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Commentary

## Reflections on foodsheds in three continents

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I have been thinking for a while now about the intriguing concept of *foodshed* in changing urban food regions. As the world becomes more urban, North and South, new fora, such as the International Urban Food Network—with the Toronto Food Policy Council as partner—reflect this shift of reimagining relations between urban and rural. Canadian experience has a specific place in the practice of emerging city food regions, one it shares with other places of European colonial settlement (and displacement of indigenous land use), but also one in which urban food regions have pioneered policies bridging the rural-urban divide.

In Canada as elsewhere, cities have long histories in relation to the foodlands around them. In fact, as Jane Jacobs, Lewis Mumford, and many others have noted, cities and farms are a pair that grew up in mutual relationship. But the recent history of European settlement (as well as Australia, Argentina, South Africa, and the U.S.) shaped landscapes very differently, not only from indigenous ways of inhabiting the land, but also from those that grew up over thousands of years in the indigenous civilizations of Europe, and pre-colonial Asia, Africa, and the Americas. The earliest Canadian cities, of course, developed in the most fertile areas and those best situated for river, lake and ocean trade; but railways and then highways allowed Canadian cities to expand more easily into the very foodlands that originally supported their inhabitants. Cities found fewer obstacles to the displacement of farms than longer-settled places.

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I was recently lucky enough to be able to reflect on how Canadian (or at least Southern Ontario) experience compares to a very old part of the world—China—and a very different world of European colonization—Brazil. The concept of foodshed is helpful for imagining this comparison.

### **Foodshed as a basis for research, policy, and emergent practices**

The idea of foodshed was revived by the seminal thinker Jack Kloppenburg and his colleagues (1996) from an important article by Getz (1989). It first appeared in an obscure, informal journal called *The Permaculture Activist*—a letter, really, that revived the idea from a U.S. policy official—precisely to ask how food flows into cities (Hedden, 1929). The term foodshed is a way to highlight the importance of protecting the source of supply of food, just like water in the watershed. Getz wrote, “As in watershed protection, this will require specific geographic and ecological knowledge...for it to be safeguarded and enhanced” (p.1). He cited Gene Logsdon, author of an insightful blog, that this requires “more farmers, not fewer”—a paradox worth contemplating.

The idea of an urban foodshed is a way to help us connect food system analysis to the extraordinary reality that humanity is now careening headlong into a reversal of the balance between food producing landscapes and human settlements that has lasted for most of the ten thousand years since cities began. Urban settlements were an experiment that the human species embarked on long ago, and that they sustained for thousands of years in intimate connection with the farms and forests around them. It more or less accords with von Thunen’s (2009) model of distance and cost of transport until, as Carolyn Steel shows in her ovarian work, *Hungry City: How Food Shapes our Lives*, it was all undone in the era of railways (and more). Now we live in an era of ‘land grabs’ that evict the last farmers in the South in favour of large-scale agriculture, mining and other land uses. This is what Farshad Araghi (2001) has called, in comparison to the history of England in the 16<sup>th</sup>–18<sup>th</sup> centuries, a ‘global enclosure’ of the remaining peasantries of the world.

Most of all, the concept is a double one, looking carefully at what exists at the moment and also what the land, or ecosystem, makes possible for the people who live there. It has been taken up by Christian Peters et al. (2009) to model possible constellations of sustainable food production and patterns of consumption in New York State, compared to present food flows in and out. It is empirical, showing what exists now, and also prospective, showing what a politics of *emergence* might aim toward. Altering Wheatley’s definition to fit a sustainable foodshed, emergence is how

...separate, local efforts connect with each other as networks, then strengthen as communities of practice, suddenly and surprisingly [creating] a new system...at a greater level of scale...[T]he system that emerges always possesses greater power...than is possible through planned, incremental change... [New] qualities and capacities...are properties of the system, not the individual, but [also become capacities of individuals]. ” (Wheatley & Frieze, 2008)

Such a politics is called for, I think, given the depth and speed of reorganizing foodsheds as links between monocultural regions. Some of these links occur via trade, although the World Trade

Organization and even regional and bilateral trade agreements tend to get stuck on agriculture (but not before instituting some crucial rules, especially in intellectual property). Just as important are the world-spanning logistics of supply chains organized by a handful of global corporations, which turn every fruit, vegetable, and even flower into a potentially global commodity. Imagining and moving towards foodsheds that are centred on urban regions does not contradict trade, but calls for changes in analysis, policies, and practices that focus on both the potentials of the region to grow food, and of the people in that region to adjust to (or at least notice) regional potentials in what they eat.

