matched by imports.

While this simple dynamic remains basic to famine, it is now clear that two other factors are equally important. One is that vulnerability to famine is not simply a function of the weather; it is even more embedded in political economy relationships (Lofchie, 1975; Franke and Chasin, 1980; Bates, 1981; Watts, 1983; Lipton, 1986; Devereux and Hay, 1986; among many others). In modern times, in particular, much famine is man-made, a product of economic marginalization, population pressures on land, environmental stress, and political struggle (Independent Commission, 1985). Similarly, famine is not simply a crisis of supply (crops fail and there isn't enough food); for most of its victims famine is really a crisis of demand (Sen, 1981). Food exists or might be obtained from elsewhere, but people who have lost employment or earnings cannot command it. Indeed, even fairly modest declines in food availability can trigger massive declines in effective demand, or "exchange entitlement."<sup>16</sup>

A more complete, and accurate, understanding of famine causality, therefore, requires the monitoring of social systems as well as natural forces, and FED (food entitlement decline) as well as FAD (food

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<sup>16</sup> See footnote #12. The consumption decelerator is a function of production and market release on the supply side and reduced employment and income -- and rising food prices -- on the demand side. See Sen, 1981; Greenough, 1982; Ravallion, 1987; also Mellor and Gavian, 1987. For an excellent account of how these factors interplay, see Devereux, 1988.

availability decline). The practical challenge is not merely to anticipate a famine before it occurs, a daunting task in its own right, but to locate it spatially and socially so as to intervene on behalf of the people who most need protection.

Figure 1 represents one way of conceptualizing the events leading to famine. As with any such diagram, this one is selective. It does not feature processes of environmental deterioration (overgrazing, overcropping, deforestation, soil erosion, desertification, and the like) which accentuate vulnerability to famine (Franke and Chasin, 1980; Timberlake, 1985). These are long-term processes that call for remedial attention in their own right, quite apart from their secondary effects. Important contextual variables (the presence of insurgency, military conflict, political suppression, etc.) are omitted for the same reason. What the figure does is highlight key endowment and exchange relationships while acknowledging that the trigger mechanism disposing to famine is usually some kind of natural disturbance.

