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## The Question of Food Security

GEOFFREY LAWRENCE AND PHILIP MCMICHAEL

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### Introduction

In March of 2012, after years of privileging the term ‘food security’, the FAO agreed to introduce the concept of ‘food sovereignty’ into its public deliberations. In 1996 at the Rome Food Summit, the international peasant coalition, La Vía Campesina, stated that ‘food sovereignty is a necessary precondition of genuine food security’. Food sovereignty is about democratic control over national food policy and the right of people and communities to control how and what food is produced, and for whom. It was originally coined as a strategic concept to politicize the idea of ‘food security’, which originated in the UN system, but was appropriated by neo-liberalism. Under neo-liberalism it equated to the supply of food from world ‘granaries’ via transnational corporations. In contrast, food sovereignty encapsulates the view that nations should have the right to consume, rather than trade, what they produce. An important claim of the food sovereignty movement is that small farmers or peasants can ‘feed the world and cool the planet’.

Under the neo-liberal regime, where WTO rules mandate liberalization of commodity trade and the reduction in farm protection across the state system, a substantial portion of the global South has become food dependent. In effect, countries no longer have sovereignty over food policy. While the EU and the US managed to protect farm subsidies via the WTO ‘box system’, Southern states, in particular, have discovered they were unable to protect their farm sectors from food imports from the Northern granaries that have been artificially cheapened via subsidies. Meanwhile, structural adjustment policies intensified the reduction in farmer support mechanisms such as rural credit and marketing boards (Patel, 2007). The principal consequence of this cheap food regime (Rosset, 2008) has been the displacement of small-holders, and a serious reduction in farming capacity, which was exposed during the 2007–2008 ‘global food crisis’: indebted farmers were largely unable to respond by producing more food (Patnaik, 2008; GRAIN, 2012). The resulting food insecurity has refocused attention on the condition of the more than 40% of the world’s population dependent on agriculture, and who produce over 50% of the world’s food (ETC Group, 2009). It is this material reality, in addition to the global agrarian crisis exacerbated by ineffectual neo-liberal policies of market-led food security, that

Geoffrey Lawrence is Head of Sociology and Criminology at the School of Social Science and Food Security Focal Area Co-Leader at the Global Change Institute, University of Queensland, St. Lucia Campus, Brisbane, QLD 4072, Australia; email: <g.lawrence@uq.edu.au>. Philip McMichael is Professor at the Department of Development Sociology, Cornell University, Ithaca, NY 14850, U.S.A.; email: <pdm1@cornell.edu>.

informs the shifting balance of forces in the FAO regarding the salience of (rights-based) 'food sovereignty' versus (trade-based) 'food security'.

The stand-off between 'food security' and 'food sovereignty' began to break down in the crisis conjuncture of the mid- to late 2000s, with rising food/energy prices, rising hunger rates, financial meltdown and recognition of wide-scale ecological degradation (Lawrence et al., 2010). During this period there was a series of important reports, as markers – the most important of which were: the Millennium Ecosystem Assessment (2005), the *Stern Review* (Stern, 2006), the IAASTD report (2009), the World Bank's *World Development Report* (2007) and the *World Food Summit Memorandum of Understanding* (FAO, 2008). While each had its own focus, all shared a common concern with the important link between a deteriorating environment and food insecurity. The UN and IAASTD Reports, in particular, underscored the centrality of agriculture to ecological stress – as problem and solution, respectively.

Introducing the 'environmentalist's paradox' the Millennium Ecosystem Assessment noted:

'Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber, and fuel. This has resulted in a substantial and largely irreversible loss in the diversity of life on Earth... These problems, unless addressed, will substantially diminish the benefits that future generations obtain from ecosystems' (Millennium Ecosystem Assessment, 2005, p. 1).

Given that healthy ecosystems are essential to human life, the centrality of a sustainable form of agriculture to civilization is clear. And its centrality includes guaranteeing the right to food. Since neo-liberal governed markets have been shown to fall considerably short of their claim to provide global food security, there is now a growing scientific consensus that agro-ecological farming methods offer the most sustainable solution – in social and environmental terms (see Rosin et al., 2012). Small and medium-sized farms based on agro-biodiversity not only promise regeneration of natural processes (including sustaining soil and water health), but also sustain livelihoods for a considerable portion of the world's population, reducing pressure on jobless cities.