What follows are some observations from my recent travels to China and Brazil, which I then connect back to Southern Ontario to reflect on the potential of trans-local networks and the various ways in which diverse regions are attempting to preserve or relink local foodsheds.

## China

I saw two contrasting foodshed policies near Beijing. The first was in Hebei Province, in the Great China Plain, traditionally an area centred on wheat, both farming it and eating it. Now, however, under the guidance of agronomists working with U.S. universities whose expertise lies in monocultural maize and soy for animal feeds, and under pressure from incentives set by government to encourage feeds for distant animal operations, the farmers have switched partly to maize. Maize is everywhere during the harvest, in streets, by highways, in courtyards. It is 'rotated' with wheat, because dumplings—which I spent a lovely afternoon making and eating with a farm family and a group of students—are part of social life as well as cuisine. The agronomists would like the farmers to grow only maize, and their experimental stations show that by applying nitrogen fertilizer they can grow two or even three maize crops each year.

The students in Science and Technology Backyards were inspiring in their respect for, and connection with, farmers. They lived in villages, worked and socialized with farmers, and tried to both teach 'better' techniques and learn what the farmers cared about. The problem, as I see it, was their calm, unquestioning conviction that official policies, crops, and techniques were best for farmers; and that farmers' innovations, however admirable, only mattered if they fit the policies, namely to grow more maize. Farmers' resistance, or their desire to keep growing wheat for their own use, was called a 'limiting factor' to the production of more maize.

The 'rotation' (which seemed to mean one crop after another) was summer maize/winter wheat—but not soybeans. Soybeans, which are traditional for sustainable agronomy and for human foods, are now imported in massive quantities from Brazil to feed animals. By contrast, maize prices were high because of government policies. The agronomists wanted to shift to a maize/maize 'rotation', and experimentally they were getting three maize crops, clearly where they hoped to go. Chemical nitrogen runoff has, in a short time, killed all the fish in local rivers, and the experimental station, with partners from Nebraska, is focusing on varieties of maize that are more efficient at using nitrogen (so less can be applied) and water (reducing the depletion of underground water).

The biggest limiting factor to growing a monocrop of maize for distant livestock operations was the farmers' (agri)cultural commitment to wheat, and to the dumplings that are part of social life. Sadly, this ancient urban civilization is following the path of Canada, the U.S., and other settler regions, at least for now. From a foodshed perspective, the problem is national government policy, which is based on a borrowed idea of food security that emphasizes grain for animal feed, getting meat production as high as possible, and concentrating both in very large

monocultures. Some villages grew specialty crops for the region (we saw watermelons and apples) and some taught ecological improvements, for instance bringing in pollinating insects. But everywhere—in streets, courtyards, the sides of highways, the plaza in front of the agricultural extension station—there was recently harvested maize, newly introduced in this region and about to be shipped to distant livestock operations. Pigs are absent in these villages.

Little Donkey Farm (LDF), which is familiar to other Western visitors to China, is the opposite. From a foodshed perspective, it models and anticipates a holistic food system for the urban region, the latest in a series of experiments in sustainable farming. LDF has learned from Western models—community gardens, CSA with a system of logistics for delivery—and have added good wages for workers. They learned from South Koreans how to make traditional plant-based pesticides and soil enhancements, and they innovated ways to make pigs and the people tending them happy. For example, mucking out pig poop is hardly pleasant, but they have created a kind of bedding that composts the waste that the pigs bury, so that when it is removed it is lovely rich soil, ready to apply to crops in LDF farms. No flies, since birds catch them in the bright pig house next to the woods where the young ones wander. LDF is in a former village in a high-tech industrial suburb of Beijing, and there are several others like it around the county.

These two experiences are impressions, but a third gave me an insight that seems to apply more widely. I visited 1,700-year-old rice-fish terraces in Qingtian, which also embrace vegetables, fruits, and other animals, all integrated with forests, waters, and villages. It is one of the new “Globally Important Agricultural Heritage Sites”, which began through the Global Environment Facility of the *United Nations Environment Program* and has now moved to the Food and Agriculture Organization. They are too small to turn to monoculture, though some activities such as threshing can be mechanized. They are too distant to be included in global supply chains or be interesting to capital seeking to invest. They are in danger from losing young people, like farming systems everywhere. But of interest here is the fact that careful scientific research on these systems shows how much more productive is the combination of fish and rice without use of chemical fertilizers or pesticides than monocultures of either fish or rice, which lack the inter-species symbiotic benefits and therefore need chemicals. This research comes not from agronomists, but from natural resource scientists whose mandate is to protect forests and waters. This, I think, can be interpreted in a broad vision of foodshed—namely, how to re-embed farming and food in ecosystems.