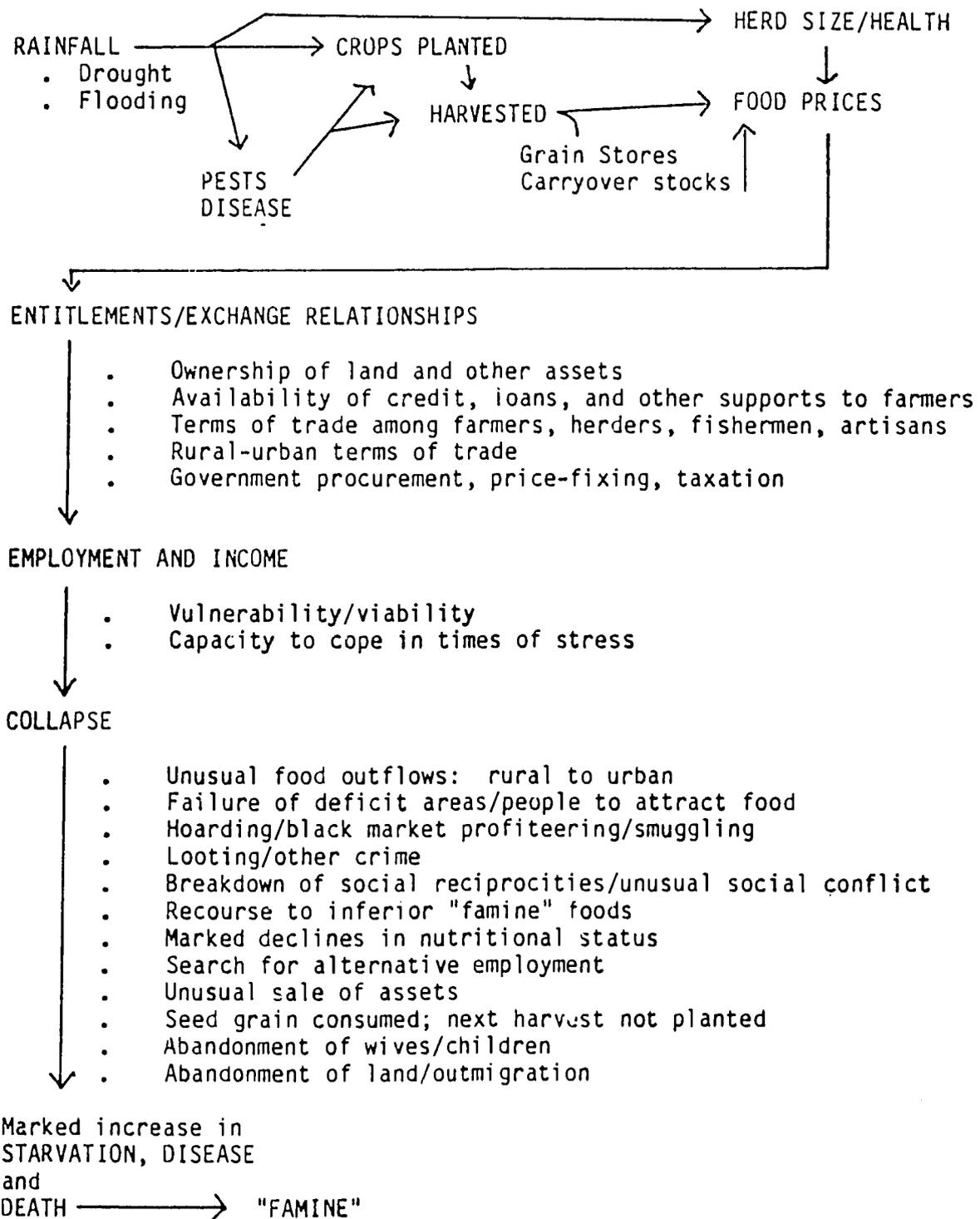
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FIGURE 1 HERE

Several insights germane to detection and response are suggested by Figure 1.

1. Notwithstanding the complexity of famine and the multiple factors underlying it, the principal indicators are few and manageable.

FIGURE 1: THE FAMINE DYNAMIC: KEY INDICATORS AND PREDICTORS



Note: Government intervention is possible at any point on this diagram with the potential, at least, of preventing the dynamic from resulting in famine.

2. The earliest indicators (rainfall, crops, etc.) warn better than they predict.
3. Prices, employment, and income are the major catalyzers of famine. When these are seasonally abnormal, intervention is necessary to protect direct and exchange entitlements.
4. Social disintegration, the explosive spread of infectious disease, starvation, and excess deaths are the clearest signs of famine conditions; but they appear very late in the overall dynamic. Similarly, the mass migration of hungry people is a "terminal indicator of distress" (Cutler, 1984, p.55).
5. Whether famine occurs or not depends critically on the timing and effectiveness of governmental action to avert or minimize the trauma.

Several inferences are suggested as well.

1. The best indicators with which to monitor the famine dynamic will be contextually grounded and hence will vary from place to place. In each instance, however, a relatively concise

number of key indicators should suffice so far as systematic data gathering and analysis are concerned.<sup>17</sup>

2. By extension, elaborate modeling and data-generation exercises, the vacuum cleaner approach to early warning, are a diversion of scarce time, talent, and resources better spent on preparedness and prevention. Comprehensiveness is neither necessary nor desirable, a more appropriate objective being effective parsimony.<sup>18</sup>
3. One reason why focused monitoring is preferable to extensive data acquisition is that early response is necessarily launched before the fact of famine is incontrovertibly clear. More data does not obviate the need for judgment. Indeed, the

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<sup>17</sup> Three indices come immediately to mind: an animal-grain terms of trade index in pastoral areas (Sen, 1981), unemployment rates for landless laborers and artisans, and a grain-wage (or grain-fish) exchange rate as appropriate (Cutler, 1985). Because increases in grain prices associated with famine are usually massive (2-6 times normal, occasionally more), monitoring grain prices is a promising way of detecting accelerating stress unless, of course, price movements are inhibited by demand failure or by the opportunity costs of provisioning (Sen, 1981; Devereux, 1988). The point here is that indices such as these should serve as very reliable barometers of a crisis in the making. In concert with meteorological and crop data they are pretty much all one needs for effective early warning.

