

A Role for Social Nutrition in Strengthening Accountability for Mass Starvation?

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INTRODUCTION

Notions of social nutrition have emerged at various points in time, and have been used or defined in different ways, often following crisis or famine. The concept has been applied to Western populations and to those in the Global South, in both emergency and more stable contexts to address malnutrition within its wider social, political and economic context. It has, however, been marginal compared to a biomedical or medicalised approach to nutrition, which focuses on nutritional requirements and treatment. In the second decade of the 2000s, however, the need to revive or re-invent some form of social nutrition is important because of the resurgence of severe famines (or situations of mass starvation) and the large numbers of people suffering protracted crises with persistently high levels of acute malnutrition. Its importance is increasingly advocated by social and human rights movements, by food policy analysts and by a small number of nutritionists working in situations of conflict-related humanitarian crises or famines.

This paper aims to stimulate discussion of the role of social or politically-oriented approaches to nutrition in situations of famine and crisis. More specifically, it examines whether there is a role for social nutrition in strengthening accountability for mass starvation. According to Alex de Waal and Bridget Conley (2019), 'starvation crimes' comprise a range of actions prohibited under different international legal regimes that deprive populations of items indispensable to their survival – and are the result of deliberate political or military acts. Wider political and economic decisions may also lead to famine. To ensure political accountability for these crimes, evidence is required about the nature of the crime and the way in which it is perpetrated. Prosecution requires showing intent, action and outcome. Criminal acts include specific actions such as policy decisions or military strikes, and assessment of the effect on access to food or other items indispensable to survival. In most situations, mass starvation will come about through a series of policies and actions, structural causes, and the interactions between them. It is in analysing how this multicausality leads to elevated levels of acute malnutrition, that social nutrition may have a role to play.

The paper starts with an overview of the concept of social nutrition, examining the various issues that have contributed to its development and exploring why it has become marginalised today. It then examines the potential use of social nutrition in strengthening accountability for mass starvation and the obstacles that may arise, and ends with areas requiring further discussion in order to develop a socially and politically-oriented approach to nutrition that is relevant to today's crises.

1. The concept of social nutrition

Different approaches to nutrition lead to different analysis and response. Broadly speaking, nutrition can be more medically and individually oriented or more socially and population oriented. Nutrition has long been an interface between the social and medical or life sciences. In 1984, for example, Philip Payne and Peter Cutler wrote about different nutrition models: a genetic potential model which leads to recommendations for nutrition education and supplementary feeding to improve work and growth capacity; and an adaptability model which looks beyond biological causes to deprivation and the nature of resource constraints (Payne and Cutler, 1984). Tim Lang (2005) also highlights the existence of many nutritions (social, epidemiological, biochemical, etc), but with two broad paradigms of social and medical nutrition. According to Lang (2005), social nutrition examines how society determines who eats, what, when, how, and with what effects. It has, however, been marginal compared to nutrition as a life or medical science which looks at nutrients as determinants of health.

Although approaches vary, a key feature of social nutrition has been an analysis of nutrition within its social, political and economic context, at the level of populations or society. The approach commonly includes an acceptance of multi-causality (at the population and household level), the interactions between different causes, and the development of flexible and context-specific interventions (see for example Pacey and Payne, 1985). Methods are largely qualitative and exploratory. Medicalised nutrition in contrast, focuses on nutrition at the level of the individual or household, tries to identify the single most important cause, and promotes pre-determined packages of interventions. Methods are largely quantitative (see the *Lancet* articles, 2008, discussed below). Medicalised nutrition is currently dominant in both emergency and more stable contexts (including in the West), and neither aid organisations nor academics pay much attention to social nutrition in situations of famine or humanitarian crises. This section gives an overview of the origins and contributions of social nutrition as a concept, and why it has been eclipsed by a medicalised approach.

1.1 Origins of social nutrition

Social nutrition emerged during times of crisis, including the post World War 1 period, the economic crisis and depression of the 1930s, the global food crisis of the 1970s and the famines and refugee crises of the 1980s and 1990s. According to Scott-Smith (see Jaspars et al., 2018: 3), the establishment of the League of Nations in 1920s was a highpoint of social nutrition. Audrey Richards, an anthropologist who briefly worked for the League, "introduced the idea that nutrition was a matter of cultural practices, agricultural systems, and political organisation, and John Boyd Orr [later the first director of FAO], connected nutrition with public health, productivity, economic growth, trade, and peaceful global relations". He considered that malnutrition was the result of social inequality, and could best be addressed with equitable access and affordable food as part of a welfare system (Lang et al., 2009: 119). Sathyamala (2016a: 68) considered in more detail how this approach came about. The League of Nations Health Organisation set out to determine the effect of unemployment and underemployment from the economic crisis of the 1930s on health, in the face of stable or decreasing mortality rates for the population overall. Much of this involved the assessment of

nutritional status, such as weight, state of muscles, avitaminosis and diet, as well as rate of illness and housing conditions. Ill-health, as shown by these indicators, was higher amongst the poorest section of the population. The findings were however rejected and the stable mortality rate was taken to indicate that the crisis had no negative effect on public health.

In the late 1970s and 1980s, social nutrition re-emerged through work at the Nutrition Department at the London School of Hygiene and Tropical Medicine (LSHTM); again, it followed crises: the global food crisis and Sub-Saharan famines of the 1970s. Two examples are given here. First, Rivers et al (1976) drew attention to famine in Ethiopia as a social phenomenon, not one simply defined as high levels of acute malnutrition. Famines, they argued, were qualitatively different from periods of extreme poverty. They are sudden and distinct events, as different from extreme poverty as ice is from freezing water. Famines are different because they are characterised by social disruption, including distress migration and the need to carry out precarious or degrading work as servants, labourers or prostitutes (p346). By waiting for signs of starvation before responding, international response was late. They suggested examining early social and economic signs of famine more carefully. Second, Pacey and Payne (1985) found that by the mid-1980s agricultural production and supplementary feeding interventions developed in response to the 1974 food crisis had little impact on nutrition.¹ As a result, they recommended a new more socially-oriented approach to nutrition.

It is worth going into Pacey and Payne's approach in some detail. They saw nutrition as a "subject which examines those social, environmental, economic and political factors that determine the degree to which people have access to food" Malnutrition, they argued, has "multiple causes which are closely linked to the conditions of inequality of resources, or poverty, and of social discrimination" (Pacey and Payne, 1985: 18). A new approach to nutrition would analyse food systems, the epidemiology of malnutrition, and livelihoods," to understand *how* people became malnourished and *who* they are. Rather than trying to identify single primary causes, they argued for a systematic procedure to identify various contributing causes and to understand the nature of their interactions (ibid.: 107), including *simultaneity* (factors which re-inforce each other, which could also be termed *synergy*) and *feedback*. In determining who becomes malnourished, they suggest going beyond production to examining ecological, socio-economic and demographic characteristics of a population (ibid.: 123). This, they called 'functional classification,' or livelihoods.

