Think Global, Eat Local
Exploring Foodways

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Federal Ministry of Education and Research
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Rachel Shindelar and Michel Pimbert

Introduction: The Popularization of Food Localization

Past and present policies have encouraged and justified the elimination of small-scale food producers who live off the land in both industrially developed and developing countries. This process of undermining diverse local food systems is linked with the expansion of a development model that considers small- and medium-scale farming, artisanal fishing, nomadic pastoralists, and indigenous communities to be outside “modernity.” However, a newly emerging vision of modernity now emphasizes the need for more local food systems in the face of peak oil, climate change, loss of biological and cultural diversity, and recurring food and water crises. In both rural and urban settings, local food systems start at the household level and expand to neighborhood, municipal, landscape, and regional levels. Such localized food systems are viewed as a way of rejuvenating the foundations of people’s nutrition, incomes, economies, ecologies, and culture.

In recent years interest in local food systems has evolved from a fringe trend to a full-fledged popular social movement—the “locavore” movement. While the locavore movement at its core comes in as a response to economic and cultural globalization, the arguments for supporting local food systems are manifold. It is argued that a food system built around a short and transparent supply chain uses less fossil fuel and generates fewer carbon emissions; is more socially and ecologically sustainable; is more transparent and therefore safer than industrial farms or feedlots; and fosters local economies and communities.

However, locavores have met considerable resistance, with staunch critics emerging from both the private sector and academia. The following are a few of the most common arguments against local food systems or in favor of the conventional food system:


• Conventional, large-scale agriculture can be more efficient and produce less greenhouse gas emissions relative to the amount of food produced;
• Processed foods are claimed to last longer, be more flavorful, and have more health and nutritional benefits than so-called “whole foods”;
• The industrial food system is better regulated and therefore guarantees safer food products;
• Organic production methods, common in local food systems, require more land than high-input agriculture using genetically modified organisms;
• The industrial food system is better equipped to feed the growing global population.

In addition to champions of the conventional food system, critics of the locavore movement can also be found among activists and academics interested in food security, food justice, and food sovereignty. Taking gender, race, and social status into consideration, they draw attention to the white, middle-class nature of the movement.³

The contributors to this volume of RCC Perspectives take issue with this simplified discourse surrounding the popularization of local food systems. Acting on the belief that such an approach is neither constructive nor accurately reflects the social, ecological, and economic factors motivating people all around the world to actively build local food systems, they ask: What is the potential of relocalizing the production, distribution, and consumption of food in rural and urban contexts? How much “regional/local” is sensible, feasible, and sustainable today? What are the limits and opportunities for change? What drives the quest for food sovereignty and the search for more localized food systems? What insights can we gain from history for the future governance and management of local food systems and the environments they are embedded in?

Bringing together articles from experts of various food systems, movements, or philosophies, this volume offers insight into the motivations, benefits, and limitations of local food systems. And while the true achievement of these articles is their ability to shed light on the complexity of the debate, a unifying message does resonate throughout the entire volume: that where our food comes from and how it is produced matters.

³ Alison Hope Alkon and Julian Agyeman, eds., Cultivating Food Justice: Race, Class, and Sustainability (Cambridge, MA: MIT Press, 2011)
Daniel Philippon

How Local is Slow Food?

At the heart of the sustainable food movement are a series of dichotomies: local/global, organic/conventional, slow/fast, artisanal/industrial. These terms are often used interchangeably, with those at one end of the spectrum (local, organic, slow, and artisanal) being elided into a single, unified ideology in neat opposition to another (global, conventional, fast, industrial). The problem with ideologies, of course, is that they rarely reflect the reality on the ground, which is more varied and complex than any generalized system of ideas could ever hope to represent.

This is certainly true with regard to “food localization,” which does not neatly stand opposed to all forms of globalization any more than it neatly allies with every organic agricultural practice, Slow Food activity, or artisanal food production method. Nevertheless, the idea of the local can also not easily be disentangled from these allied concepts, which overlap with it in a myriad of meaningful and significant ways.

With this in mind, it is worth seeking to understand some of the ways that local food coincides with Slow Food, given that Slow Food constitutes both a distinctive articulation of the local food movement and the closest thing to an institutional embodiment of that movement as we are likely to find. To that end, I want first to make some general points about food localization before exploring some of the paradoxical consequences that have come from the globalization of Slow Food as a movement.

Food Localization

Local food has now become so widespread a notion that it has followed the seemingly inevitable trajectory of fashionable ideas in an age of rapid communication: from a base of devoted advocates, to popular treatments in film and literature, to the inevitable parodies and backlash, followed by academic books and articles analyzing every possible aspect of the rise and fall of this social trend.¹

At its core, the push for local food systems comes in response to economic and cultural globalization: the internationalization of markets and the homogenization of taste. Advocates for localism seek to increase the market for food that has a short and transparent supply chain (“Know Your Farmer, Know Your Food,” in the words of the US Department of Agriculture program). They do this for a variety of reasons, including: reducing the “carbon footprint” of food; improving its freshness, taste, and nutritional value; increasing social and environmental sustainability; promoting food safety; and building local community. Critics of local food systems find fault with many if not all of these arguments, and they often criticize other assertions and assumptions of local food boosters.

The problem with this advocate vs. critic formulation is that it tends to foster an all-or-nothing, black-and-white approach to sustainable food, which is neither productive nor accurately reflects how people all around the world are working to create more environmentally friendly, economically viable, and socially just food systems at a variety of temporal and spatial scales. Even in the US, local food systems take many forms and involve everything from backyard gardens, community gardens, “guerrilla gardens,” and locally foraged food; to farmers’ markets, farm stands, food co-ops, and farm-to-school programs; to urban farms, Community Supported Agriculture farms, and other small- and medium-size producers.

Part of the blame for the simplification of local food activism must fall at the feet of its advocates, whose attempts at putting into practice some version of the “100-Mile Diet” are too easily caricatured as arguments that everyone should eat food only from within a certain radius of home. Among these are Gary Nabhan’s *Coming Home to Eat*, Barbara Kingsolver’s *Animal, Vegetable, Miracle*, Alisa Smith and J.B. Mackinnon’s *Plenty*, and Bill McKibben’s “The Year of Eating Locally” from *Deep Economy*. These were stunts to prove a point, like Morgan Spurlock’s month of eating only at McDonald’s in *Super Size Me*, Colin Beavan’s year of living sustainably in *No Impact Man*, and even Henry David Thoreau’s year of “living deliberately” in *Walden*. But while none of these writers

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3 *Super Size Me*, directed by Morgan Spurlock (Samuel Goldwyn Films, 2004); *No Impact Man*, directed by Laura Gabbert and Justin Schein (Oscilloscope Pictures, 2009); Henry David Thoreau, *Walden; or, Life in the Woods* (Boston: Ticknor and Fields, 1854).
were attempting to legislate localism (something that would be seasonally impossible for many people, anyway), their “foodshed”-based approaches must have seemed naïve to readers who took more systems-based approaches to food production, distribution, and consumption. Still, these food memoirs remind us of the most important point made by all the various iterations of the local food movement worldwide: that all food is “food from somewhere” rather than “food from nowhere,” and that the particular places in which our food grows matter much more than we may think they do.

The Growth of Slow Food

Slow Food is in some ways analogous to food in general, because while it may appear to be a movement from everywhere, it is in fact a movement from somewhere, and the place of its origin matters as much as the fields in which our food is grown.

Slow Food was born in Italy in 1986, when Carlo Petrini and a group of his fellow Italian leftists came together to protest the opening of a McDonald’s near the Spanish Steps in Rome. Since then, it has grown into a vibrant, international organization, with more than 100,000 members in 150 countries, including 35,000 members in Italy and 25,000 members in the United States. Among other activities, it produces popular annual guides to food and wine; it hosts well-attended, biennial meetings of food producers and consumers, the Salone del Gusto (Hall of Taste) and Terra Madre (Mother Earth) gatherings in Turin; and in 2004 it opened the University of Gastronomic Sciences in Pollenzo, Italy, to educate students about the relationship of agriculture, biodiversity, and gastronomy.