<sup>18</sup> Complex data gathering and analysis tend to become self-fulfilling exercises and, by virtue of being divorced from decision and response, are often self-defeating as well, as was true in the case of multisectoral nutrition planning (Field, 1987). USAID's FEWS project "conceptually and operationally the most sophisticated effort of its kind" (AIU, 1986, p.1) is a good example of the vacuum cleaner approach, alas without allowing for original data generation in the field to date.

need for judgment is especially acute in early response and does not disappear thereafter. Moreover, detection and decision are not the same thing, granted that detection can aid, even prod, a decision to act. So no matter how comprehensive data gathering and analysis may be, they are at most technical inputs to a political process. The quest for certainty as the key to decision converts early warning into late warning and even later response.<sup>19</sup>

4. Nutritional status is not an optimal early warning indicator because its movement downward comes quite late in the overall dynamic. Declines in weight relative to height, the usual diagnostic for famine, serve better to confirm what is happening than to anticipate future events.
5. Concerning intervention, the earlier the better, prevention being preferable to cure (and probably much less expensive). On the other hand, the earlier the intervention the less clear it is that a famine will actually occur. The fact that false positives abound is a political disincentive to act preemptively.

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<sup>19</sup> As Currey, 1981, has noted, the politics of information is more important than its accuracy. Indeed, many analysts believe that the real issue in famine is political (early response), not technical (early warning). On the other hand, how early warning might promote early response is addressed below.

6. Early and late intervention are both likely to be supply oriented, whereas late-early and early-late intervention are more likely to be demand oriented. When governments choose to act in the face of actual or anticipated food shortages, the logical thing to do is to import grain both to insure an adequate domestic supply and to contain inflationary pressures on food prices in local markets.<sup>20</sup> Similarly, famine relief is usually a matter of providing food and medicine to displaced people at risk of death. In between, the focus appropriately shifts to offering employment opportunities and other ways of maintaining income so as to preserve market access.

7. Effective early warning means sounding the alarm and intervening before entitlements collapse and distress sales, abandonment of assets, and outmigration occur. Early warning solely for relief is not only a contradiction of terms; it is a cop-out. Intervention at this point may be better than no intervention at all, but it is "too little, too late."

If the purpose of monitoring famine indicators is detection, the purpose of detection is to facilitate a more timely response. Similarly,

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<sup>20</sup> In 1984-85 the Government of Kenya successfully averted famine by importing 647,000 metric tons of maize and 251,000 metric tons of wheat to compensate for sharp declines in domestic production (35% and 40% respectively) attributable to drought. With aggregate supply protected, the government stabilized food prices and enabled normal market channels to continue functioning (Downing, 1987).

if the stated purpose of famine early warning systems is to improve detection, an objective of equal importance is to reduce ambiguity and thereby overcome inhibitions to taking action.<sup>21</sup> On the one hand, the assumption of early warning systems is that lack of information is the principal constraint to early response, and that governments and international agencies would respond better if forecasting were improved. On the other, early warning systems have the political role of spurring action; the need is not just for information but for information that is definitive, clear and compelling. The dilemma facing early warning is that it is very difficult, perhaps impossible, to be definitive, clear, and compelling about something that does not yet exist. Ambiguity is inherent in famine prediction, which means that judgment must be exercised. That, in turn, means that political decision-making will come into play. Early warning does not eliminate the politics; it tries to harness politics to constructive purpose.<sup>22</sup>

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<sup>21</sup> As Carlson has observed, 1982, p.9, "One of the most strikingly predictable responses by government officials has been to deny and suppress famine reports as long as possible." Among other reasons, "government officials feel that famine conditions indicate somehow that they have not properly performed their public roles. They are faced with actual or potential loss of power, as an individual, a party, or a government. This...possibility is very real, and like death, is often easier to deny than to face." Examples may be found in Shepherd, 1975; Gill, 1986; Jansson, Harris, and Penrose, 1987; and Bonner, 1989.