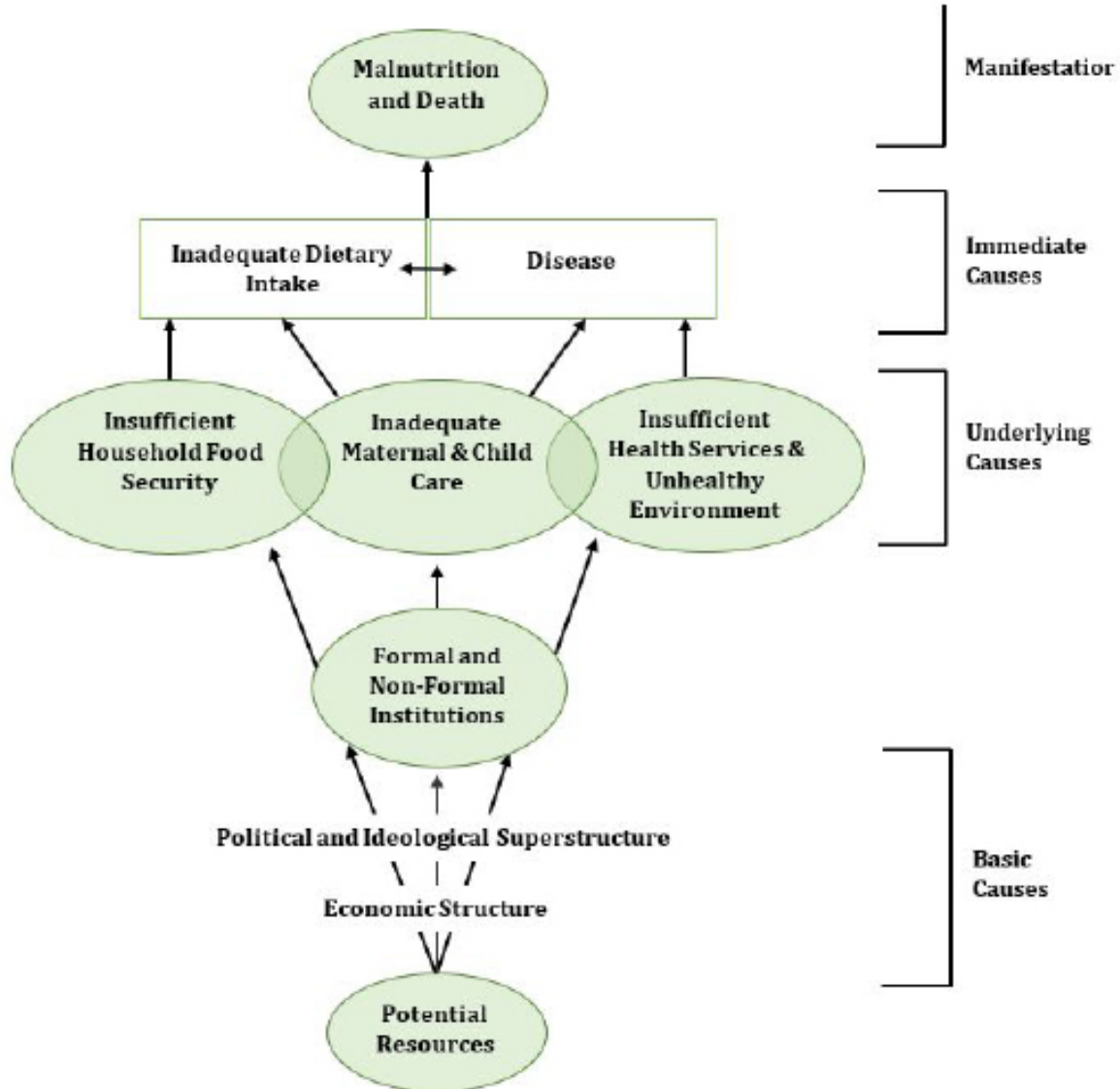
1.2 Social nutrition in emergencies

A social nutrition approach was also briefly adopted *in* emergencies. While the previous section highlights the emergence of social nutrition as a result of crisis or famine contexts, the 1980s was the time when nutritionists applied these approaches in emergencies. When working in the refugee crises and famines of the 1980s and 1990s, they soon realised that '... in famine... what matters is access to food, which relates to political, economic, social and environmental factors. In this context, nutrition is a social and human science' (UN SCN, 1994: 134). International nutrition conferences in 1988 and 1991 concluded that the political priorities of donor countries and international aid practices contributed enormously to the nutritional crises (UN SCN, 1988, Refugee Studies Programme, 1991). Nutritionists developed a large number of new practices; including famine early warning; food security assessments; agricultural, market- and employment based interventions; and approaches to food distribution that took into account the social and political constraints in reaching the most vulnerable (Jaspars, 2018). The adoption of the UNICEF conceptual framework on causes of malnutrition in the 1990s facilitated this broader social approach to nutrition (UNICEF, 1990).

¹ Note that John Rivers, the lead author of the article on the Ethiopian famine, worked at the Nutrition Department of LSHTM in the 1980s and Philip Payne was its head in the 1980s.

See Figure 1 below.

Figure 1. Causes of malnutrition and death



Source: UNICEF (1990)

The UNICEF framework was pioneered in 1990 in Iringa, Tanzania, to develop a nutrition strategy which reflects the biological and social causes of malnutrition, as well as causes at micro and macro level (UNICEF, 1990: 13). This strategy was based on an analysis of the particular context, rather than the application of pre-packaged technical interventions (ibid.: 14). The framework shows inadequate food intake and disease as immediate causes of malnutrition at the individual level. The framework shows three clusters of underlying causes: insufficient household food security²,

2 Note that the definition of food security has changed over time but since this framework was produced in 1990 we can

insufficient health services and an unhealthy environment, and inadequate care for women and children; each of which may contribute to inadequate food intake or disease, alone or in combination. It is important to note that the framework shows an overlap (interaction) between the three clusters of underlying causes. For example, food insecurity may hinder child care if the mother has to spend long hours working away from home. Of critical importance in relation to starvation crimes, is that the framework also shows basic or structural causes, which relate to the unequal distribution of resources within society (ibid.: 21). In other words, what is produced or consumed depends on economic, social, political, and ecological factors. Social conditions include power structures; and political factors include the legal system, and the role and power of national institutions. Historical conditions, external (relating to aid policies) or internal (discrimination of certain groups) also contribute. Formal and informal institutions can be seen as the interface between underlying and basic causes. As the originators say (Pelletier and Jonnson, 1994: 303), the framework is a deliberate abstraction of a complex reality. It functions as an entry point, and when a problem is identified it is necessary to carry out a deeper analysis of specific causes which are highly varied and context specific.

The UNICEF framework formed the basis of a social approach to nutrition in emergencies for much of the 1990s, and was included in the Sphere Project's Humanitarian Charter and the Minimum Standards for humanitarian response, in 1998, 2004, and 2011. By the late 1990s, it became 'public nutrition in emergencies,' defined as: a broad-based approach to assessing and responding to nutritional problems of populations in emergencies, and which takes into account the wider social, political and economic causes of malnutrition (Young, 1999). It assesses the basic and underlying causes of malnutrition, available resources and constraints that influence action (ibid.). An international conference on public nutrition in emergencies, which included a number of case-examples, identified the following as the components of the approach:

- Focus on the needs of populations;
- Assessment and analysis of causes of malnutrition (cross-disciplinary);
- Broad-based problem solving (not limited to a narrow range of interventions);
- Development of relevant actions in a socially and politically aware manner;
- Local capacity-building to address malnutrition within the specific political, economic and social context.