Slow Food is in some sense misnamed, or at least has outgrown its name. While the organization may have begun as a protest against fast food, that protest was largely symbolic, and Slow Food has become less about what it opposes and more about what it endorses. The organization began with a focus on educating people about the plea-

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4 “Slow Food” is also an idea that has taken on a life of its own, developing into an entire “slowness” movement dedicated to slowing down the pace of life, but my focus here is on the Slow Food organization. Two book-length studies that address Slow Food as both movement and organization are: Wendy Parkins and Geoffrey Craig, *Slow Living* (New York: Berg, 2006), and Geoff Andrews, *The Slow Food Story: Politics and Pleasure* (Montreal: McGill-Queen’s University Press, 2008).

5 As Stephen Schneider observes, current Slow Food rhetoric “is less a rhetoric of protest and more a rhetoric of community organization” (397).
sures of regional cuisine, but over time it has expanded to encompass a range of eco-
logical concerns and, most recently, has added an appreciation that social justice must
be part of any understanding of what constitutes sustainable food. Today, that evolu-
tion is embodied in Slow Food’s belief that food should be “good, clean, and fair”:

- good: “a fresh and flavorsome seasonal diet that satisfies the senses and is part
  of our local culture”
- clean: “food production and consumption that does not harm the environment,
  animal welfare, or our health”
- fair: “accessible prices for consumers and fair conditions and pay for small-
  scale producers.”

In some sense, therefore, all its activities are in one way or another focused on a single
goal: fostering a specific kind of economic development intended to establish and pro-
mote food communities that share its values of quality food, made by small producers
that use environmentally sustainable production methods and pay fair wages.

While this focus may certainly be considered “slow,” a better term for it might be
“small.” As Bill Buford observes in Heat,
7 “The metaphor is usually one of speed: fast
food has ruined our culture; slow food will save it. But [this] obscures a fundamental
problem, which has little to do with speed and everything to do with size.” Slow Food
is more about what Buford calls “small food,” or artisanal food: “Small food: by hand
and therefore precious, hard to find. Big food: from a factory and therefore cheap,
abundant.” “Food made by hand,” asserts Buford, “is an act of defiance and runs con-
trary to everything in our modernity.”

Since its founding, Slow Food has faced a number of critiques:

- that it is elitist, and that its focus on pleasure-based “taste education” reflects
  an ingrained class bias that the organization has been unable to shake
- that it is nostalgic for a mythologized “local” and has invented food traditions at
  least as much as it has preserved them

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7 Bill Buford, Heat: An Amateur’s Adventures as Kitchen Slave, Line Cook, Pasta-Maker, and Apprentice to
Think Global, Eat Local

- that it is more of a promotional strategy for Italian food, drink, and culinary tourism than a force for sustainable agriculture and food justice.⁸

Although these critiques certainly have some truth to them, they do not reflect the primary concerns I heard during the five months I spent studying Slow Food in the Piedmont region of Italy, where the organization is based. Instead, many of the food producers, chefs, and distributors with whom I spoke were concerned that the scale of Slow Food’s growth increasingly seemed to conflict with the preservation of local food traditions and celebration of local food producers on which the organization was founded. A chocolate maker, for instance, observed that as the Salone del Gusto has grown, it has lost the local character of its earlier days, when it was “a small, typical Piedmontese, very elegant site.” A winemaker noted that while the organization’s increasing need for money has created opportunities for larger producers to be involved, it has also created financial barriers for smaller producers to do so. And another winemaker expressed concern that by helping big producers, Slow Food may have taken on some of the trappings of the very industrial mentality it was formed to combat. Slow Food has now become a brand, he said, “like Dolce & Gabbana or Armani,” but it may be that “artisanal products for the masses are not possible.”⁹

Whether these compromises are the inevitable consequences of the globalization of Slow Food remains unclear. On the one hand, as Wendy Parkins and Geoffrey Craig have observed,¹⁰ the fact that the organization has always rendered its name in English, despite being founded by Italians, is “an acknowledgment of the international spread and aims of the movement.” And its global growth, they believe, has helped to create “a kind of transnational civil society distinct from the transnationality of global corporations.” On the other hand, almost everyone I spoke with, including some Slow Food staff members, expressed hesitations about the organization’s recent collaboration with Eataly, the Italian food superstore, for whom Slow Food serves as a consultant. As one olive oil producer said, Oscar Farinetti (Eataly’s founder) “in a sense

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⁸ Among the more prominent of these critiques are the cluster of articles that appeared in *Food, Culture, and Society* 7, no. 2 (2004), and various analyses that have appeared over the years in *Gastronomica*.

⁹ Some academic critics have made similar observations. Meneley notes that “Slow Food claims to champion the small producers, but ends up favouring the elite” (173), and Peace claims that Slow Food “essentially reflects the power and mirrors the contradictions of the system against which [it] pitches its political and symbolic resources” (39). Anne Meneley, “Extra Virgin Olive Oil and Slow Food,” *Anthropologica* 46, no. 2 (2004): 165–76; Adrian Peace, “Terra Madre 2006: Political Theater and Ritual Rhetoric in the Slow Food Movement,” *Gastronomica: The Journal of Food and Culture* 8, no. 2 (2008): 31–39.

¹⁰ Parkins and Craig, *Slow Living*. 
bought the brand of Slow Food” when the collaboration first began in 2007. That the questions I posed to Italian producers about Slow Food almost always resulted in answers about Eataly shows just how fluid the boundary between the organization and the corporation has become.

The anthropologist Richard Wilk has made the case that “the extremes of slow and fast, local and global, artisan and industrial, are ideal types; at some level they may be good intellectual tools, but all the real action takes place in between,” where what Sidney Mintz has called “food at moderate speeds” is traveling. The challenge for Slow Food, however, seems to be not how to become “Moderate-Speed Food” but whether it is possible to hold the extremes of local and global in a productive tension. Philip Ackerman-Leist believes that “Slow Food’s dual emphasis on local autonomy and global exchange is exemplary in a polarized era of local versus global”, and there is much to support this view. But when the term “global exchange” refers not to the exchange of ideas but to commercial transactions, Slow Food’s dual emphasis on the local and the global can start to feel a bit more like cognitive dissonance.

Critical Urban Gardening

In recent decades, two contrasting forces have caused corresponding transformations in urban landscapes. On the one hand, massive construction investments, supported by neoliberal trends in city planning, have compressed public space and extended the city to peri-urban areas. On the other hand, proliferating grassroots movements in cities—particularly gardening movements—have begun to reclaim public space and the right to produce local food. Flower and vegetable gardens are blossoming in city spaces worldwide, climbing the walls of derelict buildings or popping out the top of newly built skyscrapers, whose planners’ eco-friendly attitudes are demonstrated by the provision of cultivable flower beds on the roof. Along with providing urban inhabitants with colorful and life-affirming experiences, gardens highlight pressing contemporary political issues. They also contest neoliberal urban planning strategies, food governance structures, and the global geographies of power and resource distribution. Furthermore, by bringing people together in collective gardening initiatives aimed at utilizing public space for the enjoyment of nature and the production of food, urban gardeners actively take part in local political decision-making processes.

