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The restructuring of food systems: Trends, research, and policy issues

Mustafa Koc[1] and Kenneth A. Dahlberg[2]
[1]*Department of Sociology, Ryerson Polytechnic University, Toronto, Canada;* [2]*Department of Political Science, Western Michigan University, Kalamazoo, MI, USA*

Abstract. This issue brings together a selection of articles based on presentations at two Conferences in 1997. The aim has been 1) to offer clearer and more understandable descriptions of the major trends and relationships that are involved in the structural transformations that are occurring in food systems at all levels; 2) to help develop better theoretical and conceptual tools to aid us in analyzing such restructurings and their dynamics; and 3) to clarify a number of practical issues facing those seeking to promote more sustainable and just food systems, especially at the local level. With only one exception, all the articles here focus on Western economies where food systems are highly commodified, globally integrated, corporate, and state structures have been restructured by a series of neo-liberal reforms in recent years. In pointing out the problems with these food systems, the articles also discuss various possibilities for structural reforms for more healthy, sustainable, just, and equitable food systems and societies.

Key words: Restructuring food systems, Globalization, Food systems theory, Food systems practice, Local food systems

Mustafa Koc *is Associate Professor of Sociology, and Coordinator of the Centre for Studies in Food Security at Ryerson Polytechnic University, Toronto. His research deals with globalization and local development, the restructuring of agricultural and food systems, food policy, and urban food systems (Koc, 1990, 1994; Koc et al., 1999). He is the secretary of the Research Committee on Agriculture and Food of the International Sociological Association and has been a member of the Toronto Food Policy Council.*

Kenneth A. Dahlberg *is Professor of Political Science and Director of Environmental Studies at Western Michigan University, Kalamazoo. He has had a long-term interest in food systems and sustainability (for summaries, see Dahlberg, 1993, 1996 and 1998) and the evolution of industrial institutions and values (see Bennett and Dahlberg, 1990). He has been active in the Agriculture, Food, and Human Values Society since its beginnings and is President-elect for 1999–2000.*

Introduction

This special issue has a number of sources. One is the long-term interest of both of us in food systems and their dynamics, particularly as they relate to issues of sustainability. Another is the clear increase in the interest on the part of scholars, practitioners, and advocates in these issues. This was manifested at two important recent meetings. The first was the International Conference on Sustainable Urban Food Systems organized by the Centre for Studies in Food Security in Toronto, Canada, May, 1997. The other was the joint meeting of the Agriculture, Food, and Human Values Society and the Association for the Study of Food and Society in Madison, Wisconsin, June, 1997. After these meetings, it occurred to us that it would be useful to bring together a cross section of food systems papers from both meetings.

The articles here represent that collection, but they by no means cover all the issues suggested by this special issue's title. Most of the attendees at these conferences came from the US, Canada, the UK, and Australia. The papers reflect this not only geographically, but substantively. Consequently, they deal much more with the issues facing advanced industrial countries than with those confronting the developing countries. The only exception to this is the article on Cuba.

It is fair to say that the articles are all in one way or another critical of the dominant institutions and trends in food systems, especially those toward globalization. A number of them stress the need to strengthen public sector commitments – at national, state/provincial, and local levels – to food access and rights. Many others present alternative approaches, often stressing the importance of strengthening local food systems

as a way of trying to provide not only buffers, but new organizational and institutional models for more sustainable and just food systems.

Just as not all regions are represented, neither are all fields. While a wide range of academic disciplines, administrators, practitioners, and a few advocates are represented, there are only a few natural scientists or agriculture production scientists. Articles in this collection offer a wide range of perspectives, a number of valuable insights, as well as clarifications of old and new concepts. All are laced with useful theoretical discussions and/or implications.

We will leave it to the reader to determine how far the articles presented move us toward the goal of this special issue: 1) to offer clearer and more understandable descriptions of the major trends and relationships that are involved in the structural transformations that are occurring in food systems at all levels; 2) to help develop better theoretical and conceptual tools to aid us in analyzing such restructurings and their dynamics; and 3) to clarify a number of practical issues facing those seeking to promote more sustainable and just food systems, especially at the local level.