## **Brazil**

Unlike China, Brazil is a country that has long inspired Canadian food change and policy, especially the experiments pioneered in Belo Horizonte. That city-region produced Cecilia Rocha, who studied at York University with Betinho, the hero of progressive movements in Brazil who came to Canada under exile from a dictatorship. Cecilia has acted as liaison for many Canadians to learn how the municipal government of Belo Horizonte works holistically for food security, including how to link support for sustainable, local farmers with programs giving access to quality foods to all citizens.

After attending an inspiring workshop in Porto Alegre—the home of ‘participatory budgeting’ and the World Social Forum, a longstanding centre of agroecology, and now the largest organic farmers market in Brazil—I took a side trip to Rio de Janeiro to meet with colleagues. There I met Teresa Corção, a heroine of foodshed innovation. Teresa didn’t know anything about the policies of Belo Horizonte, so I found myself telling her about Toronto and

the Golden Horseshoe, and how much we learned from the national food policy of Brazil and from the municipal programs of Belo Horizonte. This suggests that emergence of sustainable foodsheds happens in trans-local networks, not necessarily inside national boundaries. Let me write a few words about Teresa's journey.

Teresa is chef and owner of an elegant restaurant in central Rio called *O Navegador*. A Slow Food meeting led to an invitation to Belem, a poor region in northeast Brazil. Teresa was more curious about the manioc (cassava) pancakes made on the street than in the workshop she was there to teach. This amazed the local people, that a fancy chef would be interested in a food associated with the poor, both indigenous and Afro-Brazilian. One thing led to another: to the 'manioc house' in an indigenous village in the Amazon, and to her own restaurant kitchen, where she discovered unsuspected knowledge about manioc preparation among workers who had migrated from the poor north to Rio for employment. Teresa now includes manioc in her elegant meals, and works to restore the dignity of the people preparing diverse, regional varieties of dishes. Every region, from tropical to temperate, has unique ways of preparing and preserving manioc. It is a model of integration in many ways—traditional and professional cuisine, chefs and workers, the unity of diverse regions each with its own distinct foodways connected to manioc. She helps traditional producers to be respected and to enter into commerce with Rio and other cities. She does this while appreciating that they don't want to be stuck in a timeless idea of tradition, but to be part of the modern world, offering their knowledge and products, trading on fair terms, and using modern technologies such as cell phones. It is a fine example of foodshed innovation.

Teresa innovates organizationally in a number of ways. For manioc, there is Instituto Maniva. To improve the foodshed of Rio, she created *Eco-Chefs*. This group encourages traditional farmers markets, which are jeopardized by small supermarkets and by profound changes in rural society that threaten the continued supply of farmers to the city. She takes unsold produce from farmers to prepare in her restaurant, as a way to avoid waste. To scale this up, she has just become head of all the chefs of Rio, where she hopes to link support for local sustainable farmers, elegant restaurants, and recovery of good food otherwise destined to become waste.

### **Comparative questions for Ontario**

The idea of foodsheds elsewhere helped me to understand how Southern Ontario is changing. We are certainly innovators, especially in the area of links between urban food change and large farm organizations that are manifest in the *Food and Farming Action Plan* of the Greater Golden Horseshoe. We do so in the context of continued immigration to cities and towns, while farms and farmers are in crisis. We need to revive the links in ways that renew crops, farmers, food businesses, and eaters. China is imitating the foodways that got us into foodshed disconnect, but is now also looking for ways to improve health and the environment. So, to some degree, they are innovating to reconnect urban foodsheds (Little Donkey Farm), and protecting farming systems that have been resilient for many centuries (rice-fish terraces). Brazil, which has shared experiences with Ontario for two decades now, is pioneering to incorporate indigenous and Afro-Brazilian foods into valued cuisines, and reshaping urban foodsheds before they disintegrate as much as ours have.

Relinking of foodsheds seems to be emerging everywhere, always taking different forms according to the specific histories, landscapes, and geopolitical contexts of each region. Here in

Ontario, we share the dilemmas of a region dominated by cities and towns with rich surrounding land, and young and immigrant farmers who want to farm it to serve diverse urban markets, but who face immense obstacles in doing so. Lots of questions arise. Is there something for a European settler region to learn from indigenous foodways that once defined this landscape? From revival of indigenous foods in culturally diverse, urban Brazil, which also shares Canada's huge agricultural trade? From the problems faced by a system in China that has survived for almost two millennia? From experimental networking and adaptive learning such as Little Donkey Farm, which recovers ancient knowledge, adapts Western forms like the CSA, and sustains connections that link diverse foodsheds across continents?

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