Critical Urban Gardening

Critical urban gardening (also called political or radical gardening) includes various informal activism practices that encourage people to garden and cultivate flowers, trees, and vegetables in any available city space to demonstrate an alternative to the current conventional use of space and the system of food production, distribution, and consumption. The origins of (critical) urban gardening can be traced back to the 1970s in New York, when communities re-appropriated green space for building projects and the enjoyment of nature. Neglected brownfields, vacant lots, and interstitial areas have subsequently been appropriated with the aim of offering beauty and tranquility to marginalized and impoverished areas of cities. Around the world, the phenomenon has grown in the last two decades and has taken the form of a spontaneous, decentralized, and subversive grassroots movement. Scientific literature exploring the objectives, methods, and results of urban gardening initiatives continues to grow. Case studies
include the production of fresh vegetables in “food desert” districts, the provision of open space to elderly people in privatized areas of the city, the establishment of youth centers in derelict neighborhoods, the commitment of immigrants as part of multicultural politics, improvements in public health, and new spiritual engagements with nature.¹ Urban harvesters, guerrilla gardeners, community growers, and land-sharers—to mention but a few—are reinvigorating the concept of cities as laboratories for political experiments. The range of motivations expressed in the micro-politics of garden activism is diverse: self-sufficiency in order to escape the transactions of capitalism; the promotion of community empowerment; involvement in environmental planning; the search for environmental justice; the provision of education for dealing with the Anthropocene; and the reconstruction of people’s relations with nature to counteract the “extinction-of-experience.”²

Urban gardeners constitute a complex and heterogeneous political movement aimed at focusing public attention on crucial issues including the scarceness and poor quality of public spaces, the lack of green infrastructure, the need for more and better social relationships, the urgency of providing marginalized social groups with dedicated spaces for self-improvement, the contestation of existing food production, and trading regimes.

Critical Urban Gardening and Urban Farming

It is important to distinguish between different critical urban gardening practices with regards to food issues. Urban gardening includes both flower and vegetable gardening, in public space (vacant lots, abandoned interstitial areas, flower beds, traffic islands, etc.) and private space (terraces, roofs, indoor gardens, etc.).

A related phenomenon—often overlapping with critical urban gardening—is the urban farming practice. This includes food production and animal breeding in urban and peri-urban areas on the basis of the availability of public land and people’s willingness


to produce food. Especially in recent years, it has attracted the interest of municipal and national authorities (particularly in the Global South) and of international institutions. Urban farming, in fact, is seen as providing a number of benefits. It helps to address the mandate of the Food and Agriculture Organization of the United Nations (FAO) on the provision of adequate access to nutritious food for growing urban populations. It helps to integrate urban and peri-urban areas with rural areas. And it helps to drive agricultural practices towards sustainability targets.

Urban food production has a long tradition in many countries, and the United Nations Development Program has estimated that urban agriculture produces 15–20 percent of the world’s food. It plays an important role in enhancing food security and nutrition standards, in promoting local economic development, in alleviating poverty, and in improving the situation of socially disadvantaged groups. These effects are particularly important given the growth of cities and the increase in population density at a global level. Approximately 50 percent of poor people live in urban areas. Cultivating urban lands helps those urban poor who cannot afford to purchase adequate quantities of food, and it provides fresh vegetables, dairy products, and poultry during times of crisis. It also offers productive employment in a sector with low entry requirements and secures income for urban dwellers. Furthermore, it increases the efficiency of agricultural production by bringing producers closer to consumers and largely eliminating the need for storage and delivery infrastructure.

There are various noteworthy concerns around the expansion of this type of local food system. Concerns arise, for example, over the likely competition for resources (such as land, water, labor, and energy) and the smells, noise, and water pollution that make gardening incompatible with some urban areas. In fact, despite the fact that horticult-

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tural species, unlike other food crops, have a considerable yield potential, the impact of urban agricultural expansion—especially where demand for natural resources is already high—may become a critical issue. As rural sociologist Henk de Zeeuw writes:

Food produced in or near cities may be detrimental to human health if soils or irrigation water are contaminated by industries (heavy metals), if untreated urban wastewater is used for irrigation of food crops or fresh solid organic wastes are used as fertilizer, or if hygiene is lacking in the processing and marketing of food. Traffic may have a direct polluting effect on urban crops (lead contamination). Cultivated areas and livestock in cities may attract or provide breeding grounds for rodents and flies and thus can contribute to the spread of diseases they may carry if proper precautions are not taken. Urban agriculture may contaminate local water sources if high input levels of fertilizers and pesticides are used. Neighbors may complain of the dust, smell, and noise created by urban farms.

As a result, the optimization of land and resource management achieved through concerted action of municipal administrations and urban farmers is generally seen as a necessary precondition for sustainable agricultural activities in urban areas.

It is also worth noting that urban farming, as a particular form of urban gardening, is also practiced in the Global North, where it presents different characteristics, probably determined by the different social, environmental, and economic context. Besides the common case of private farms that operate in peri-urban areas, in the Northern cities urban farming is principally regarded as an alternative to the mass production, distribution, and consumption of globalized food. Indeed, in describing their motivation, urban gardeners generally point to the fact that our food system is based on the availability of cheap oil, the maximization of short-term profit, the destruction of local food systems, and the adoption of sustainability-threatening practices. Critical food gardening is thus based on socio-environmental values, aiming to provide accessible public space and free vegetables.

8 ETC, “Annotated Bibliography,” 13–14
trinsic political value of urban gardening is evident when we consider that gardening does not merely propose an alternative to existing urban food governance but also addresses issues of land reclamation, the rebuilding of urban commons, and self-governance. Local food production is a largely consistent practice in Northern cities, but when compared with urban agriculture in most Southern contexts, it presents some remarkable differences: vegetables are not generally viewed as a source of revenue, nor are they the only available food; cultivated lots are intended to remain public and not to be appropriated by gardeners; products are not for sale but for personal consumption or sharing; gardening is a voluntary initiative put forward by citizens with no economic motivations.

The rapid and pervasive diffusion of critical urban gardening can probably be attributed to its ability to address relevant problems in people’s everyday lives by constructing the world they would like to live in. One of the slogans adopted by the international movement is the Gandhian maxim: “Be the change you wish to see in the world.” Gardening is a way to change the future by changing the space of the present. Although some local administrations or private organizations manage very large projects, gardens are generally public, and everybody is able to take part in their realization and maintenance. Based on the idea that a well-kept bed of lettuce is the best way of inviting others to join and to refrain from vandalism, urban gardening philosophy does not encourage the construction of fences to prevent violent disagreements. Rather, it asks everybody to adopt simple means to discourage them, such as always keeping the garden clean and readily repairing damages. The patient, sometimes modest or unnoticed—but always-enthusiastic—work of critical urban gardeners is helping to change post-modern urban life. Abandoned spaces and previously unnoticed wastelands become public places of civic renaissance. Producing food and helping interstitial nature to flourish is a way of helping people to meet basic life goals. The project provides adequate and nutritious food, a large, unpolluted space for personal and social enjoyment, and an equal opportunity to advance positive social relationships in one’s own space.

17 “Transition Network.”
The Ecological Sustainability of Local Food Systems

There are many political, social, and economic arguments that support (re)localizing food systems, as the other contributions to this issue of *RCC Perspectives* illustrate. However, the argument that has perhaps received the most attention from the general public and mass media concerns the reduced ecological footprint of consuming locally produced products. According to the Intergovernmental Panel on Climate Change (IPCC), the greenhouse gas (GHG) emissions and land-use practices associated with the agricultural sector are a driving force behind climate change.¹ To be more specific, the global food system accounts for approximately one third of anthropogenic GHG emissions.² In an attempt to address this, considerable attention has been focused on promoting the consumption of locally grown food. The most prominently voiced reasoning behind this is the reduction of GHG emissions that would result from the decrease in transportation requirements. A straightforward and plausible concept, deliberately purchasing and consuming local products has quickly become a core strategy for reducing individual and institutional GHG emissions and is perceived as the motivation behind the “locavore” movement. But is locally produced food genuinely more sustainable?

This essay argues that while the belief that locally grown food is more sustainable due to the shorter distance it travels from farm to plate is misplaced, local food systems as a whole are more sustainable, both ecologically and socially.

The Where vs. The How

The idea of reducing one’s own ecological footprint by eating locally grown food took off with the release of a 2001 study on food miles by Rich Pirog and colleagues. The authors use the term “food miles” to refer to the distance a food product travels from

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producer to point-of-sale. Concentrating on the conventional US food system, Pirog and his colleagues determined that, on average, produce in the United States traveled 1,518 miles (approximately 2,400 kilometers) by truck before it reached the supermarket. In a local system—defined by Pirog and his colleagues as a system in which farmers used consumer-supported agriculture enterprises to market directly to local buyers—produce traveled on average 44.6 miles (72 kilometers).\(^3\) Transportation in the conventional system used 4–15 times more fuel and emitted 4–17 times more carbon dioxide than transportation in the local system.\(^4\) Against this backdrop, the argument that buying local food products—keeping in mind that the term “local” has not been clearly defined, and is therefore open to interpretation—is more sustainable is persuasive. And, all other factors remaining equal, it is scientifically speaking a legitimate argument.