A diversity of issues, themes, and approaches

The articles have been ordered alphabetically by author. The capsule summaries that follow are meant to offer some guidance to readers on the main themes and issues the authors address as well as to illustrate the variety of approaches they use. Clearly, only the main themes, issues, and questions dealt within each can be mentioned.

Patricia Allen addresses one of the major recurring themes in the issue: food security. Pointing out the contradictions in the current food system, she critically evaluates the attempts of the traditional anti-hunger and the newer community food security advocates in seeking new ways of defining and pursuing food security. She is particularly concerned with exploring the basic differences currently found between these two approaches. Her article, while sympathetic to local efforts to gain greater control over local and regional decision-making, also warns against a myopic localism that ignores the larger systemic causes of food insecurity. The latter can ultimately be dealt with only through state and national-level political struggle over rights, justice, and equity. It is here as well as at local levels that the two groups need to learn to work together to combine their relative strengths.

The article by Miguel Altieri et al., examines the ways in which urban agriculture – involving some 8000 gardens nationwide – has developed in Cuba, how it has been informed by agroecological approaches, and what the practical challenges are – from the agronomic to the organizational. The Cuban example offers us an interesting contrast with the rest of the case studies in this volume. Seeking food security through "comparative advantage" and its accompanying dependence on foreign trade, the Cuban case clearly demonstrates the risks and costs of such an approach. The historical dominance of large industrial mono-crop agriculture and the lack of local food systems have made responses to recent economic crises difficult. However, by not being fully integrated into the global food system, Cuba has had greater flexibility in pursuing its need for greater food self-reliance. It has also been able to draw upon knowledge and skills generated from investments in education and training over the years – something that has greatly facilitated the organization and diffusion of urban agriculture.

The article by Molly D. Anderson and John T. Cook also takes a look at practice – focusing on the range of groups seeking to promote community food security – and seeks to identify the kinds of conceptual issues that emerge out of such practice. They then outline the kind of theoretical work and research that is needed to better understand and guide such developments. The key issues they discuss include several questions: What are the differences between "local" and "community?" How do we define their boundaries? What are the relationships between the goals of equity and food security, ecological sustainability, and community development? What sorts of research strategies and practical indicators can be developed to better assess movement toward food security and the building of greater local self-reliance? How do individual, household, and local food security relate to state and national food and agricultural policies?

Jane Dixon argues that there is a need for a new "cultural economy" model for studying food systems. Neither commodity systems analysis nor the emerging work on the distribution and retail sectors fully capture the changing power realities in industrial food systems. Equally important, they neglect a range of important household, gender, and consumption issues that involve public and private sites of production, paid and unpaid work, and exchange mechanisms beyond the market. By examining in detail the theoretical strengths and weaknesses of focusing on particular sectors of the food system (like commodities and/or distribution and retail) as contrasted to her broader-gauge systems approach, she is able to show important lacunae. Her "cultural economy" approach brings in a range of new and relevant materials from anthropology, feminist analysis, household studies, and consumerism. There is, however, relatively little

on matters of sustainability or ecology and how they might relate to "cultural economy."

Brewster Kneen, a social activist, food systems analyst, and ethicist, uses a metaphor – "corporate genetics" – to focus his analysis of the restructuring of the global food system. His review of the global strategies of Monsanto and Cargill is based on his previous extensive studies of these global agri-food giants and offers insights regarding the similarities and differences in corporate restructuring of the food system. Kneen's article represents a sophisticated example of an inductive approach seeking to describe the ways in which these large organizations move society in unsustainable directions. It also very effectively reflects the moral outrage and increasing impatience of the new social activism.

Tim Lang, an academic with extensive experience in consumer advocacy reviews major historical changes in UK food policy and concludes that it is broad political choices that shape and determine the structure of food systems. The degree of food policy integration and coordination that was achieved during World Wars I and II is striking. In the emerging crises of today, he notes two macro trends: one involves increasing competition between producers, processors, retailers, and consumers for both markets and policy influence. In this competition, each sector is being restructured into fewer and larger players. This movement toward greater concentration combines with a more general movement toward centralization – both of which underlie the second macro trend: that of globalization. The continuing power of the long-established production sector in the UK and the serious damage to the environment and public health it produces point to the need for major political and policy reform. Academics, consumer groups, environmentalists, and public health groups need to build broad integrated understandings of the food system to be able to organize effective reform alliances.