<sup>22</sup> Another assumption of early warning systems is that all is well until something goes wrong, the task of early warning being to detect that something. Yet as Anderson, 1985, p.50, has noted, for many people normalcy is "the condition of vulnerability that allowed the crisis to become a disaster."

2b. India Historically vs. Africa Today

The difficulty of linking detection and response is best conveyed by contrasting India's experience with famine management and the situation found 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 descendants of them to considerable advantage ever since. In Africa, only Botswana has something similar (Dreze, 1988).<sup>23</sup>

In India detection and response were the responsibility of the same individuals, who typically were district-level officials.<sup>24</sup> 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 project; some units of national governments such as the Relief and Rehabilitation Commission in Ethiopia (recently replicated in the Sudan); and various PVO-NGO bodies 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

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<sup>23</sup> Kenya and Zimbabwe are making good progress (Hay, 1988).

<sup>24</sup> References to India are in the past tense only because they reflect the historical record.

apprehension" was clearly preferred to "too mechanical obedience to rule" (Orissa Enquiry Commissioner's Report, 1867, quoted in Currey, 1981, p.20). 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 quantities 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 (Shawcross, 1984; Gill, 1986; Jansson, Harris and Penrose, 1987; Bonner, 1989). 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. 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.<sup>25</sup>

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.<sup>26</sup> Little such preparedness planning exists in Africa today. Famine-prone African

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<sup>25</sup> These political attributes are no guarantee that the government will intervene in time. Dreze, 1988, argues that the response in Bihar in 1966-67 was tardy, although it still averted outright famine. The Orissa state government flatly refused to acknowledge famine conditions in certain tribal areas in 1987, only to be overruled by the central government after considerable delay. The press played a catalytic role in this episode, as it has on other occasions (Palmieri, 1982; May, 1987; Penrose in Jansson, Harris, and Penrose, 1987).

<sup>26</sup> 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 levelling, bunding, well digging, and the like; 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 (McAlpin, 1983; see also Dreze, 1988). 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 (Berg, 1973; Dreze, 1988; Ezekiel, ). 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.

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 being 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.<sup>27</sup> 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 (Timberlake, 1985; Independent Commission, 1985; see also Edelman, 1986).<sup>28</sup>

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.

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<sup>27</sup> This railroad was actually built on the recommendation of the Famine Commission of 1880 (McAlpin, 1983).

<sup>28</sup> Economic assistance to Africa by USAID is about \$900 million annually. The most famine-prone countries, with exception of the Sudan, are not prime beneficiaries.

India's overall record in dealing with famine is as good as its record in dealing with chronic malnutrition is poor. Africa's record and that of the international community tend to be quite dismal except in the provision of relief.<sup>29</sup> The reasons are not difficult to fathom, and they go beyond India's impressive development of infrastructure and operational capacity. In India 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 aides to decision.<sup>30</sup>

These observations are summarized in Figure 2. Ironically perhaps, the burden of the historical record is that effectiveness is inversely related

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<sup>29</sup> Again, Botswana is a striking exception. Dreze, 1988, p.102fn, notes that the report which laid the foundation for Botswana's very effective drought relief/famine prevention system "literally reads like an echo of the Famine Commission Report written in India almost exactly one century earlier." (Botswana's performance is assessed in Holm and Morgan, 1985; Hay, 1988; Moremi, 1988; and Morgan, 1988.) On the other hand, the relevance of India's experience for much of Africa is a matter of controversy. See McAlpin, 1987; Clay, 1988; Harris, 1988; and Dreze, 1988.