However, as tempting as this coherent rule-of-thumb appears, recent studies show that things are a bit more complicated. Weber and Matthews’ life-cycle analysis of GHG emissions associated with food production in the US is particularly enlightening for a couple of reasons. First, it shows that the GHGs emitted during the transportation of a food product from producer to point-of-sale represent approximately four percent of all life-cycle GHG emissions. Food miles also only represent a quarter of the total miles and 40 percent of the transport-related GHG emissions in the conventional US food supply chain (11 percent of total life-cycle emissions).\(^5\) Second, Weber and Matthews revealed that the majority (80 percent) of GHG emissions occur during the production phase. Take, for example, GHG emissions resulting from the transport of fertilizers, pesticides, and feed (it takes around 10 kilograms of feed to produce one kilogram of meat in conventional livestock husbandry), or those from the use of synthetic fertilizers and pesticides, and of course the enteric methane emissions that are common among ruminant animals.\(^6\)

In short, GHG emissions from food miles account for a trifling percentage of the total emissions produced in the agricultural sector. The majority of GHG emissions in the agricultural sector stem from certain practices in the production phase.

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\(^4\) Pirog et al., *Food*, 18.


\(^6\) Weber and Matthews, “Food Miles,” 3510.
However, while this information suggests that there are perhaps better ways to reduce GHG emissions than cutting down on food miles, it does not prove that buying locally produced food is less sustainable than purchasing non-local food products. As a US Department of Agriculture report aptly puts it, “Given two otherwise identical supply chains, the supply chain with greater food travel distance will use more energy and emit more pollution.” Ergo, is less ecologically sustainable. “But supply chains . . . are seldom identical; the mode of transport, load sizes, fuel type, and trip frequency all affect energy use and emissions.”

How food travels is often more important than how far, as the life-cycle analyses conducted by Weber and Matthews and by Saunders and Hayes illustrate. To summarize their findings, the transportation of food products via large boats or trains is more energy efficient and produces fewer GHG emissions than transportation via airplanes or trucks (the smaller the vehicle, the less energy efficient it is). As a result, the reduction in food miles won by purchasing locally sourced foods is often offset by the inefficiency of the mode of transportation (i.e., smaller trucks). Similarly, how the food is produced is very important. These findings are not limited to the US conventional food system. In a study of food life-cycle energy inputs in Sweden, Ann Carlsson-Kanyama and colleagues argue that buying imported produce can often be more sustainable than local produce—particularly when it comes to produce that requires considerable irrigation or must be grown in fossil-fuel-powered greenhouses because it is cultivated in a region that is unable to sustain it naturally.

In this light, consuming local food does not always mean consuming more sustainably. Purchasing fresh produce, grown in a greenhouse running on fossil fuels on a local farm and transported to your market or home on a small truck, is rarely a more sustainable practice than purchasing fresh produce from the conventional supply chain.

7 USDA, Local Food Systems.
8 Weber and Matthews, “Food Miles.”
9 Caroline Saunders and Peter Hayes, Air Freight Transport of Fresh Fruit and Vegetables, Research Report No. 299, Agribusiness and Economist Research Unit (Christchurch, New Zealand: Lincoln University, 2007).
Sustainable Local Markets

In practice, however, ecological sustainability is not equivalent to fewer or no GHG emissions. And local food systems are not simply a mirror image of the conventional food system with less food miles; rather, they differ fundamentally from the global conventional food system in both structure and culture. Building on this, this essay argues that local food systems currently offer the best source of sustainable food products in most Western, industrialized economies today. The common practices of the average producer and retailer in a local food system, together with short supply chains, increase the sustainability of local food markets. Of course, not all local systems are alike—quite the contrary. The practices adopted by members of local food systems can vary greatly from system to system, yet these variations are frequently a reflection of both the region and community in which the local food system is rooted. It is precisely this physical and social embeddedness that enables local food systems to be opportune sources of sustainable food products. While the other contributions in this volume delve more deeply into social and economic sustainability, this essay will conclude with a few examples of the ecologically sustainable practices commonly adopted in local food systems.

In general, such systems foster a culture of consumers and producers who value sustainability. For example, as Brian Halweil so aptly puts it in his paper, “the foundation of a local food system is crop diversity.” Living off of one or two crops is neither economically sensible nor appetizing. As a result, producers in local food systems not only frequently adhere to the ideas of crop rotation and polyculturalism, but also integrate crop and livestock production. Another common occurrence in local food systems is the compliance of producers with organic farming standards. According to a report published by the US Department of Agriculture, 49 percent of small farms that sold directly to consumers used organic production methods. Finally, considerable research has

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11 David W. Hughes, “What is the Deal with Local Food Systems: Or, Local Food Systems from a Regional Perspective,” (working paper, Clemson University, 2007).
14 Halweil, Home Grown, 29–30. The environmental benefits of polycultures and diversified farms over monocultures are widely accepted. For more information see any of the core texts on agroecology, such as Francis et al, “Agroecology: the Ecology of Food Systems,” Journal of Sustainable Agriculture 22, no. 3 (2003): 99–118.
also shown that the majority of producers who actively choose to participate in local food systems are small farmers who are prone to adopting one or more of the following sustainable production and distribution practices: moderating or abstaining from the use of synthetic chemicals and fertilizers, allowing livestock to range freely or graze, using cover crops, designing field borders to provide a refuge for native biodiversity, and minimizing packaging.16

Going beyond the practices of producers, local food systems are also good venues for purchasing ecologically sustainable food products as they frequently have shorter supply chains. In many cases, market intermediaries are disposed of entirely and farmers handle storage, packaging, transportation, and distribution themselves.17 This in turn frequently reduces or eliminates entirely the processing and packing of food products, which greatly reduces their ecological footprint.18 In addition, short supply chains enable consumers to access information about the origin of and methods used to produce a food product and to make more informed decisions. Consumers in local food systems can more easily identify and choose products based on their social, ecological, and economic impact on the local community and environment.

With agriculture and food production accounting for such a significant amount of anthropogenic greenhouse gases, assessing the ecological footprint of our diets is pertinent to combating climate change. While the “100-Mile Diet” is unfortunately not quite the easy fix to our unsustainable food consumption patterns that many of us had hoped for, the discussion surrounding it has played a critical role in drawing attention to the environmental impact of the global conventional food system. Simply reducing food miles does not guarantee a more sustainable diet, but consciously choosing to participate in alternative local food systems instead of the conventional food system is a sure way to increase your access to environmentally friendly food and to support more ecologically sustainable agricultural practices.

16 This list is not exhaustive, but merely represents the most common sustainable practices adopted by local food producers. Donald W. Lotter, “Organic Agriculture,” Journal of Sustainable Agriculture 21, no. 4 (2003).
Alicia Funk

**Revisiting Forgotten Foods: A Case Study from California**

Food localization means cultivating a sense of place—a deep awareness of the land we call home. It is a process that depends upon science and indigenous traditional knowledge as well as the continuing exchange of new ideas on sustainable interdependence within the native habitat.

The groups interested in the movement towards wild food are diverse: organic food consumers interested in new foods that are free from pesticides and GMOs, local food enthusiasts wanting fresh, community-sourced food; gourmet “foodies” looking for an exotic taste adventure; gardeners landscaping with drought-tolerant, habitat-friendly plants; advocates of indigenous culture conservation; and environmentalists concerned by changes in biodiversity and climate.