A soil scientist and policy analyst by training, Rod MacRae has also been a key leader in the Toronto Food Policy Council. He argues that only a suite of major bureaucratic reorganizations – creating departments of food and food security at local, provincial, and national levels – will be able to overcome the current fragmentation of food policy making and regulation in Canada. A concomitant shift in priorities will be needed: from economic priorities to those stressing nourishment, food security, and environmental sustainability. To come up with the design for these new departments, MacRae draws upon ecological principles, organizational theory, and food security – each of which stresses macro analysis of systems, integration, and transdisciplinary approaches. Two case studies – bovine growth hormone and consumer information on food and agriculture – are used to illustrate current Canadian policy. They are then reviewed in terms of how they would be handled in his proposed departments, showing how the resulting policies would be different. Reorganization is to be accomplished in three stages, over a fifteen-year period. The clear message here is that food systems thinkers and advocates need to engage in long-term strategic planning.

The historic obstacles to such planning – at least in the US – are detailed in the article by Kameshwari Pothukuchi and Jerome L. Kaufman, who teach and do research on planning. The invisibility of food systems for urban planners has its sources in the "urban/rural" dichotomy, in government bureaucracies and programs that mirror this, and in the cheap energy and technological changes (especially refrigeration) that have made long-distance transportation of food easy and inexpensive. A review of planning criteria makes it clear that food system planning is as logical and needed as other major types of urban planning. The pros and cons of three options for introducing such planning are explored: creating city departments of food; creating city food policy councils; and integrating food into city planning departments. Whichever approach is pursued, they stress that it will take both political pressure and political leadership to insert food systems into the urban agenda – something that will be difficult as long as the middle classes see no crisis.

Graham Riches, a social worker, has had a long interest in policies relating to community development and hunger. In his review of the decline of food security in Canada over the past decade, he concludes that a significant element required for its re-establishment is full implementation of the right to food – something the Canadian government has ratified in various international agreements and declarations. He claims that government's failure to recognize these human rights issues, the increasing commodification of welfare, the corporatisation of food, and the depolitization of hunger by governments and the voluntary sector constitute major obstacles to food security. After reviewing the important linkages between job security and food security, he argues not only for greater national and provincial support, but increased local democratic control over these matters. He also stresses the need for social policy analysts to incorporate the politics of welfare, food security, and human rights into their research and policy analysis.

Penny Van Esterik uses a threefold mirror (the right to food, the right to feed, and the right to be fed) to present a stimulating and kaleidoscopic pattern of issues. Drawing upon her anthropological background, a human rights emphasis, and a deep concern for the strong gender aspects of food, the article challenges

many conventional views. In addition, it also offers a particularly strong critique of theories based upon assumptions of linearity, functional specialization, and neoclassical economics. Such narrow approaches, and their dichotomization of food issues between public and private sectors, formal and informal economies, and production and reproduction not only cloud our understanding of food issues, but reinforce social structures that greatly limit the much-needed input of women into food policy and global food regimes.

Key trends and effects of globalization

Each of the authors is responding in their own way to a diversity of institutional and social trends that are gathered into that broad and increasingly popular concept: globalization. The most visible impacts of these trends include: 1) an increasing exploitation of large segments of society as manifested in increasing inequalities, poverty, hunger, poor health, and loss of cultural diversity; 2) increasing exploitation of the natural environment, which is manifested in increasing pollution, resource losses and degradation, and loss of biodiversity; 3) an increasing loss of national, state, and local political power as concentrations of economic and corporate power increase, with a corresponding reduction of democratic power and social controls.

What are some of the major sources of these trends and what do they mean for food systems? Clearly, the intensification of global economic relations, as well as the restructuring of the corporate economy and the state have introduced such dramatic changes or potentials for change that some observers even consider the last two decades of the twentieth century to be a transitional period from one distinct phase of capitalist development to a new one (Amin, 1997; Bonanno et al., 1994; McMichael, 1996). Academics debate among themselves what might be the best analytical approaches and labels to capture the main tendencies of this era (post-Fordist, post-industrial, post-modern, or post-fossil fuel). This divergence reflects both different intellectual traditions and the amorphousness of the emerging structures and institutions of a global economy. Despite their different theoretical perspectives and methodological approaches, most agree that expansion of commodity relations, integration of domestic markets, the global division of labor, and the restructuring of the state lead to an intensification of linkages and interdependencies among different parts of the world. At the same time there is a growing concern that modern industrial society is not sustainable – as witnessed by the extensive literature on such issues as global warming, the loss of genetic and biological diversity, and environmental degradation (Rayner and Malone, 1998; Wilson, 1992; and Turner, 1990).