By the late 1990s, however, medicalised nutrition once again came to the foreground, as nutritionists, largely with practitioner backgrounds, developed this approach in relative isolation. Tensions arose between different sectors about their relative roles and a lack of engagement with decision-makers (ibid.).

Although the UNICEF framework can provide the basis for public nutrition, it needs to be adapted or re-interpreted for emergency contexts. Particularly salient issues are social causes beyond the household; the changing relationship between malnutrition and mortality and between underlying causes and the increasing severity of crisis; and the need to clarify the links with basic causes and famine acts in times of crisis. The cluster of 'inadequate child and maternal care,' for example, could be adapted to include the effects of social disruption such as migration and splitting of families (see for example: de Waal, 1989; Howe and Devereux, 2004). At the population level, displacement undermines the social networks that normally support the household in caring for children, sick and elderly. Displacement may also lead to overcrowding and a poor health environment, thus

assume that they are referring to the World Bank (1986) definition: access by all people at all times to enough food for an active healthy life.

increasing exposure to disease and ultimately mortality (Young and Jaspars, 2006). Young and Jaspars (2009) explored the relationship between malnutrition and mortality, and between underlying causes for the UN's Integrated Phase Classification system, which is used to determine severity of food insecurity and famine. In reviewing the malnutrition-mortality relationship, they found that:

- Mortality risk in individuals increases as anthropometric status declines; Malnourished children who are exposed to higher baseline mortality and morbidity have a higher risk of dying: malnutrition and infection have a synergistic effect on mortality;³
- The few studies that exist on the relationship between food security, nutritional status and mortality, suggest that for a given level of nutritional status mortality is higher during a period of food insecurity. Furthermore, as food insecurity worsens, and the prevalence of wasting increases, the risk of dying for all children increases;
- Studies of the prevalence of wasting⁴ and mortality rates in situations of humanitarian crises (in particular camp situations) in the 1980s and 1990s strongly suggest a synergism between underlying causes – leading to an exponential relationship. This explains the sometimes rapid deterioration in situations of increasingly severe crisis.

These findings led the two researchers to develop a theory on how the relationship between underlying causes changes as food security deepens and famine develops. They suggest that in non-emergency phases, the three underlying causes are on a par. Each is necessary, but insufficient on their own to ensure good nutrition. When food insecurity worsens, it affects the social and care environment, and the health environment as, for example, people migrate for work and reduced income lowers access to health care. In a humanitarian emergency, social disruption influences both food security and the health environment. In a famine or humanitarian catastrophe, all underlying causes are extremely elevated and produce the extremely elevated malnutrition and mortality rates found in the most severe famines. This is explained in more detail in Box 1 and illustrated in Figure 2 (Young and Jaspars, 2009).

Young and Jaspars (2009) recommended that the crude death rate for the most severe phases of famine was increased from more than 2 to 5/10,000/day to reflect the exponential increase that occurs in such instances.⁵ Further, that the reference levels for wasting should be reviewed following an analysis of recent existing databases. In this way, the IPC phases could reflect the exponential relationship between malnutrition and mortality as food insecurity worsens. When the IPC was used to declare famine in Somalia in 2011, however, the earlier scales were used despite evidence of much higher levels of wasting and mortality than in the 'famine' IPC phase, and despite a sudden stark increase in malnutrition and mortality 2011 (Salama et al., 2012). Evidence from the 2011 Somali famine appears to confirm the sudden exponential deterioration of nutritional status (see Figure 3). The changing relationship between the underlying causes of malnutrition and mortality could be a crucial element in social nutrition's role in determining the outcomes of famine acts. Further analysis is needed of recent studies of the malnutrition and mortality relationship, and to test the proposed theory about the interaction between different underlying causes with increasing severity of food insecurity and famine.

3 Note that the relationship is different for different nutritional indices.

4 Another term for acute malnutrition.

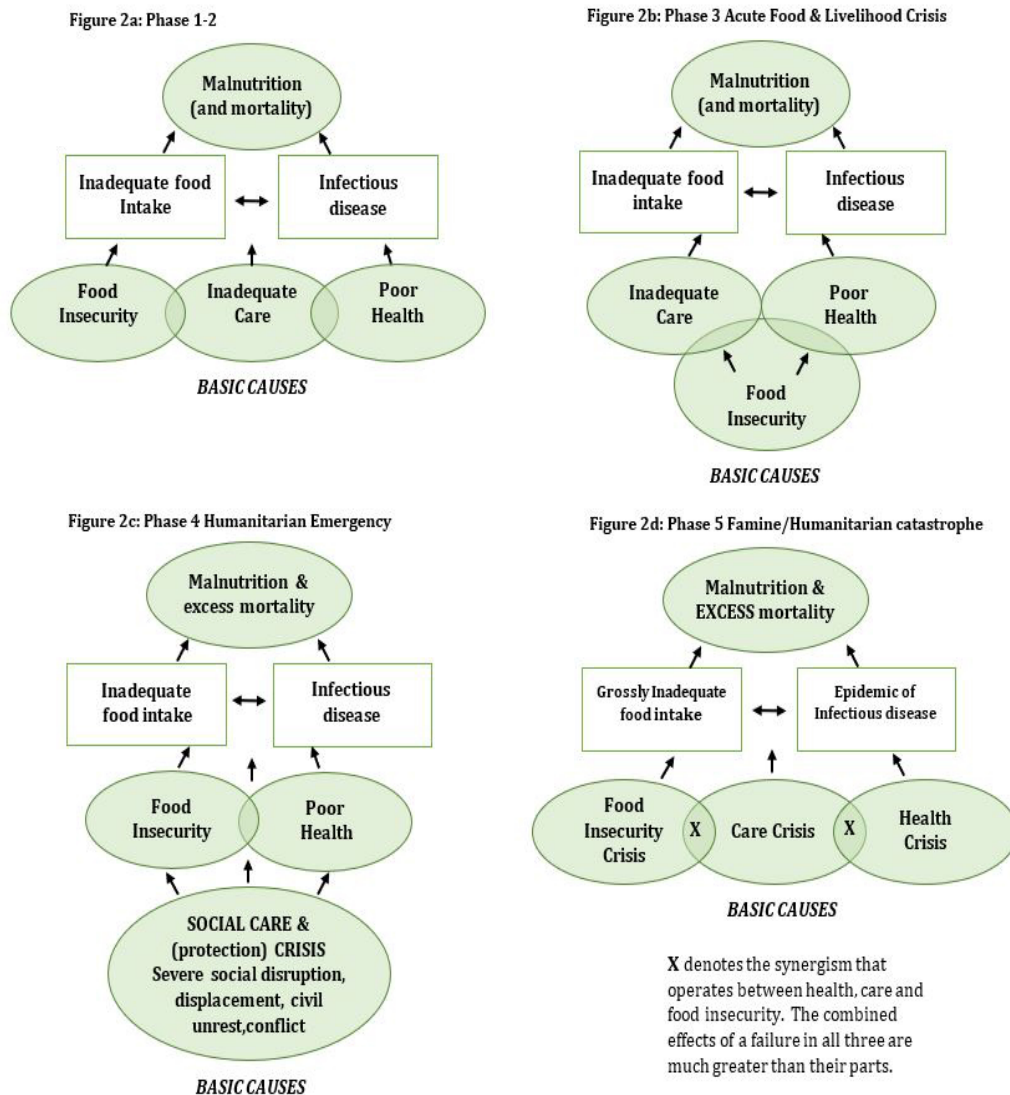
5 And under five death rate from >4/10,000/day to >10/10,000/day