In a small northern California town, community members are once again enjoying the berry of an abundant, drought-tolerant shrub called Manzanita, or “little apple” in Spanish. Used by the original inhabitants of the region, the Maidu, as well as tribes throughout California, it was typically consumed as a beverage, made by crushing the berries and then steeping them in cold water. Just two hundred years ago, an indigenous Californian’s diet would have included about one thousand species of plants, with each region enjoying food from several hundred local varieties. Devastated by the effects of the gold rush and forced off of their lands, the local indigenous community of Maidu lost much of their plant knowledge and access to traditional foods.

In building relationships and gathering the names and uses of the plants in the three Maidu dialects for my book, a thread of continuity was re-established. I learned traditional processing methods and began drinking Manzanita cider with my family each summer. I worked with an indigenous family and other locals to gather enough berries to start creating new recipes. We found differences between the sweetness of berries from shrubs growing in distinct areas and developed new ways to efficiently gather the berries and grind them into a powder that we could use not only as the traditional beverage but also as a flour substitute.
Photo captions:

1. The author gathering spicebush blossoms.

2. Oak nuts (acorns) have more omega-6, vitamin A, folate, and potassium than whole grain wheat flour, without the gluten.

3. California natives such as Manzanita (Arctostaphylos viscida), Elderberry (Sambucus nigra), and Madrone (Arbutus menziesii) berries have been shown to contain more than three times the amount of antioxidants as blueberries and pomegranates.

4. Manzanita vinaigrette
Curious about how the health benefits of this native food compared to commercially popular fruits, I sent samples to a laboratory for testing. We found that our local Manzanita berries and two other native berries contained more than three times the antioxidant compounds as blueberries and pomegranates and require no supplemental water.

Local restaurants and natural food stores began using Manzanita in recipes—including in vinaigrette and as a cracker. After several hundred years of ignoring the native foods growing in our backyards, we have taken a step toward once again enjoying a truly local food.

The declining diversity and nutritional content in commercial food crops, the transfer of the genetic control of food from farmers to multinational corporations, disappearing indigenous knowledge systems, and unpredictable climate change make it imperative to encourage regional, wild food sources, through cultivation and sustainable wild harvest. With a collaborative approach designed to share information and resources, communities can grow and gather nutrient-dense, independent food crops that protect habitat diversity.
We Should All Have the Right to Link Ourselves More Directly to the Land

This article aims to reflect on the relations between “man and the land” (to use an old fashioned turn of phrase). Today, the relations between people and the areas that feed them are almost non-existent. As consumers, we are effectively (and often physically) excluded from the places where production takes place. Instead, our information on these locations comes from advertisements and public relations campaigns, which paint rosy pictures that are quite at odds with the realities in the fields, stables, and slaughterhouses. Farmers are, in a way, equally excluded. When doing their work, they have to follow the script written by the agro-industrial conglomerates that supply them with their tools and technologies and to whom they have to deliver the raw materials they produce. The consumer is an abstract entity for the producer, just as the ways in which the producer uses the land and living nature in order to produce food is a mystery for most consumers. “Man and the land” are separated: the ties that once bound them together are broken.

Certainly this mutual abandonment has been convenient, and many of us were not at all uncomfortable with it. But increasingly this “separation of convenience” is falling into disarray. Food scares, financial and ecological crises, unemployment, loneliness, and dissatisfaction are all potential reasons for redesigning this relationship.

In discussing the relations between people and the land (or at least some aspects of such relations), this article builds on two modest points of departure. The first one is an Italian research program on pluriactivity. This program, designed and supervised by Flaminia Ventura and Pierluigi Milone from Perugia University (and funded by Rete Rurale) included two large surveys. One involved “part-time farmers” who work both on their own farm and in another occupation (the latter often generating the bulk of their income); the other involved farmers whose partner has a job outside of the farm and whose income is, again, important for the overall family income. I played a role in this research, helping design the methodology. A second source is China, a country I know well. In recent years I have witnessed in China a specific form of pluriactivity, which is mostly referred to as “multiple job holding.”
From Deprived to Privileged

For many decades, part-time farming has been overwhelmingly defined in negative terms. A part-time farm is not a full-time farm and by extension it has been seen as a farm that fails to be a real farm. Most countries’ agricultural statistics exclude part-time farms, as if denying their validity. A part-time farmer may be perceived as a failing farmer, one who is unable to develop his or her farm into a “real” full-time farm. As a result the part-time farm has been viewed as a temporary phenomenon—a relic from the past, destined for extinction. Today, though, it is clear that part-time farming is a permanent and durable phenomenon, rather than merely an expression of a transitional process towards an agriculture that is fully geared towards and sustained through the global markets for agricultural products.

Part-time farming is essentially about combining farming and another job outside of the farm. This might be done for many different reasons: for example, pluriactivity is used by young people as a mechanism to finance the acquisition of a farm and its subsequent development. The farms we are talking about might differ considerably, just as the outside jobs can differ considerably. Alongside highly valued jobs that generate substantial incomes (army officer, university professor, lawyer), there will be seemingly modest ones (wage labor on other, larger farms; taxi-driving) with low levels of remuneration. Thus, there are at least four sources that produce heterogeneity among part-time farms: the farms themselves, the outside jobs, the reasons for the combinations, and the interactions between these factors.

In essence, part-time farming involves actively constructing a combination of different activities (farming activities on one’s own farm and the outside job). If we want to understand the background, meaning, and dynamics of this combination, we have to go beyond socio-Darwinist views that see the world as a place in which only highly specialized species can survive. Equally, we have to look beyond economic factors.

When asked about their motivations, part-time farmers stress that their choice is not governed by economic need. Thirty-eight percent argue that it is a “personal choice,” whilst 60 percent indicate that they wanted to “preserve the family farm” (only two percent refer to an “economic necessity”). People do not generally become part-time farmers because of a lack of alternatives: 41 percent of the part-time farmers in the
survey finished secondary school, and as many as 18 percent have a university education. These people will have had (and probably still have) alternatives, but they choose part-time farming. Admittedly, economic factors might well play a role in personal choice and the willingness to continue the familial patrimony. However, the reasons given reflect consciously made choices.

When asked why they do not dedicate all their time to the farm, 78 percent of part-time farmers indicate that farming by itself would not generate enough income. This could be interpreted as being the main, and economic, explanation of part-time farming. However, such an interpretation would be wrong. Because, if farming renders insufficient income, then why do these people not sell their property and dedicate themselves to the other job?

The part-time farmers were asked to compare their situation with that of non-farmers living in the same area. According to the part-time farmers, non-farming rural residents miss out on certain benefits linked to active participation in farming. Forty-eight percent of the part-time farmers, for instance, think that the food they consume is of better quality than that consumed by non-farming rural dwellers. Slightly paraphrasing Rachel Carson, one could say that these part-time farmers ensure that in their farms and gardens “spring is alive.” Twenty-nine percent think that the two groups consume the same quality of food, and only five percent think that the quality of their food is worse.

Part-time farmers also believe a farm is a better place to raise children. Space for the children was the second most mentioned difference. This was immediately followed by “the house.” Farming activities (and the associated contact with nature) make the part-time farm a better place to live. Next came the absence of stress: part-time farmers perceived farming as a stress buster. Other factors were access to services and social contacts. Those involved in part-time farming do not feel isolated: having a foot in two different worlds opens more opportunities for them and allows them to relate to others.

Income was perceived as the least significant difference: most part-time farmers think that their own income is equal to that of non-farming rural dwellers. Some think it is higher and a smaller portion thinks it is lower.
The Centrality of Food Quality

From one perspective, it is remarkable that quality of food stood out as the most striking difference between farming and non-farming rural residents. From another, though, it is perhaps no surprise at all. The response is a direct reflection of the deep lack of faith in the quality and reliability of the food supplied by food industries and large retail organizations. Against this background, being able to produce even just part of your own food can be seen as an enormous and increasingly recognized privilege. And this is not limited to Italy or Europe. In our ongoing research in China we have found exactly the same motive. Although the 250 million small farms in China are only one of the assets of families with multiple jobs, the main reason given for the importance of the farm is the same as in Italy: the quality and reliability of self-produced food is considered to be superior to that of the food processed by agro-industries and distributed through large retail organizations. In China, preserving the family farm is also important for a number of other reasons: the farm is understood as a fallback in a crisis, for example when levels of industrial employment are suddenly reduced. It is also part of a decentralized system that holds food reserves.