Globalization of agri-food systems has been an increasingly emergent process for the last five centuries. In the course of this period, a global expansion of commodity relations has destroyed, transformed, or restructured previous forms of social, economic, and political relations and institutions. The effects of this process have been particularly devastating for domestic economies, rural life, local culture, and communal structures. It has also had an ever increasing impact on the natural environment (Marsden, 1994). Transformation, even under best circumstances, has been highly fragmented and uneven. While some regions and localities have been integrated into the emerging world economy, others have been marginalized or even excluded. Development and underdevelopment, and integration and marginalization remain as contradictory, but central tendencies in a global economy (Koc, 1994).

Although the origins of the trends leading to the current global food system can be found in the earlier mercantilist and colonial food regimes, the processes involved have intensified in the post-WW II era through the spread of the “green revolution” (Dahlberg, 1979), the growth of transnational corporations (TNCs), the expansion of global financial capital, and the expansion of international organizations and agreements (McMichael, 1994). The development of international communication technologies and transportation systems have also contributed to the globalization of social, cultural, and economic interconnections, and dependencies (Bonanno et al., 1994; Friedmann, 1993; Goodman and Watts, 1997 McMichael, 1994 and 1996). Recently, the combination of intellectual property rights and genetic engineering has led to a stunning, but still underappreciated commodification of nature and given increased power to agri-food and pharmaceutical TNCs (see Kneen, this issue).

The increased commodification and globalization of the agri-food system, based as it is on functional specialization, has compartmentalized the food chain into diverse sectors, processes and structures, and standards (Busch, 1997) each with different rules of conduct. From farmers to consumers, all social actors and agencies involved in these processes are separated from each other not only spatially and temporally, but by their functionally different interests. They are typically unaware of their common interests in the larger agri-food system. What interlinkages exist among the sectors, processes, and structures are maintained mostly through TNCs, nation states, and international

trade and financial agreements and organizations like the IBRD, IMF, and WTO.

Functional specialization and globalization have penetrated to the household level, where even farmers in most parts of the world have become consumers of food, often with limited knowledge of how and where most of their food is being produced, transported, processed, and distributed (Koc et al., 1999; Winson, 1993). While overall production levels have increased, thousands of people die of hunger daily all around the world. Even more – mostly children, women, and the elderly – suffer the debilitating effects of malnutrition. Far from disappearing, hunger and malnutrition are on the rise even in advanced industrial societies (Riches, 1997). The prevalence of hunger in wealthy countries with large food surpluses indicates that food security requires not just availability but also accessibility of food.

When all the impacts of globalization are considered, a wide variety of analysts have concluded that the so-called success of the current food system – its great productive capacity – is also its biggest liability for long term economic and ecological sustainability. Its very structures lead to an undermining of local and traditional systems that provide efficient and accessible production and distribution. They also increasingly reduce the future food options of the world's many societies and cultures – both through destruction of their cultural and biological diversity and by making them dependent upon large and unstable organizations.

Local alternatives and approaches

The larger threats of global warming, loss of cultural and biodiversity, and growing economic inequalities among and within countries have generated a range of analysis and proposals for policy and structural changes at national and international levels. Less visibly, they have also unleashed a flood of local initiatives. In part, these are triggered by many of the "trickle down" impacts of globalization. One broad set of responses – related to sustainability issues – can be seen in the flourishing of local environmental groups and activities. While these responses are usually manifested in very contextual terms, what appears to underlie most of them is a serious questioning of whether the "progress" of globalization is worth the "price." Another broad set of responses relates to the cut-backs in welfare and other social programs introduced by restructuring initiatives in many industrial countries. Inevitably, many of these initiatives end up revolving around food and hunger issues.