Box 1 -Shifts in malnutrition causation with increasing severity of food insecurity

<p>Phase 1 -2 Generally Food Secure / Moderately Borderline Food Insecure</p>	<p>These two phases are the less severe phases, with each of three underlying causes contributing indirectly to malnutrition. For the majority of the population food insecurity will not be adversely affecting either their “caring and household behaviours”, or the “public health environment and access to health services”. Food insecurity, health and care are on a par with each other, and each is necessary, but on their own insufficient, for addressing malnutrition (Figure 2a).</p>
<p>Phase 3 Acute and Livelihood Crisis</p>	<p>This is the first of the more severe food insecure phases. The relative importance of food insecurity is heightened, and as a result, food insecurity influences the social and care behaviours, and access to health care and the health environment. For example, as households must prioritize their food security, coping strategies place severe constraints on care-giving behaviours - breastfeeding is curtailed, infants and young children are left with secondary care-givers, household members migrate in search of work reducing family support. Similarly, health seeking and hygiene behaviours are restricted because of a loss of income as a result of food insecurity (inability to pay for services), and less time on health/hygiene behaviours as more is needed for food security. Food insecurity is a driving force increasingly influencing these other two underlying causes (Figure 2b). As food insecurity worsens, malnutrition is a population-wide phenomenon.</p>
<p>Phase 4 Humanitarian Emergency</p>	<p>This phase is characterized by a severe lack of food access with excess mortality, very high and increasing malnutrition, and irreversible asset stripping. The overriding characteristics of a humanitarian emergency are severe social disruption, including increasing migration and displacement, civil unrest and general insecurity and conflict. That it is classified as a ‘humanitarian emergency,’ often means that it exceeds the capacities of local institutions to cope, and requires external emergency intervention. Food security is heavily influenced by the severe social changes associated with the above – particularly where forced migration (or conversely restricted mobility and access as a result of conflict) affect the integrity of the household and their food security (Figure 2c). At this stage, both acute malnutrition and mortality are likely to be high, and above the emergency threshold of 15% wasting.</p>
<p>Phase 5 Famine/ Humanitarian Catastrophe</p>	<p>This phase is one stage beyond humanitarian emergency, and represents extreme social upheaval with complete lack of food access, and/or other basic needs, where mass starvation, death and displacement are evident. At this stage ALL underlying causes of malnutrition are extremely elevated (Figure 2d). The combined effects of a complete failure in all three underlying areas generates the extremely high levels of malnutrition and mortality as were witnessed in Southern Sudan, Somalia, Ethiopia, etc. The three sets of underlying causes act synergistically to cause extremely elevated malnutrition and mortality.</p>

Source: adapted from Young and Jaspars (2009: 77-78).

Figure 2 – The changing relationship between food, health and care as food security deteriorates



Source: adapted from Young and Jaspars (2009: 79).

1.3 The marginalisation of social nutrition

In the past decade, social nutrition has rarely, if at all, been used in emergencies. Nutrition continued and intensified on its path of medicalisation in the 2000s, including in emergencies. The period of social or public nutrition in emergencies has in fact largely been excluded from mainstream histories of nutrition (see, for example, Gillespie and Harris, 2016) which presents emergency nutrition as focusing on treatment. In development contexts, the UNICEF framework has been criticised for facilitating a focus on the biomedical, by placing an emphasis on disease and lack of care as underlying causes and therefore providing a means of moving attention away from its political and economic causes (Sathyamala, 2016a: 111, Sathyamala, 2017). Sathyamala (2016a) also points out that

while the framework identifies the structural causes of malnutrition, it does not mean that UNICEF will want to address them – as their policy on ‘[structural] adjustment with a human face’ shows. The application of the framework has received criticism because of its focus on technical issues at the individual and household level – also leading to a depoliticization of nutrition (Young and Marshak, 2018; Nisbett, 2019).

There are a number of reasons why medicalised nutrition currently dominates both academia and practice, briefly summarised here.⁶ First, methods for treating malnutrition improved dramatically, in particular with the development of community management of acute malnutrition (CMAM) and commercially-prepared ready to use therapeutic foods (RUTF). This led many emergency nutritionists to focus on treatment (Jaspars, 2018: 51). Second, two influential series of papers in the *Lancet*, in 2008 and 2013, reported on meta-analyses of the causes of malnutrition and ‘what works’ in terms of interventions. However, they explicitly excluded deprivation and inequity from their analysis and focused on identifying risk factors at the individual level. Analysis of ‘what works’ was based on impact evaluations using Randomised Controlled Trials (RCT) of medical and behavioural interventions (Black et al., 2008; Bhutta et al., 2008). They concluded that interventions such as fortification, supplements and nutrition education were effective in addressing malnutrition (later called ‘nutrition-specific’ interventions). The later series introduced nutrition-sensitive interventions such as agriculture, safety nets, and education (Ruel and Alderman, 2013). These articles form the basis of most nutrition strategies today – whether developed by donors or aid organisations – including in emergencies. These articles coincided with the 2008 global food crisis, following which a resilience ideology dominated development and in which nutrition became key to resilience (Jaspars, 2018). Since 2010, donors, aid organisations and researchers all work together with private sector institutions to promote a standard package of interventions as part of the Scaling Up Nutrition (SUN) movement.

The move away from a socially-oriented approach is highlighted by the adaptations of the UNICEF framework in the *Lancet* articles. The social and political have been almost entirely removed. In 2008, the underlying causes no longer overlap and a different level of entirely economic causes – income, employment, remittances, etc - replaces the formal and informal institutions. Basic causes are indicated as capital (financial, physical, social, natural), and the ‘social, political and economic context’ (Black et al., 2008: 243-244). In 2013, the framework focused on actions to achieve optimal foetal and child nutrition rather than analysing the causes of malnutrition (Black et al., 2013). A list of nutrition-specific and nutrition-sensitive interventions is given in the framework, thus promoting standardized packages of interventions rather than interventions based on a context-specific analysis. Furthermore, Ruel and Alderman (2013) argue that there is little evidence of impact for nutrition-sensitive interventions, further justifying a purely medical approach. The fact that only RCT studies are considered valid evidence of impact, highlights the dominance of methodologically-individualistic quantitative studies that generate statistically significant results over ethnographic and qualitative information on context-specific causal linkages and interactions.

The third reason that a medicalised approach is dominant is that it is economically and politically convenient. As Sathymala (2017) highlights, medicalised nutrition includes a number of biotechnical products such as micro-nutrient supplementation and nutraceuticals, all of which further commercial interests. Other political and economic benefits of a medicalised approach are discussed in section 3 as constraints to adopting a socially- or politically-oriented approach to nutrition.