It is not just rural dwellers who are actively focusing on food quality. The inhabitants of large cities and metropolises (such as Beijing and Shanghai) share the same aspiration, and in some places this translates into a variety of new forms of urban agriculture. Some of these represent novel ways of linking both people to people and people to the land. Little Donkey Farm (a cooperative located north of Beijing) is one example. Here city people can obtain direct access to a piece of land and, importantly, to the required knowledge (which they often completely lack). Farmers (mostly elder ones) are part of the co-operative and they transfer their knowledge, through a variety of mechanisms, to the new part-time farmers. The co-operative also provides the basic infrastructure (access roads, demarcation of parcels, water, manure, seeds, and so on). Beyond this, it provides an important and friendly meeting place.

There are several new mechanisms for distributing food produced on small part-time farms in the countryside to the major urban areas. Glass noodles are a good example. Made from sweet potatoes through a lengthy process requiring significant labor and high levels of craftsmanship, these glass noodles travel from their villages of origin towards the cities (often through the networks of migrant laborers). They are a popular
gift during the Spring Festival. Thus the produce of part-time farmers may reach far beyond the local area.

Part-time Farmers and the Wider Panorama

From these examples I argue that part-time farming is not about poverty and deprivation. Incomes are the same, and beyond that there are considerable non-monetary advantages. Part-time farming often represents a choice for a more polyvalent life. In more general terms, what we are witnessing here is a return of the “link to the land.” This link was an important characteristic of the peasantry: peasants were strongly tied to the land, a land they had actively constructed and thus loved dearly. Similarly, many part-time farmers are tied to the land because it offers them a good place to live and to raise their children, because it offers them food that is far better than the food obtained through modern retail chains, and for a multitude of other reasons. This link to the land turns part-time farming into a continuous and resilient phenomenon. Young people raised on a part-time farm will be taught the importance of certain values and will probably opt, in the future, for a similar existence.

Part-time farming might be a valuable option at personal level, but how does it fit into a broader context? Six percent of the Italian sample of part-time farmers believe that they play a fundamental role in maintaining the territory in which their farm is located, and 40 percent consider that they play an important role. The main contributions that they believe they make are related to the maintenance of the landscape (36 percent) and the quality of the produce (28 percent). Twenty-two percent consider part-time farming to be important for securing the volume of agricultural production and 13 percent consider it important for the development of other economic activities in the area.

“Full-Time” Farming

The same research project also examined full-time farmers that form part of a pluriactive family. This means that part of the overall family income is earned from the farm while another part is earned elsewhere.
Comparing these two groups is extremely helpful, I believe, because it shows that there is no sharp boundary—neither conceptually nor empirically—between part-time and full-time farming. Semantically there may appear to be a clear division; however, in real life there are far more similarities, and the differences are minor.

The first notable difference is that these full-time farmers are almost as dependent on off-farm earnings in order to generate an adequate household income. The main data are summarized in Table 1, in which the horizontal axis shows the contribution of the farm to the overall household income and the vertical axis the amount of time that the conduttore (the farm manager) dedicates to the farm.

**Table 1: Contribution to family income according to time dedicated to the farm (n=947)**

<table>
<thead>
<tr>
<th></th>
<th>Marginal</th>
<th>Substantial but less than 50%</th>
<th>Equal to 50%</th>
<th>&gt;50%</th>
<th>Almost 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time</td>
<td>43%</td>
<td>18%</td>
<td>8%</td>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td>&gt;=50%</td>
<td>26%</td>
<td>18%</td>
<td>30%</td>
<td>21%</td>
<td>4%</td>
</tr>
<tr>
<td>&lt;50%</td>
<td>80%</td>
<td>15%</td>
<td>4%</td>
<td>1%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 1 clearly shows that full-time and part-time farms do not differ greatly when it comes to the contribution that the farm makes to the overall household income. If we take all the part-time farms together, in 71 percent of cases the farm only makes a marginal contribution to household income. On the full-time farms this is 43 percent. Ironically, on the part-time farms where the conduttori dedicate more than half their working time to the farm, the situation is slightly better: in only 26 percent of these cases is the contribution marginal. Only 15 percent of full-time farms derive nearly all of their income from the farm. The differences between full-time and part-time farms are therefore minor.¹ Most of these farms, whether full-time or part-time, can be maintained only with the help of additional income generated outside of the farm.²

¹ We may equally assume that over time there will be many changes to this configuration: part-time farms may become full-time, and vice versa. Such changes will depend very much on intra-household relations, work opportunities, administrative and fiscal regimes, etc.

² In the case of so-called full-time farms, there often is an interesting gender aspect. It is commonly the women working elsewhere (as teachers, nurses, engineers, directors, and so on) who that generate the family income. Thus the “full-time farm” functions, in the end, as the expensive hobby of the husband who dedicates all his time to it. The earnings of the farm are re-invested in it; they do not contribute to the family income.
The argument that the differences between part-time and full-time farming are minor is reflected in the opinions of full-time farmers themselves. On the whole they do not think that part-time farmers perform worse than them. In fact, 53 percent of them believe that part-time farmers play an important (or even fundamental) role in the area. Part-time farmers are seen as especially important for the maintenance of the landscape (37 percent), for the supply of high quality food (35 percent), and for the maintenance of an acceptable level of production for the area as a whole (28 percent). It is telling that these full-time farmers are almost as likely to advise youngsters and/or family members to become a part-time farmer (17 percent) as to become a full-time farmer (20 percent). Even more telling, perhaps, is that 38 percent would advise the next generation not to engage in farming in any way whatsoever. When it comes to prospects for the future, five percent of full-time farmers think that part-time farms have the best prospects compared to 24 percent for full-time farms. Notably, 38 percent indicated that multifunctional farms have the best prospects. Thus the essential choice is not between full-time or part-time farming, as may have been the case in the past. Rather, the two forms are interchangeable expressions of the same difficult situation. The essential choice now, it seems, is about new ways forward, particularly in the development of multifunctional farms.

The Moral of the Story

Having direct access to the land is increasingly seen as something of great value. It allows people to actively increase the quality of their lives in a variety of ways. However, at present only certain minorities can gain such direct access. Some people might relocate to the small farm owned by their grandparents. Similarly, they might take over their parents’ farm, maintaining it as an attractive place to live, to raise children, to produce food, and to meet other people. They are likely to sell a part—perhaps a considerable part—of their produce. This will help them to better face the harsh conditions that come with the economic and financial crisis. Others might be well-paid professionals, countering the stress of urban life by running a farm as a hobby. Yet others might be granted access to land through new institutional arrangements, such as Terre des Liens in France and Rural Estates in the Netherlands.

There are many more social groups, though, who would like to gain direct access to land but lack the mechanisms or resources to do so. I believe that this offers new op-
opportunities for local politics (although the consequences will be felt at regional and national level). Local politicians should adopt policies that create direct access to land for everybody who wants it. This will require tailor-made solutions—hence the need for local politics to find the most adequate local solutions. It will require new, creative infrastructures (for accessibility, water, and so on). It will also require new patterns of cooperation and new meeting places. Farmers will be needed to show and teach to the others how to prepare the land and how to manure, plant, and harvest it. A multiplicity of new Little Donkeys will emerge, adapted to other circumstances but always creating new linkages between farmers and urban people.

Part-time farming carries the promise of an improved quality of life, especially when circumstances are difficult. If efforts are made at a local level to bring part-time agriculture within the reach of everybody who wishes to engage in it, it might well become an important factor in the wider processes of societal change that we are currently experiencing.
Michel Pimbert

Food Sovereignty and Autonomous Local Systems

Throughout the world, a growing number of initiatives aim to reconnect producers and consumers through short food chains and local food systems. According to a recent study commissioned by the European Union, short food chains generate many social and economic benefits throughout Europe. They create a sense of community and of “living together” by building trust and social bonds. They generate jobs and strengthen local economies because a higher share of value added is retained by producers.