Some examples – which many readers of this journal will be aware of – include,

- efforts to create local farmers' markets as a way of building/strengthening local markets;
- the rapid expansion of a new social innovation – community supported agriculture groups;
- experimentation with food policy councils, food system advocacy groups, and coalitions that go beyond traditional anti-hunger efforts;
- the growth of community gardening activities and efforts;
- the emergence of "community food security," both as a concept and a USDA-supported program.

These new practices created by advocates and local citizens are often ahead of analysis by most academics (not to mention government agencies). Hopefully, this special journal issue will help remedy that somewhat.

Common concerns and some differences

The common concerns that our authors share regarding the impacts of globalization have already been summarized. They revolve around the high political, social, and environmental costs of current industrial trends and the shrinking role of government in regulating the economy and shaping social programs – trends that raise fundamental issues of social stability and survival for many societies. While not shying away from discussing some of these larger trends, most papers focus on understanding the importance of local responses and developing better theoretical and conceptual tools that, among other things, will facilitate strategic planning and policy analysis.

Theoretical, analytic, and research issues

In terms of the kinds of theoretical, analytic, and research issues that are raised, we note the following. Most of our authors argue for, and employ, a "systems approach." However, how these systems are understood differs. Often looking at the same or related processes, institutions, and structures at different levels of analyses and different levels of abstraction, they lead us to different categories, such as commodity food systems, urban food systems, the global food system, agri-food systems, local food systems, urban food systems, regenerative food systems, and food policy systems. Some authors focus more on formal organizational structures and aspects – whether in the form of corporate structures and strategies (Kneen), governmental structures and policies (MacRae), competing economic sectors

(Dixon and Lang), human rights (Riches and Van Esterik), the challenges of organizing local efforts around food issues (Allen and Altieri et al.), or the role of planning in local food systems (Pothukuchi and Kaufman). Anderson and Cook stress the need to clarify the theoretical issues surrounding the concepts of "community" and "local" food systems.

There are many underlying theoretical questions here: the perennial problem of how to sort out which concepts, data, and time frames are relevant to each different level of analysis; sorting out the relative influence of environmental, technological, and cultural factors; and how to develop approaches that better capture key relationships and issues that are contextually-defined and tend to slip through the wide mesh "fishing nets" of most universal/generalization approaches (Dahlberg, 1993).

The importance of informal systems – particularly household systems – is stressed by both Dixon and Van Esterik. The informal economy is especially crucial for a range of neighborhood and community development efforts and analyses, not to mention a whole range of environmental and ecological dimensions. Van Esterik underlines the significance of women's domestic labor within household systems and in the informal economy. In her discussion of the role of culture in the analysis of food sectors, Dixon stresses the importance of the informal at a much larger scale – contrasting it with the more formal and materialistically based approach of commodity system analysis.

Anderson and Cook explore other theoretical and conceptual dimensions. They describe what kinds of research and theory are needed to better guide local food empowerment efforts. Part of this is to sort out more clearly how one defines both the substance and the extent of "community" and "local." These terms have tended to be used almost interchangeably by local activists, but need clarification. Equally, the underlying political values behind different approaches to "localization" need to be brought out – since some approaches reinforce current structures and disparities, while others seek empowerment and greater democratic control.

MacRae, Lang, and Riches deal with national level issues (although also seeking to trace their global as well as local aspects). MacRae focuses on the need for governmental and bureaucratic reforms if better policy is to be delivered. Lang, in his broad overview, suggests that broad political forces (war; peace; changes of government) can lead to major changes in food policy without bureaucratic reform. Riches would likely agree, but argues that existing international agreements that have never been fully implemented or have been neglected by a particular government can be a powerful political rallying point – assuming that the issue involved (the right to food) resonates with citizens.

The current restructuring of the economy and the state is redefining citizenship by stressing duties rather than the rights of the citizens. In continental or global trade and investment treaties such as GATT, NAFTA, and MAI, "experts" negotiate new rights for transnational corporations, with almost no democratic input. As a result, the rights of citizens within the boundaries of many nation states to the basics of life and social services are increasingly being redefined as privileges. Thus, it is no wonder that many papers in our collection use human rights arguments – whether as a group right (Van Esterik) or as a universal right (Riches) – to try to counter this trend.