6 For a more detailed analysis see Jaspars (2018).

The only approach that currently comes close to social or public nutrition analysis is ACF's nutrition causal analysis. However, their analysis is largely limited to the underlying causes at the community rather than population level and known risk factors at individual level. Qualitative methods focus on local perceptions of malnutrition and its causes, the practices of care-givers and to understand historical change (ACF, 2017). As it is estimated to take about 4-5 months to complete, it has largely been applied to protracted rather than acute crisis contexts or famine. The wider political and economic processes that determine why some people have plenty of food whereas others do not have enough are generally not analysed. When social factors are considered at all, they tend to be at the level of the household or individual and limited to 'caring behaviours' or the interaction between care-giver and child. A few exceptions exist in the literature. Engle et al. (1996) for example, considers the social systems in a child's environment (e.g. schools, community organisations, extended families) and the larger forces which influence social systems, such as government policies, culture, and legal systems. Studies in Yemen and Jamaica showed the importance of social inclusion for good nutrition (ibid.: 628), and in Niger showed the importance of women's income and access to social networks to secure nutritional resources (Hampshire et al, 2009). By extension, the social disruption associated with famine would have a serious impact on nutrition whether due to the splitting of families, contraction of social networks or displacement. There are some indications that emergency nutritionists are willing to engage with basic structural causes again. A recent study on persistent global acute malnutrition, found that several respondents raised issues of society and politics as causes. The study report is clear about the importance of analysing basic social, political and economic causes to better understand persistently high levels of acute malnutrition, and about the need to look beyond simplistic interpretations of the UNICEF framework (Young and Marshak, 2018).

In non-emergency contexts, there have been calls for a revival of social nutrition. A recent article in *Public Health Nutrition* argues that the social needs to be seen as central to nutrition science. Schubert et al., (2011) argue in particular for more attention to agency. They also highlight that socially-engaged nutrition studies tend to be done by sociologists, anthropologists, and geographers, and that they tend to be qualitative or ethnographic rather than quantitative. Nisbett (2019), too, argues the need for nutritionists to engage more with insights from the critical social sciences to move beyond the biomedical; for example, learning from food systems models, ecological and adaptive systems models, biopolitics, or new materialist approaches. Anthropology, development studies and politics researchers have criticised medicalised approaches because the focus on behaviour and biotechnology takes attention away from government policy and the food industry itself in causing malnutrition. They particularly raise issues of conflict of interest arising from business involvement in solving malnutrition (Street, 2015, Patel et al., 2015, Sathyamala, 2016b, Sathyamala, 2017; Jaspars, 2018). Social and human rights movements are advocating for re-engaging nutrition with society and advocate the necessity of seeing nutrition as a profoundly political issue, which touches on rights, livelihoods and health (Prato and Bullard, 2014, Civil Society Forum, 2014).

To conclude, the concept of social nutrition is largely a historical one and has been defined in different ways. Its role needs to be redefined in light of today's famines and humanitarian crises (including protracted crises) and the considerable obstacles in bringing about a shift away from medicalised approaches. At the same time, there are calls for a more socially- or politically-oriented approach to nutrition from nutritionists and human rights activities, and from researchers in social science disciplines such as anthropology, development studies and politics.

2. How can social nutrition strengthen accountability for mass starvation?

Accountability for mass starvation entails making mass starvation unthinkable; for political and military leaders in a position to inflict or fail to prevent starvation to unambiguously act to avoid it. This will happen when the public demands it and the law is fit for purpose (de Waal, 2018). One element of the strategy is therefore to sharpen the conceptual contours and practical application of the relevant international law, and how criminal and humanitarian law might be used to prosecute individuals for crimes of starvation.⁷ Another is to find a means of gathering and analysing evidence of actions which can lead to mass starvation, such as the way in which wars are being fought, and the process by which these actions lead to extremely heightened levels of acute malnutrition and mortality. A socially or politically-oriented approach to nutrition may have a role in this. As indicated in the previous section, this concept needs to be refined in light of today's famines and protracted crises.

2.1 Overview of famine, malnutrition, and legal instruments

The most severe famines, with the highest malnutrition and mortality rates, have been a result of conflict and deliberate war strategies to undermine the opposition's livelihoods, including the denial or restriction of food supplies, and of displacement. Examples of great or calamitous famines in recent history include: Ethiopia and Sudan in 1984, Sudan (South: Bahr El-Ghazal) in 1988, Somalia in 1992-93, Sudan (South) in 1998, Democratic Republic of Congo in 1998-2002, Darfur (Sudan) in 2003-5, and Somalia in 2011 (de Waal, 2018). Such famines have been defined as those resulting in more than 100,000 or one million or more excess deaths (Devereux, 2000; de Waal, 2018). With the exception of Sudan in 1984, all famines mentioned in this paragraph were linked to war. These famines have also been associated with some of the highest acute malnutrition levels recorded. Table 1 shows that in most great famines, acute malnutrition levels are many times the generally accepted WHO threshold for emergencies of 15% (WHO, 2000).

Table 1 – Examples of prevalences of acute malnutrition in situations of mass starvation

Date	Country	Prevalence acute malnutrition	Specific location
1985	Ethiopia	70%*	Korem
1988	Sudan	36%*	IDP South Darfur
1992-93	Somalia	70%**	Baidoa, Bardera, Huddur
	Ethiopia	44%***	Ogaden Region, Gode town, IDPs & refugees
1998	Sudan (South)	48-80%***	Ajiep, Gogrial County
		71.6%***	Wau IDPs
2004	Sudan	21.8%****	Darfur
2011	Somalia	19.6-55%*****	Crisis-affected areas

*CDC 1992; **Cambrezy, 1997; *** Young et al., 2004; **** WFP and UNICEF, 2005; ***** Salama et al.(2012).

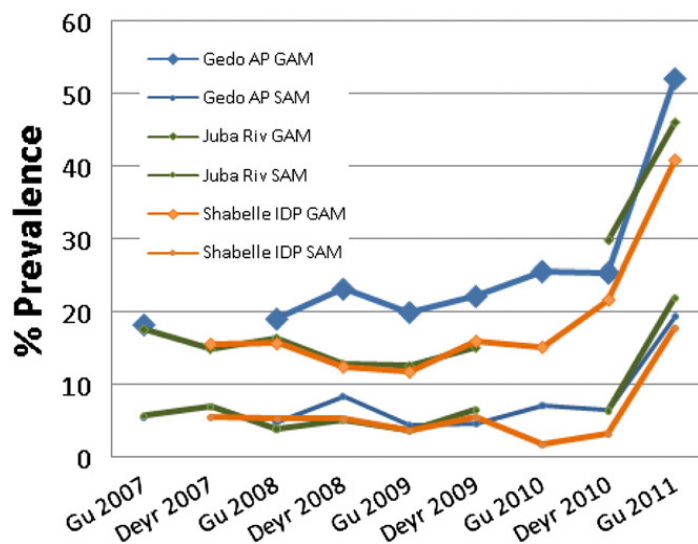
Crude mortality rates are also frequently well above the emergency threshold of 1/10,000/day, for example 16/10,000/day amongst Ethiopian refugees in Sudan in 1985 90/10,000/day amongst displaced populations in Sudan in 1988 and 26/10,000/day in South Sudan in 1998 (CDC, 1992; Howe and Devereux, 2004). Refugee and displaced contexts often present situations of the great-

⁷ This is what the 'Accountability for Mass Starvation' project sets out to do. See: <https://starvationaccountability.org/>

est severity (see also Moloney et al., 2011⁸ on Somalia more recently). These highly elevated acute malnutrition and mortality rates illustrate the qualitatively different nature of great or calamitous famines and the exponential increase in malnutrition and mortality when a crisis affects all underlying causes simultaneously. A recent example is the sudden (and apparently exponential) increase in the most recent famine in Somalia (Salama et al., 2012). See Figure 3 below.