But despite their current role in meeting human needs and sustaining diverse ecologies, local food systems—and the organizations that govern them—are threatened by two main trends. The first is the global restructuring of agri-food systems, with a few transnational corporations gaining monopoly control over different links in the food chain. This undermines local people’s capacity for autonomy and self-determination. The second threat is the modernist development agenda which aims to reduce the number of people engaged in food production and instead encourages them to get jobs in the largely urban-based manufacturing and service sectors—regardless of the social and ecological costs of increasingly job-less growth in these sectors.

The food sovereignty movement has emerged as a reaction to this situation. Relocalizing and regenerating autonomous food systems—with, for, and by citizens—is a key challenge for the food sovereignty movement. Reclaiming such spaces for autonomy and well-being depends on strengthening the positive features of local food systems and on large-scale citizen action grounded in an alternative theory of social change. “Food sovereignty” thus emphasizes:


2 The loss of autonomy and self-determination is a direct consequence of the expansion of the industrial model of development rooted in commodity production. An important mechanism in this process is what Ivan Illich has termed “radical monopoly”: “the substitution of an industrial product or a professional service for a useful activity in which people engage or would like to engage,” leading to the deterioration of autonomous systems and modes of production. Ivan Illich, Tools for Conviviality (London: Calder and Boyars, 1973).
“the right of peoples to define their own food and agriculture; to protect and regulate domestic agricultural production and trade in order to achieve sustainable development objectives; to determine the extent to which they want to be self-reliant; to restrict the dumping of products in their markets... Food sovereignty does not negate trade, but rather it promotes the formulation of trade policies and practices that serve the rights of peoples to food and to safe, healthy and ecologically sustainable production.”

The emerging food sovereignty policy framework identifies the need for several mutually supportive national and international policies to strengthen the autonomy and resilience of more localized food systems. It recognizes that there are many local food systems throughout the world, particularly in developing countries. Indeed, most of the world’s food is grown, collected, and harvested by over 2.5 billion small-scale farmers, pastoralists, forest dwellers, artisanal fisherfolk, and urban farmers. This food is primarily sold, processed, resold, and consumed locally, with many people deriving their incomes and livelihoods through work and activities at different points along the food chain—from seed to plate.

In the face of the organized power of science, business, and mainstream politics, the concept of food sovereignty, and the struggle to achieve it, brings together farmers, citizens, indigenous peoples, pastoralists, and all kinds of rural and urban groups from both the South and the North. Transformation for food sovereignty partly depends on strengthening the local organizations of these food providers and on citizens reclaiming power over their lives in at least five interrelated areas, which are discussed here.

Access to Land and Seeds

The entry into farming by prospective farmers—most of them young people—has become a problem with high land prices and an increasingly speculative land market. In Europe for example, land ownership is highly unequal. There are some 12 million farms in the EU, but the large farms (100 hectares and above) which only represent 3 percent of the total number of farms, control 50 percent of all farmed land. A wide-
spread political process is required to reverse the concentration of land ownership in Europe and other continents where similar inequities prevail.

In the meantime, it is inspiring that a number of citizens’ initiatives are removing land from the commodity market and enabling farmers to enter or stay in farming. For example Terre de Liens in France has acquired over 2,000 hectares of farmland since 2007, which it holds in perpetuity for the sake of current and future generations. Land is then lent to farmers who farm organically. Almost all these farms market their products through short food webs that create jobs and wealth in the local economy.

Food sovereignty also depends on unrestricted access to a diverse range of non-pro-prietary seeds in order to develop biodiversity-rich farming systems that are resilient to change. But seed regulations as well as Plant Breeders Rights in many countries currently induce uniformity in farming landscapes by restricting the free exchange of seeds between farmers. Although seed companies hugely benefit from these laws, this greatly hampers society’s ability to develop more genetically diverse agroforestry, intercropping, and mixed farming systems that are needed to adapt to climate change. Policy reversals are urgently needed to liberate seeds from corporate control and strengthen farmers’ rights to save, use, and freely exchange diverse seeds.

**Models of Production**

Transformation for food sovereignty requires a fundamental shift from linear, throughput industrial models of production to circular systems that mimic natural ecosystems to reduce both external inputs and waste. At the farm level, this requires developing alternatives to monocultures and reducing farmers’ dependence on suppliers of off-farm inputs and the food retailers. By combining farmers’ local experiential knowledge with the modern science of ecology, agroecology provides the basis for designing such agricultural systems by harnessing biodiversity and other locally available resources. Dependency on external markets for inputs and ecological footprints are reduced by encouraging functional designs that generate their own soil fertility, crop protection, pollination, and water management to yield quality foods and other farm products.

Greenhouse gas emissions can be high for short chains and local food systems that deliver unprocessed seasonal foods when key inputs, such as electricity and fuel, are sourced from a considerable distance from the farm. As with the farm level, an alternative here is to develop productive systems that minimize external inputs, pollution, and waste (as well as risk, dependency, and costs) by adopting a circular metabolism that is inspired by nature. There are two key design principles here that both reflect the natural world. The first is that natural systems are based on cycles, for example water, nitrogen, and carbon. Secondly, there is very little waste in natural ecosystems. The “waste” of one species is food for another, or is converted into a useful form by natural processes and cycles.

So a major challenge for the food sovereignty movement is to find new ways of re-integrating food and energy production with water and waste management in locally embedded circular economy models. The overall focus is on “doing more with less”; widespread recycling and reuse; diversity and multi-functionality, and the ecological clustering of industries, as well as the relocalization of production and consumption. This includes a shift from large-scale, centralized electricity generation to small-scale, decentralized renewable energy systems. This is how centralized and specialized global food supply can be replaced by decentralized food webs—from house clusters, municipalities, and whole cities, to peri-urban belts linked with nearby farm lands and the wider countryside.

This ecosystem-analog approach can enhance farmers’ and citizens’ direct control over the means of production and decisions on what to produce, and how. It provides the material basis for local food sovereignty and resilient food systems throughout the world.

**Transforming Knowledge and Ways of Knowing**

Farmers who want to grow their crops and rear their animals using organic methods and agroecological approaches often need knowledge that is very different from what is currently offered by the formal agricultural research system. More generally, the

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development of circular systems that combine food and energy production with water and waste management requires radically different knowledge from what is available in public and private sector research and disciplinary-based university departments.

The whole process of transforming knowledge and ways of knowing for food sovereignty should lead to the democratization of research, diverse forms of co-inquiry based on a specialist and non-specialist knowledge, a blurring of the boundaries between scientific, citizen, and indigenous knowledge systems, expansion of horizontal networks of farmers and citizens for autonomous learning and action, and more transparent oversight.

**Claiming Citizens’ Rights to Participate in Policy-making**

Organized efforts by citizens are necessary to ensure changes in research priorities, policies, and public investments for local food systems and alternative food networks. For example, funds are required to build the infrastructure of decentralized food systems: local abattoirs, mills, community food processing units, equipment for distributed micro-generation of renewable energy, and systems for water recycling and purification. Global, uniform standards for food and safety need to be replaced by a diversity of locally evolved food standards that meet food and safety requirements. Local food, energy, and water procurement schemes also need to be introduced to ensure that wealth and jobs stay in the local economy.

All this requires “a mass re-politicization of food politics, through a call for people to figure out for themselves what they want the right to food to mean in their communities, bearing in mind the community’s needs, climate, geography, food preferences, social mix and history.”

More direct democracy and citizen engagement in framing food policies and public investments can be encouraged by strengthening civil society and local organizations, using methods for deliberative and inclusive processes to link local voices into national and international policy making, expanding information democracy and citizen-controlled media, nurturing active forms of citizenship, and learning from the rich history of direct democracy. Federations of local organizations and peoples’ assemblies linking

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villages, towns, neighborhoods, local economies, and ecological units can also act as a significant counter-power to the state and transnational corporations.