This is the approach recommended by the International Assessment of Agricultural Science and Technology for Development (IAASTD) in its report of 2008. This report, prepared by over 400 social and natural scientists and development practitioners, advocates a multifunctional role for agriculture in reducing poverty and social/gender inequality, stabilizing rural cultures, reversing environmental degradation, and reducing global warming. Stating that 'business as usual is no longer an option' in the face of multiple crises, the IAASTD questions the adequacy of an industrial-agricultural and transgenic-food approach to feeding the world, since markets fail to register the environmental and social harm arising from that model. Markets only feed people who possess the necessary purchasing power, and they are a minority of the world's population (Patel, 2007). Further, as global inequality deepens (George, 2010), more crop-land is used to grow animal feed and bio-fuels at the expense of staple grains (see also FAO, 2009). With respect to the current food regime, the IAASTD documents its unfavourable impacts on small farmers. It recommends ending subsidies for Northern surpluses and proposes financial rewards for environmental stewardship. It highlights the importance of national policy flexibil-

ity to balance the needs of poor consumers and small farmers (IAASTD, 2009, p. 10). Echoing the MEA, the Report recommends an integrative view of food, resource and nutritional security, emphasizing that reinventing agriculture as farming requires scientists (natural, social and health) to work with local farmers, governments and civil society organizations (IAASTD, 2009, pp. 9–10). These sentiments were also contained in the UK's Government Office for Science report *The Future of Food and Farming* (2011), where recommendations were made to contain consumer demand for resource-intensive foods and to improve the global system of food governance to achieve sustainable production outcomes.

Complementing the substantial literature on the greater overall productivity (and sustainability) of small-scale farming, an IAASTD contributor noted: a 'half-hectare plot in Thailand can grow 70 species of vegetables, fruits and herbs, providing far better nutrition and feeding more people than a half-hectare plot of high-yielding rice' (quoted in Leahy, 2008). Similarly, studies in Mexico found 'a 1.73 ha plot of land has to be planted with maize monoculture to produce as much food as one hectare planted with a mixture of maize, squash and beans. In addition, the maize-squash-bean polyculture produces up to 4 t per ha of dry matter for plowing into the soil, compared with 2 t in a maize monoculture' (Altieri and Toledo, 2011, p. 596). Several recent studies have concluded that the relative yields of organic/agro-ecological versus non-organic farming are sufficient to provision the current daily average consumption of calories across the world (Halberg et al., 2005; Pretty et al., 2006; Badgley and Perfecto, 2007; Altieri, 2010). Most notably, Catherine Badgley and colleagues examined 293 cases in a global data set finding that, on average, organic farming in the global North produces 92% of conventional agricultural yields, but in the global South organic farming produces 80% more than conventional agriculture (Badgley and Perfecto, 2007). Further, they found that sufficient food could be produced organically to feed the world, even without expanding farm land, and that leguminous cover crops could fix sufficient nitrogen to replace current applications of synthetic fertilizer (which, with over-use, undermine soil health). Organic fertilizer is cheap as it is produced on-farm (chemical fertilizer having risen in cost by 300% recently). And, since most inputs are on-farm and replenish soil and watersheds, organic/agro-ecological farming uses much less energy than industrial agriculture.

In order to strengthen and secure small farming, IAASTD recommends altering institutional arrangements to ensure agricultural multifunctionality, building trust and valuing farmer knowledge and natural and agricultural biodiversity, as well as seed exchange and common resource management systems (IAASTD, 2008, p. 4–5). IAASTD maps out a general strategy to strengthen food system resilience in the face of environmental crises – including promoting agro-ecological practices with 'triple bottom-line' goals: full-cost accounting to incorporate energy, health and environmental costs and, importantly, a rights-based framework rather than a market-centric organization of the agri-food system. The rights-based framework mirrors the food sovereignty principle of citizens consuming, rather than trading, their food. The UN Special Rapporteur on the Right to Food, Olivier De Schutter, advocates domestic production to reduce food dependency, noting there are 'approximately 500 million small-scale farmers in developing countries making them not only the vast majority of the world's farmers but, taking into account their families, responsible for the well-being of over two billion persons' (De Schutter, 2011, p. 13). Given the FAO's landmark decision to take food sovereignty seriously, it appears that there is a

discursive, if not an institutional, realignment underway in rethinking the meaning of – along with the mechanisms to promote and achieve – food security.

### **Articles in the Collection**

The broader issue of global food insecurity – in particular its causes, consequences and the policy options to attempt to ameliorate it – has been a focus of scholarly attention for decades, but has recently had a resurgence with the acknowledgement that a host of new drivers (including ‘land grabs’, peak oil, peak phosphorus, freshwater constraints, along with climate change; see Cribb, 2010; Ingram et al., 2010; Lawrence et al., 2010; Cotula, 2012; McMichael, 2012) are combining to compromise attempts by nation states to feed their populations. At the XXIV Congress of the European Society for Rural Sociology (ESRS), held in Chania, Crete, in August 2011, a Working Group on Food Security discussed many of these ‘drivers’ and their impacts. This collection of articles is largely drawn from those delivered at the conference and presents a critical assessment of various local- national- and global-level concerns relating to food security.