Conflict remains the most common cause of hunger, acute malnutrition and mass starvation. The 2015 report on the Global Hunger Index found that countries which scored highest were those affected by conflict (although note that the score could not be calculated for many conflict affected countries due to limited data) (International Food Policy Research Institute, 2015). In war-ravaged South Sudan, prevalences of acute malnutrition were between 23 and 39% when famine was declared in 2017 (Maxwell et al., 2019). A study on persistently high levels of acute malnutrition in protracted crises also concluded that such conditions were often found in complex emergencies, often associated with conflict (Young and Marshak, 2018).⁹ In their interviews, Young and Marshak (2018) found four overlapping perspectives on basic causes of persistently high levels of acute malnutrition: 1. Protracted war, conflict and insecurity, 2. Poverty and inequality, 3. Governance of natural resources, and 4. Migration and displacement.

Figure 3 - Trends in prevalence of global and severe acute malnutrition in selected areas of southern Somalia, 2007-2011



Source: Salama et al. (2012).

In the most severe famines the destruction of livelihoods is a deliberate political and military act, or the result of a failure to act, in particular when it is known that war strategies are leading to the starvation of civilians. Macrae and Zwi (1994) divided these into acts of commission, omission and provision. Acts of commission are attacks on production (agriculture and livestock, and items needed to maintain them), markets and the restriction of movement; i.e. blocking of people's attempts to access food or preserve their livelihoods. Acts of omission include failures to act, such as the obstruction of relief or failure to use local reserves to feed civilians affected by conflict. Acts of provi-

⁸ Note that in the Somali famine of 2011, the relationship between malnutrition and mortality varied widely between different affected populations.

⁹ Although note that persistently high levels of acute malnutrition were also found in some non-emergency contexts, such as India, Pakistan and Bangladesh.

sion entails the selective provision of food for one side of the conflict, or its supporters. Importantly, as Keen (1994) has shown in Sudan, famine has beneficiaries as well as victims. The restriction of food and other items essential to survival may benefit the government, e.g. when used in siege tactics, but also merchants benefit from increased food prices and farmers may benefit from cheap labour from the forcibly displaced (ibid). These benefits include those gained from the manipulation of food aid, which continues to the present day (ibid.; Jaspars, 2018).

A number of populations are at risk of mass starvation today: including in Yemen, South Sudan and Syria; all of which are in the midst of war (de Waal, 2018). As de Waal (2018) suggests, the resurgence of mass starvation is not only a result of an increase in conflict globally, but also a global trend of counter-humanitarianism. This is linked both to the War on Terror and a return to geopolitical objectives of aid, national security, a rise in authoritarian governments, and – in some cases – a reluctance in declaring famine or humanitarian crisis on the part of the international community for fear of losing access. In Somalia, for example, US anti-terrorism legislation delayed the 2011 famine response and continues to limit humanitarian operations today. In Yemen, the war between the US- and UK-supported Saudi coalition and Iran-backed Houthi rebels has led to a severe humanitarian crisis. Saudi bombing of markets, sieges, and destruction of roads and bridges, combined with coalition closure of airspace and a naval and land blockade led to a total collapse in food supplies. In South Sudan, the IPC team hesitated in declaring a famine in 2016 because it feared government reprisals (ibid.). Similarly, in Sri Lanka, Sudan, and Syria, government denial of aid and access to crisis-affected populations in rebel-held areas was not challenged thus inadvertently strengthening the government's hand (Keen, 2014; Martinez and Eng; 2016; Jaspars, 2018).

Famine is a result of political decisions and of power relations. If this is the case, we need to ask not what causes famine, but how were acts of starvation committed and by whom? (Edkins, 2007, de Waal, 2018). If mass starvation is the result of a political process or of a series of political acts, it needs to be seen as a crime. Once considered a crime, the language changes from causes and solutions, to responsibility, perpetrators, bystanders, victims and survivors (Edkins, 2007). It also leads to prosecution. The legal instruments available include the Rome Statute of the ICC (International Criminal Law or ICL) and International Humanitarian Law (IHL). Article 8(2)(b)(xxv) of the Rome Statute, for example, provides that “*intentionally* using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival, including wilfully impeding relief supplies as provided for under the Geneva Conventions” is a war crime. IHL also prohibits the starvation of civilian populations and, like ICL, states that the parties to the conflict have an obligation to allow and protect speedy and unhindered access to humanitarian workers and the distribution of supplies for civilians.¹⁰ Sieges and blockades are considered unlawful if the intent is to starve the population.

This implies that the law recognises the multi-dimensionality of starvation, i.e. not just limited to the deprivation of food directly, but also of other objects indispensable to survival. This, in turn, has the potential to link a legal response to the underlying causes of malnutrition and mortality. In other words, to food insecurity (e.g. food, markets, land, livestock), social networks and caring behaviours (e.g. relations between groups, distress migration, family separation), health care and the environment (e.g. medicine, shelter, blankets), and the things that link or influence all three, such as access to water, displacement and restriction of movement, depending on the severity of crisis.

10 Three main principles of IHL. 1. Distinction between civilian populations and combatants. 2. Proportionality. Parties to the conflict may not launch an attack on military objectives if it will result in excessive civilian deaths. 3. Precaution. Take all measures to protect the civilian population.

Finally, it should be noted that the political acts and decisions that result in high levels of malnutrition and mortality are not limited to situations of mass starvation. Acts of omission, commission and provision occur on an on-going basis in protracted crises and evolve over time, but are rarely revealed by existing information systems. Populations who have suffered mass starvation or are at risk of doing so (for example in South Sudan, Yemen, and Syria) often already suffer protracted crises associated with persistently high levels of malnutrition. Young and Marshak (2018) found that acute malnutrition in populations in South Sudan, Chad, Niger and Bangladesh rarely went below the 15% mark. Furthermore, it is often the same politically marginalised populations which suffer repeated famines, particularly in wars fought along ethnic lines (all the wars mentioned here). The riverine and inter-riverine populations in Somalia (Bay and Bakool regions) are a case in point. They suffered the most severe famines in 1992 and in 2011, with the highest malnutrition and mortality rates, but these populations also suffered severely elevated acute malnutrition levels during periods of crisis in 2000 and 2008 (Jaspars, 2000; Jaspars and Maxwell, 2008; Maxwell and Majid, 2016). One question is therefore how to distinguish situations of protracted crisis with persistently high levels of acute malnutrition from situations of famine and mass starvation, or rather, how to identify the point when protracted crisis turns into mass starvation.