Kneen's description of the corporate strategies of two major players in global food and agricultural matters raises fundamental questions: what are and should be the limits of corporate power? How does this relate to the ways in which we understand technology? Should we continue to allow the "commodification" of nature through the combination biotechnology and intellectual property rights? Depending on how one answers these questions, some basic political and cultural issues are raised.

There are wide-ranging discussions of local issues. Allen raises a number of basic issues both about the relative importance of local issues as well as summarizing the histories and potential conflicts and complementarities between anti-hunger and community food security approaches. She warns that without changing the basic structures of the current food system, and creating a non-retractable governmental safety net, local initiatives will have only limited impacts on food security.

In reviewing the various articles, it becomes clear that there is a great need for much more comprehensive and detailed histories of the evolution of locally-targeted food programs and the interactions between different levels of governments, academics, and non-profit groups in developing them and their various concepts and approaches. For example, many are not aware of the key role that the nutrition community had in introducing a domestic conception of food security into US debates on anti-hunger (see Select Committee on Hunger, 1990; Cohen, 1990).

Another key and related issue is job security – as Riches stresses. How we might go beyond concepts and practices of rights and entitlements based on the individual is not clear, but needs to be explored. Note that this has long been done in regard to corporations, which for most legal purposes are considered "persons." The Altieri et al. article shows not only the importance of context, but of alternative approaches

to economic development. Cuba's heavy investments in human capital, especially in education and health care, have facilitated its responses and adaptations to economic crisis – in ways that appear to be sustainable. Besides being the most practically-oriented paper in the issue, it also raises a host of important comparative issues.

Last, but not least, Pothukuchi and Kaufman challenge us to re-examine the time-worn industrial concepts of "urban" and "rural," suggesting that we need to see with fresh eyes what actual land use patterns are as they relate to food systems (this, of course, also means moving beyond the traditional focus on the production aspects of food; e.g., agriculture). At a deeper level, they (and MacRae) are implicitly suggesting that local government needs to be reconceptualized and reorganized in broad systems terms, not in terms of highly specialized functions. These broad systems would include such basic needs as: food, shelter, work and employment, health, environment and green space, security, learning and education, transportation, and justice. This, of course, suggests that those concerned about food systems also need to think more clearly and comprehensively about how local food systems relate to these other systems.

Reform and restructuring issues

A number of these have already been discussed – mostly in terms of desired changes in government and corporate organization as well as policy. What emerges from the articles is also a strong argument for theoretical and analytic "reform" (e.g., the various reconceptualizations called for). Not raised are questions of whether academia itself will need a reform of its disciplinary-based structures, priorities, and incentives to facilitate more holistic and interdisciplinary research and analysis. Questions of research co-optation are only briefly referenced. And as we know, the role of professional associations is great and there are relatively few interdisciplinary ones, such as the Agriculture, Food, and Human Values Society, which foster and provide legitimacy for an open and critical questioning of food systems issues.

Strategic planning is another generally accepted notion among our authors. By whom and in what setting is less clear. Lang calls for national level strategic planning among academics, environmentalists, consumer groups, and public health groups to form new political alliances that can help change both the general political climate and specific policies. Pothukuchi and Kaufman talk about the kinds of reforms needed to bring effective planning to local food systems. Their arguments also implicitly call for a major change in the curricula of schools of planning to introduce food systems as a central planning component.

Conclusion

A number of enduring political and policy issues have emerged in new forms and are being played out on global stages with new and more powerful lights and media. However, there are now no new frontiers to move on to after local resources have been exhausted or polluted. Because of this, the externalities of globalization are increasingly becoming the "internalities" of *all* localities and regions rather than just those historically most exploited. What this means is that the stakes are much greater than ever. The calls for reform cross all sectors of industrial society. Yet, as illustrated in the following articles, it is in the arena of the world's many food systems that we may well find the clearest manifestations of both the need for, and the paths to reforms that offer the prospect of more healthy, sustainable, just, and equitable societies.

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Address for correspondence: Mustafa Koc, Department of Sociology, Ryerson Polytechnic University, 350 Victoria Street, Toronto, Ontario, M5B 2K3, Canada
Phone: (416) 979 5000 ext. (6210); Fax: (416) 979 5273; E-mail: mkoc@acs.ryerson.ca