Duncan and Barling examine the activities of the UN’s Committee on World Food Security (CFS). They indicate that this body’s attempt to incorporate the interests of civil society organizations (that is, both social movements and non-governmental organizations) is consistent with neo-liberal desires to widen participation in global food governance. Yet, the so-called Civil Society Mechanism (CSM) that the CFS has adopted is viewed as an innovative means of bringing new voices to the table and as having the potential to challenge some of the excesses of neo-liberalist thinking that continues to dominate public discourse about food security. Indeed, the overall legitimacy of the future activities of the CFS will, the authors argue, be based upon the extent to which civil society organizations can alter CFS policies in the face of wider, hegemonic views from wealthy countries relating to the necessity for the adoption of agro-industrial solutions to world food production/supply problems. Duncan and Barling claim that the CSM, while something of an experiment, is a ‘politicizing, engaging and connecting’ mechanism that has the potential to strengthen the influence, at the global level, of the very groups most affected by food insecurity.

The ways in which agri-food research is ‘framed’ has a direct bearing upon its likely impacts – in this case in relation to food security. Rivera-Ferre argues that the framing of current bio-scientific research is influenced by how ‘development’ is conceived, along with a view of the role agriculture should play in development. She identifies two mutually distinctive framings – an orthodox framing, which, in separating the bio-sciences from the social sciences, conceives of hunger in a narrow, technical way and views solutions similarly – that is, in terms of increased applications of high-tech agribusiness technologies and management regimes. In contrast, the alternative framing, which incorporates rather than marginalizes the social sciences, views agri-food systems as part of a wider political, social and environmental milieu. As such, triple bottom-line thinking, which promotes the desirability of sustainable development, can be readily embraced. As Rivera-Ferre acknowledges, the two approaches generate different questions about, and research programmes aimed at addressing, food security. The orthodox, or official, framing is one that supports industrial farming, monocultures, long food supply chains and the top-down transfer of knowledge. It has failed to improve global food security. The alternative framing is of an agro-ecological sort – one which endorses polycultures,

holistic thinking, short food supply chains and the co-production of knowledge. It is one, Rivera-Ferre argues, that has the potential to empower local-level communities to address wider power structures and to move toward a sustainable development pathway for agriculture.

Michael Carolan introduces the notion of 'food-print' to highlight the current inadequacies in assessments of food security. He develops a Food and Human Security Index (FHSI) that moves well-beyond notions of a population's access to calories. Incorporated in the FHSI are measures of well-being, nutrition, economic concentration within the agri-food industries, food dependency and sustainability. In applying the FHSI, Carolan reveals that an economically poor nation such as Costa Rica is more food secure than countries such as the US, Sweden, New Zealand and Canada. While this may appear counter-intuitive, Carolan points out that if we fail to account for such things as the state of the environment, which produces food, along with food independence and nature of the marketplace (competitive or monopolistic), we lose sight of the overall capacity of a nation's people to feed themselves, now and into the future. Importantly, his FHSI index is one that captures, and 'rewards' countries for, food sovereignty – the very ideal of *La Via Campesina*. Carolan provides provocative and critical assessment, one that argues for an alternative means of moving beyond the calorie-focused approach of assessing food security. In doing so, he reminds us that food intake is only correlated with the welfare of society up to a point, after which it begins to affect society negatively: 'more' food rather than the right foods, he argues, can actually create food insecurity. The FHSI index is a sober reminder that new thinking – about the environment, social well-being and food independence – needs to be undertaken if we are going to evolve a meaningful measure of 'food security'.

In the article by Alia Gana, the focus turns to the food protests that have occurred in Tunisia since 2008. Globally, food prices soared during the period 2006 and 2008, provoking street demonstrations and riots in countries such as Yemen, Guinea, Mexico, Morocco and Haiti and Tunisia (Pechlaner and Otero, 2010). While food prices and availability were not the only issues of concern to Tunisians, they were a crucial rallying point for the social protest movement that precipitated the collapse of the Ben Ali regime. In a nation where some 36% of family household expenditure is on food, food price increases would prove to be a significant factor in the mobilization against the government. Policies in Tunisia had favoured providing 'cheap' imported staples – something that undermined local producers and reduced the capacity of the nation to feed its own people. But when international food prices increased, and were passed on to consumers, the people could neither afford these foods, nor call upon local growers to supply foods that would substitute for the imports. Consumer anger resulted in protest, while a farmer protest movement called for land reform. Gana locates the cause of the problems faced by Tunisia, as well as by many Arab nations, in relation to the impacts of policies of the IMF and World Bank. She argues that a new form of structural change – one that allows for increased control of economic resources by farmers at the local level – is needed if there is to be a truly democratic transition in Tunisia.