<sup>30</sup> Cutler, 1985, 1987, and 1988, is equally dubious about high-tech detection. On the other hand, Wilhite and Easterling with Wood, 1987, provide examples of remote sensing, meteorological monitoring, and crop forecasting that augur well. Cutler's misgivings and my own are political, not methodological. In addition, Cutler's are based on cost-effectiveness and a perceived mismatch between the technologies and the environments in which they are being applied.

FIGURE 2: FAMINE DETECTION AND RESPONSE IN INDIA AND AFRICA

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

with 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.

#### 2c. Preparedness and Prevention

If the situation outlined above is to improve, both responsibility and capacity to cope with famine must be returned (or created) within African countries themselves. With rare exception, neither the governments of famine-prone countries nor the international community are well positioned to prevent famine from occurring in much of Africa. Among the factors disposing to a generally low response capability is the lack of credible information with which to discern an impending crisis, with message ambiguities, plus overload, reinforcing other disincentives to a timely response. Also involved are an absence of planning to meet emergencies in advance of their occurrence and inadequate resources, combined with weak institutional capacity at the local level, with which to organize effective counter-measures.

What it all boils down to is that, all too often, climatic stress triggers a food crisis which 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 also by 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 (Green, 1982; Scott, 1987; Jansson, Harris, and Penrose, 1987; Curtis, Hubbard, and Shepherd, 1988; Bonner, 1989).

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 which, 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.<sup>31</sup> Moreover, as a means of overcoming political

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<sup>31</sup> This is the aspiration of USAID's FEWS initiative and of other detection systems. But see Cutler, 1987 and Torry, 1987 and 1988.

inhibitions to taking action when famine signals appear, improved early warning may well be an essential first step to preventing climatic disturbances, crop shortfalls, and entitlement breakdowns 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 the 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, are 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.<sup>32</sup> Moreover, the tragedy of famine

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<sup>32</sup> This is the lesson of much experience, witness the difference 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.

is compounded when the international community must itself marshal its resources, create the management, develop the logistics, and establish its own operational capacities in far-away places virtually from scratch.<sup>33</sup>

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 pre-planning 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 (Taylor, 1978; Curtis, Hubbard, and Shepherd, 1988). Governments and international donors continue to ricochet from development as a long-term solution to famine to relief as a form of crisis liquidation in the immediate. 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

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A case in point was the hasty creation of the Office for Emergency Operations in Africa by the United Nations in December 1984. With the worst of the crisis over, OEQA has since been disbanded.

much of Africa especially, as noted by a distinguished nutritionist, Jean Mayer, more than a decade ago (1974, p.98), 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 materiel 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 been made in advance. 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.

2d. The Role of the Nutrition Community

I would like to conclude this paper on a somewhat provocative, introspective note. Because this is an International Congress of Nutrition, it is appropriate to raise the question as to what we as a professional community can 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.<sup>34</sup> In addition, nutrition clearly plays a major role in famine relief and in the monitoring of populations at risk, including refugees (Nieberg et al., 1988 and 1988).

On the other hand, if the role of nutrition in famine management is important, it is also counter-intuitive. Ironically, the importance of nutrition 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 prices, maintain market access, and ensure market functioning more than to manipulate nutrition per se.

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<sup>34</sup> In a comprehensive article on famine, Scrimshaw, 1987, discusses the physiological processes that accompany starvation.

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 works schemes. Moreover, it is nutrition monitoring that provides the penultimate evidence as to whether populations are succumbing to famine or holding their own in adversity.

Nevertheless, perhaps the most important role that we in the nutrition field can play is that of policy advocate on behalf of the millions of people who remain vulnerable to famine (Cutler, 1986). 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 this Congress ("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 toward this end. The task will not be easy by any means, but it is absolutely essential that we take it on.

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