2.2 Social nutrition, famine and strengthening accountability for mass starvation

Social nutrition could potentially provide the analytical link between structural causes or famine acts, and the process and outcome of heightened malnutrition and mortality. It can analyse severity through estimates of the prevalence of malnutrition and mortality, and by examining the interaction between different underlying causes. More importantly, it has the potential to explore when and why the underlying causes of malnutrition become so elevated that, in combination, they generate the levels of malnutrition and mortality found in the most extreme famines or mass starvation.

For this, it faces at least three challenges. Analysis would need to: first, explicitly link famine acts and underlying causes, and by understanding the process leading to malnutrition and mortality promote political accountability; second, determine what constitutes plausible evidence from which to infer causation; and third, overcome the considerable political, economic and scientific incentives that are currently promoting a medicalised approach to nutrition. In effect, it needs a paradigm shift in nutrition.

Few attempts to classify famine link it with accountability. The Integrated Phase Classification (IPC) and its predecessor, Howe and Devereux's famine intensity and magnitude scale (Howe and Devereux, 2004), attempt to classify severity of food insecurity and famine using indicators of food security, malnutrition and mortality. While the Howe and Devereux scale went some way in trying to promote accountability, it is telling that the latest version of the IPC manual (FAO, 2012) states that the aim is to produce 'technical consensus,' and that the government is one of its stakeholders – which is likely to be problematic in situations of civil war and repression.¹¹ The manual states that it combines food security, nutrition and livelihoods frameworks, but does not discuss the basic causes of malnutrition. It relies almost entirely on quantitative data and assumes an almost linear progression in severity. Howe and Devereux (2004), in contrast, do distinguish between famine and severe famine, place much greater emphasis on the social and political dimensions of famine, and examine the implications for accountability. Acts of commission, or where famine is used as a weapon of war, they write, could in theory lead to referrals to the ICC for crimes against humanity. They also argue that accountability needs a clear definition of famine and clear responsibilities for famine

¹¹ Note that the IPC was originally used when in Somalia when there was no government.

prevention, but that the latter is made difficult by the diffusion of responsibilities between national and international actors.

Proving causality is difficult, whether in a legal or in a statistical sense. In the 2000s, nutrition studies largely analysed statistical associations of malnutrition with, and the prevalence of, immediate risk factors. This cannot prove causality and does not involve an examination of structural causes, or the consequences of certain political acts or power relations. The latter are more likely to be examined by anthropologists, political analysts and other social scientists through qualitative enquiry or ethnography, but such evidence is unlikely to be accepted as proving causality by epidemiologists or medical nutritionists. In putting the case for prosecution for starvation crimes, however, the ability to demonstrate causal links between political acts such as sieges or blockades and the consequential deprivation of items that leads to starvation is necessary. ICL permits a conclusion on causality from circumstantial evidence as long it is the only reasonable inference available from the evidence taken as a whole. In theory, this sounds similar to ACF's nutrition causal analysis. The aim of ACF's nutrition causal analysis is to determine causal pathways and to develop evidence-based consensus around plausible causes of under-nutrition. However, it currently considers basic causes as background information, and in practice, does not link it with underlying or immediate causes of malnutrition. A key question arising from current approaches to nutrition is therefore whether evidence permissible for prosecution may in fact be accepted as proving causal links by medical nutritionists. Alternatively, linking nutrition with legal instruments to prevent starvation may lead to new ways of gathering plausible evidence on the process that ultimately leads to heightened malnutrition and mortality. An examination of the structural causes of malnutrition needs to be a starting point. This includes an examination of how famine acts lead to hugely elevated levels of malnutrition.

There are a number of reasons why nutritionists rarely examine basic or structural causes of malnutrition (or of food security and even famine). First, nutritionists and other aid workers often consider these causes beyond their control (Young and Jaspars, 2006; Jaspars, 2018). The importance of being aware of these causes has been stressed only occasionally. Young and Jaspars (2006), for example, urge the importance of examining structural factors because they reflect the overarching processes that are shaping and influencing the nutrition of communities, and possibly the preconditions for recovery from emergencies. Young and Marshak (2018) have more recently called for a more systematic exploration of basic causes to understand persistently high levels of acute malnutrition, and Jaspars (2018) for a reconsideration of nutrition within its social and political context to critically examine contemporary nutrition approaches. Well before this, Pacey and Payne (1985: 203) wrote that nutritionists need to be aware of the political and social dimensions of the food system because, with a degree of independence, they might take up an advocacy role on behalf of the poor.

Second, an analysis of the structural causes of malnutrition can be seen as a political exercise and may have political repercussions, particularly when used to strengthen accountability for mass starvation. Such an analysis requires explicitly linking war strategies or obstruction of aid, with malnutrition and mortality as an outcome by analysing the link between basic, underlying and immediate causes, and the interactions between them. Assigning responsibility and intent will take this even further. Pacey and Payne (1985: 198) discuss some of the dilemmas that analysing the social and political dimension of nutrition creates in relation to advocating for 'problem-solving education,' rather than traditional nutrition education. According to Freire (the originator of this approach), a problem solving approach involves people in a reflection on their situation and it should lead to

revolutionary action for change. A resulting interest in social change is therefore inevitable, as are its political repercussions. At the same time, the fact that social approaches may lead to political repercussions can also be taken as an indication of the relevance of the programme, whereas the more conventional forms of nutrition intervention – e.g. nutrition education – are so ineffective that no one could object. However, if a relevant programme is withdrawn or prevented because it is so controversial, it does not have an effect. Unless local organisations are strong enough to take on the political repercussions, a balance needs to be reached. Howe and Devereux (2004) also state it is important to ensure that strengthening accountability for famine does not create perverse incentives, e.g. just trying to prevent populations from crossing the malnutrition or mortality threshold for famine rather than addressing the underlying causes.

In Darfur, Sudan, the use of a medicalised approach to nutrition can also in part be explained by its apolitical nature and therefore enabling aid organisations to maintain a presence in Sudan (Jaspars, 2018). Darfur, in fact, warrants further investigation as to why the referral by the UN Security Council to the ICC for a situation described as a situation of mass atrocities including possibly genocide, has not, to date, led to justice. It was the first time that anyone responsible for a situation described as famine faced the prospect of being brought to justice by the ICC (Edkins, 2007). Almost immediately after the ICC issued an arrest warrant for war crimes, crimes against humanity and genocide, however, the Sudan government expelled thirteen INGOs and revoked the licenses of three local NGOs. It accused them of violating their humanitarian mandates by, for example, false reporting and cooperating with the ICC (Humanitarian Aid Commission, 2009: 4). For international organisations that remained, access to conflict affected populations got worse, while President al-Bashir continued to be able to travel freely within the region. The issuing of an arrest warrant for al-Bashir was highly controversial among humanitarian agencies. They were concerned that the ICC actions jeopardized their activities and hence the wellbeing of the victims, and argued that prosecution would not therefore be in the interests of the victims. They also criticized the factual claims of the ICC prosecutor, for exaggerating on-going mortality levels (Brauman 2010). Prosecutorial overreach discredited a potentially valuable exercise in seeking accountability for starvation crimes. In December 2014, the ICC prosecutor shelved the investigation into war crimes in Darfur due to lack of action by the UN Security Council in pushing for arrests (World Bulletin, 2014). Gathering and using evidence to strengthen accountability for mass starvation clearly needs a better-considered approach.