Stewart Lockie, Rebeka Tennent, Carmen Benares and David Carpenter ask the question of whether 'de-agrarianization' is an inevitable process in an uplands area of the Philippines. The authors conducted research in the upland area of Negros Occidental, a region dominated by small-holder production of sugar-cane, rice, corn, coconuts and tropical fruits. The farms are small, isolated and lacking in economic

resources. In a region where food insecurity combines with limited incomes from farming, there is considerable pressure for the removal of the least efficient producers and/or the adoption by farmers of various coping strategies (improving agricultural productivity, growing higher-value crops and working off the land). The authors found that farmers who adopted more agro-ecological approaches to farming (including organic production) were able to improve family livelihoods. Supplying local and regional markets provided for regular income while also allowing more food to be retained on-farm for family consumption. When cash and subsistence strategies were closely aligned, households benefited considerably. (This aside, there is a growing financial reliance upon remittances from family members who have left for paid work in the towns and cities.) The authors conclude that agro-ecology, in combination with greater market intelligence and access, and increased levels of formal education, can counter the forces leading to both 'de-peasantization' and to continued food insecurity. Re-peasantization, rather than de-peasantization, is a distinct possibility when new economic/political settings encourage producers to improve rural livelihoods.

The 'politics of re-peasantization' takes a slightly different focus in the paper by Elisa Da Vià. She traces the attempts by farmers in France, Spain and Italy to co-ordinate efforts in maintaining a system of self-managed seed production and distribution. Farmer-to-farmer seed swaps, along with the agro-ecological knowledge regarding the best conditions for plant growth are, she argues, examples of de-commodified exchange, which stands in contradistinction to the system of intellectual property that underpins the standardized, corporate-based, agro-industrial model of farming. Various networks have arisen that foster and bolster farmer-based knowledge. These networks hold training workshops, seed fairs and farm visits, with the specific aims of selecting the best local varieties and of ensuring farmers understand the agronomic conditions most favourable for their growth. They develop databases of seeds, farmer-level seed banks and conduct demonstration days to assist growers understand the benefits of those seed varieties (including biodiversity benefits). For Da Vià these activities are at the heart of the re-peasantization of European farming, where local-level producers are moving beyond EU regulations in asserting the right to farm in a manner that preserves agrarian culture and rural livelihoods, alongside biodiversity and biological resilience.

Behrooz Morvaridi explores the largely under-researched topic of the forms and intentions of philanthropic investment in agriculture. He is specifically interested in understanding the motivations of the Bill and Melinda Gates foundation in promoting the so-called 'New Green Revolution' in sub-Saharan Africa. Morvaridi argues that while it may appear to be overly cynical to doubt the desirability of forms of aid delivered by philanthropy, it is nevertheless necessary to examine the socio-political context in which that aid is provided. He argues that philanthropic activities conducted within global neo-liberalism have the explicit aim of drawing peasant producers into wider market relations and to foster the extension of corporate agribusiness. In sub-Saharan Africa, the endorsement of GM by Gates and others extends the corporate model of industrial farming – something that is inconsistent with improvements in local-level social justice, especially possibilities for a more equal wealth distribution. While GM is viewed by philanthropic and corporate capitalists as an essential mechanism to increase food production (and, so, reduce food insecurity), its extension throughout sub-Saharan Africa will do little to alter the causes of poverty and inequality. As such, philanthro-capitalists are addressing the symptoms

of hunger, not its structural bases, and their activities are not expected to deliver the sorts of outcomes that would lead to the alleviation of poverty, inequality and food insecurity among some of the poorest countries in Africa.

In the final article, Terry Marsden argues that the dominant approach to the framing of food insecurity contains assumptions about the indefinite supply of resources, the desirability of the increased applications of advanced technologies, and the importance of 'bio-economic' solutions to problems of hunger. This paradigm is one that embraces and endorses an older productivist logic, even if new terms such as 'sustainable intensification' are introduced to give legitimacy to the pursuit of bio-science. Marsden contrasts this with what he terms the 'eco-economic' paradigm. This is one in which ecological concerns are embraced within policies aimed at relocating agriculture as a central component of local and regional economic systems and communities. In this way, agriculture becomes place based and its governance can be of a more reflexive sort. Marsden considers that while the bio-economy is likely to remain entrenched in the lowland regions of Northern Europe, the eco-economy is gaining ground in upland regions – particularly in South-west England and Wales. Here, agriculture is responding to regional and city-based demands for sustainably produced foods, while also providing for enhanced biodiversity and amenity. He then examines the articulations between the two paradigms and shows how they are reconstituting space, albeit in a contested and contingent manner. This is a 'co-evolutionary' process, which, while not seeing the end of productivism, sees its excesses tempered. Marsden considers that we may be witnessing the growth of the 'ecological city region' – representing the re-ecologization of the spatial economy in which increasing public concern about the state of the environment, and concern about food production and quality, will ultimately alter regional agri-food trajectories. More reflexive and place-based forms of governance are a key to the geographic extension of agri-food multifunctionality and sustainability.

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