Third, the interests for maintaining the status quo are very powerful. These include political, economic and logistical motivations. Any consideration of the potential for social nutrition to strengthen accountability for mass starvation also needs to consider why such an approach has repeatedly been marginalised. As indicated above, an approach that identifies the multiple causes of malnutrition, including political, will be controversial. In contrast, a medicalised approach to nutrition is more acceptable as it focusses on disease or individual behaviour rather than the governments unequal development or war strategies (and their international sponsors). In addition, most aid organisations have signed up to the SUN movement and the standardized package of nutrition interventions it promotes. A standardized package of biotechnical interventions also promotes the interests of business, and business involvement is actively promoted by nutritionists, aid organisations and their donors, despite the conflict of interest this entails. Sathymala (2017) has additionally noted the conflict of interest of many of the authors of the *Lancet* papers. A change in approach, in particular establishing responsibility, will also highlight that current medicalised approaches implicitly assign responsibility to mothers or households themselves for causing malnutrition rather than those who obstruct access to items essential to survival.

Furthermore, in changing to a more socially or politically oriented approach it may also become apparent that medicalised and quantitative aid practices can be seen as making aid agencies complicit in hiding the political acts that cause food insecurity or famine (Jaspars, 2018). There are also logistical and financial reasons for maintaining the status quo: in situations of limited access or funds it is difficult to apply flexible and context-specific approaches (Jaspars et al., 2018). For the accountability for mass starvation project, a key issue is therefore not only that it requires a paradigm shift in nutrition (or at least recognition of social nutrition as a discipline), but also that it needs to find a way to overcome the political and economic benefits of a medicalised approach to nutrition, or find political and economic incentives to promote a social nutrition approach.

CONCLUSIONS

This report has shown that a social nutrition approach, as such, does not really exist at present, in particular in situations of emergencies or famine, and that there are considerable obstacles in attempting a revival or re-invention. On the other hand, if some form of socially or politically-oriented approach to nutrition can be revived or newly developed, there is a possibility it could assist in providing evidence of the process and pathways between famine acts and the outcome of heightened levels of malnutrition and mortality. This evidence is needed to prosecute for crimes of starvation. The accountability agenda, in turn, could contribute to a revival of a social nutrition theory and approach in situations of humanitarian crisis and famine. The accountability agenda focuses on the actions and processes of inflicting deprivation. The accompanying task for the nutritionist is (a) social and (b) forensic. It is social in that it must examine the community or population as a whole, not just individuals. It is forensic in that it requires an examination of not only the outcomes (extent of deprivation) but also how that state was arrived at: the processes whereby people were deprived of sufficient (and sufficiently good) food, water, healthcare, and caregiving.

The historical analysis of social nutrition in this paper has shown that such an approach has usually emerged at – or following – times of famine or crisis. A social nutrition approach was created in the 1930s, after the first world war and the economic depression that followed; in the 1970s, after the global food crisis of 1974 and famines in Sub-Saharan Africa; and in the 1980s and 1990s and following refugee crises and famines, and increased involvement of emergency nutritionists and aid organisations at that time. These social nutrition approaches co-existed with a more dominant medically-oriented approach but in the past two decades or so, social nutrition approaches – particularly in famine and emergencies – have largely disappeared. The paper has discussed a number of reasons for this, including scientific advances in analysis and treatment of malnutrition, which have tended to focus on the medical and quantitative, the development of a range of commercial specialised nutritional food products – and the funds allocated for scaling up a standardised package of interventions. In addition, as intervention in political crises and for hard to access populations has become more common, a standardized medicalised and apolitical approach is easier and less controversial. A focus on feeding and hygiene behaviours at the household level hides politics and leads a standardised package of treatment and education which is easier to implement and requires less access than context-specific interventions.

At the same time as ongoing medicalisation of nutrition, however, there have been calls by some nutritionists, human rights activists, anthropologists, development specialists and political scientists for a more socially or politically-oriented approach to nutrition. The reasons for this vary from: the return of severe famines, persistently high levels of acute malnutrition in some popula-

tions, and crises in food systems due both to climate change, ecological crisis and the industrialisation of food products. The question is what social nutrition should look like, what its purpose would be, and in the case of mass starvation whether and how it can be linked to the legal instruments that prohibit starvation, and who should be doing this. This paper aims to provide the basis for these discussions.

Past literature and approaches suggest a social nutrition approach consists of a population-level analysis, an examination of the socio-economic and political factors or acts that cause famine and humanitarian crises and that obstruct response. It includes analysis of the process leading to deprivation (for some but not for others), and the interaction between multiple causes in leading to highly elevated levels of malnutrition and mortality. Other aspects have included a focus on livelihoods, food systems, and participatory or qualitative methods of enquiry. Another feature is analysis of the actual political and economic effects of existing interventions, in particular the role of business. It also raises the possibility that at least some nutritionists need to become social or political activists.

On the issue of purpose, it will be necessary to determine whether a general social approach to nutrition can work for all contexts. Is the UNICEF framework still valuable, or do its various adaptations and depoliticisations mean it has been too debased for a genuinely social or political approach? A return to the document accompanying the original UNICEF framework may prove instructive. The originators were clear that it is a deliberate abstraction of a complex reality, and that it functions as an entry point. At the same time, the model clearly incorporates basic causes such as the unequal distribution of resources in society, power structures, access to legal systems, and issues of historical marginalisation, which covers many of the basic causes in today's crises. In addition, a closer look at how social scientists examine the causes of hunger and malnutrition may prove valuable and this needs a more in-depth review of anthropological, sociological and political approaches to hunger. In the case of mass starvation, an additional element is to examine how linking nutrition with legal instruments may lead to new ways of gathering plausible evidence on causation and the process that ultimately leads to heightened malnutrition and mortality. These issues need to be discussed between nutritionists, development and humanitarian specialists, anthropologists, political scientists, and legal experts. A new approach is necessary to strengthen accountability for mass starvation, and because current approaches are not actually reducing acute malnutrition levels.

In addition, there will be a need for further analysis of malnutrition and mortality relationships, in particular, in situations of crisis and famine, and to test the proposed theory on the interaction between different underlying causes for a number of famine situations. Key will be to examine the link between different famine acts and decisions, underlying cause and heightened malnutrition and mortality, and what constitutes plausible qualitative evidence from both a legal and nutritional perspective. A key issue will be to examine the temporal dimension that distinguishes situations of protracted crisis with persistently high levels of acute malnutrition from situations of famine and mass starvation, or, rather, how to identify the point when protracted crisis turns into mass starvation. Again, this should not be done by nutritionists alone.

Finally, each famine and crisis context will need careful examination of the political, economic and logistical interests in maintaining the status quo (i.e. medicalised nutrition), and the obstacles towards a more politically-oriented approach. Part of this will need to be an examination of any political and economic incentives for promoting a social nutrition approach as well as the limits of a social nutrition approach in facilitating prosecutions for famine crimes.

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