Deepening Democracy

There is a need for economic arrangements that offer enough material security and time for citizens (both men and women) to exercise their right to participate in shaping policies for the public good and to develop autonomous food systems. Only with some material security and time can people be “empowered” to think about what type of policies they would like to see and how they can contribute to them. Leveling the economic playing field for democratic participation calls for radical and mutually reinforcing structural reforms, including: 1) the introduction of a guaranteed and unconditional minimum income for all; 2) the relocalization of plural economies that combine both market oriented activities with non monetary forms of economic exchange based on barter, reciprocity, gift relations, and solidarity; 3) a generalized reduction of time spent in wage-work and a more equitable sharing of jobs between men and women; 4) a tax on financial speculations, to fund the regeneration of local economies and ecologies; and 5) a shift from the increasingly corporate controlled, globalized, centralized, and linear systems we use to produce and distribute food to more decentralized and relocalized circular systems that combine sustainable food and energy production with water and waste management in a diversity of urban and rural settings.

Conclusion

Over a century ago in Fields, Factories, and Workshops, Kropotkin presented his vision of a decentralized anarchist communist society “of integrated, combined labor… where each worker works both in the field and in the workshop,” and each region “produces and itself consumes most of its own agricultural and manufactured produce.” At “the gates of your fields and gardens,” there will be a “countless variety of workshops and factories… required to satisfy the infinite diversity of tastes… into which men, women and children will not be driven by hunger, but will be attracted by the desire of finding an activity suited to their tastes.”

In many ways, “food sovereignty” echoes this earlier vision of how society could be organized for equity, social inclusion, and environmental sustainability. Given the threats of climate change, peak oil, loss of biological and cultural diversity, water scarcity, food crisis, as well as steeply rising unemployment and poverty, there is an urgent need for such a fundamental transformation throughout the world.
Matthew Booker

What Should We Eat?

This question, so simple and yet so profound, sits at the center of some of the most popular and widespread movements of the twenty-first century. Activists around the world argue for food localization, producing and consuming food closer to home. What is it that makes local food so attractive to so many different groups worldwide? What are the uses and limits of food localization movements?

Other contributors to this volume discuss food localization movements among producers, in Europe, and in the Global South. This essay will consider the drive for local food as a consumer movement in the wealthy North, and particularly in the United States. This essay asks: why do people want to eat locally?

Food has become a container into which desires for healthy, just, sustained, and happy lives can be poured. This seems like common sense. Food is after all the most elementary human need, and agriculture perhaps the defining element of modern human civilization. Work is life, and food work continues to dominate all work in the world. But can food bear so many hopes and dreams? Perhaps more than any other aspect of our lives, food shows the tension between desiring to act on behalf of all humanity and desiring to act on behalf of oneself.

Advocates for food localization mean many different things when they call for local food. The American scholar David Cleveland lists four distinct values for the term: strengthening local communities, social justice, environmental health, and improved nutrition.1 To this list I would add “belonging.” Since the age of industrialization, with its many dislocations, many moderns feel out of place, divorced from community, disconnected. Psychologists have long noticed this connection between modernity and anxiety. In 1943, when Abraham Maslow created his hierarchy of human needs, he ranked the need to belong just below survival and safety.2 Many of the writers who promote local food mention their desire to know and to connect with the people who grow their food. Eating locally is a way of making a group and building a community.

This one word, local, offers a shared path to reach all these disparate ends. Eating locally offers something to farmer-activists in the Global South, and health campaigners and consumers in the Global North. The trouble with local is that it may paper over the very great differences between these groups, and it may distract and confuse consumers with the promise of one magic bullet to solve all ills.

Perhaps the best example is the hope that eating locally might reduce emissions of greenhouse gases that are warming the planet. This concept builds on the common sense idea of local as distance from producer to consumer, or “farm to table.” Biologist Gary Paul Nabhan inspired many others, including the creators of the concept of “locavore,” with his effort to eat only foods grown within a 250-mile radius of his home in the US state of Arizona. Nabhan was concerned with sustaining cultural traditions, not with reducing carbon. Others however have noted that food consumed within a few miles of its origin requires less fuel for transport and therefore, it seems, less carbon. More recently, scholars have analyzed food systems to ascertain just what percentage transportation and distribution consume of the total carbon budget of food systems.

These studies show that transportation is rarely a significant contributor to a food’s carbon budget. Much more significant are the fossil fuels used to produce, process, and store food. Large-scale growers are often more efficient at these steps of food production, making distance a poor proxy for carbon load. In one careful study of US diets, scholars found that 83 percent of emissions occurred before leaving the farm gate.

If the goal is to reduce the contribution of greenhouse gases from the food system, it may make more sense to change diet. As two scholars found in a lifecycle assessment of US food, “Shifting less than one day per week’s worth of calories from red meat and dairy products to chicken, fish, eggs, or a vegetable-based diet achieves more greenhouse gas reduction than buying all locally sourced food.” But, as another leading local food researcher argues, these kinds of simple prescriptions can do more

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Think Global, Eat Local

harm than good. Removing meat and dairy from diets in the developing world might do great damage. Poor people have historically been unable to eat enough meat and dairy products.\(^5\)

The beauty of advocating for local food seems to be its simplicity and comprehensiveness. Yet as food miles and diet suggest, simple solutions are rarely so neat. Another major challenge is defining where local ends and regional, national or global begins. As Rachel Shindelar has already shown in her analysis in this volume, neither producers nor consumers seem to have a clear definition for the term “local.” For example, in one survey, half of North American shoppers defined local food as produced within 100 miles of the point of sale. Thirty-seven percent thought food grown within their home state was local. Small percentages considered food grown within a region (like the six American states of New England) or even the national borders as “local.” These are significant differences. The differences in scale between a 100-mile radius circle (81,000 km\(^2\)) and the most populous American state, California (424,000 km\(^2\)), make local nearly meaningless. Yet in recent years “local” has become a more popular and commonplace marketing slogan than “organic.” In the same survey of American consumers, more than half said they try to buy local food whenever possible while just 23 percent said the same of organic food. But calling food organic actually means something, while calling it local does not. In the United States, organic food is subject to inspection standards. “Local” food is not.\(^6\)

Of course, these are American consumers. Their views do not represent the rest of the world. And even in the United States, local food movements are not only about improving the environment or searching for healthy food. They are also about control, self-sufficiency, authenticity, and personal empowerment. Local food has further meanings in other national contexts, such as in Mexico, France, Germany, or Switzerland with their deep histories of place. In those places, food localization often has less to do with environmental issues, such as climate change or toxins, and much more to do with social justice, food sovereignty, identity politics, and other goals.\(^7\)


Here again though, food can look like a unifying flag under whose banner may walk contradictory desires. For instance, the founders of the Slow Food movement in Italy initially aimed to “defend regional traditions, good food, gastronomic pleasure and a slow pace of life.” Their 1986 protests against construction of a McDonald’s in Rome have since branched out to become a global movement for regional identity, one connecting activists in dozens of countries. But the desire to protect local traditions in an age of rapid globalization can be twisted toward very different political ends. The Italian nationalist organization Lega Nord has advocated protecting local food not to prevent the introduction of foreign foods but to prevent the immigration of foreign people. In 2010 Lega Nord used the slogan “Sì alla polenta, NO al cous cous. Orgogliosi delle nostre tradizioni” [Yes to polenta, no to cous cous. Proud of our traditions]. This slogan, opposing the traditional Italian peasant dish of polenta to North African couscous, turned localism into xenophobia. Lega Nord connected pride of place with hatred of outsiders, an old and troubled tradition in the country that gave birth to fascism.

What should we eat? Turns out to be a complicated question in our own time. It is also a question with a history. This is not the first time in modern history that citizens have worried about their food and its origins. More than a century ago powerful technologies and organizational methods of industrial economies moved into agriculture and food processing, transforming fisheries, agriculture, and marketing. Food production and consumption linked concerns about the meaning and ownership of work, reflected anxieties about massive migrations from countryside to city and across oceans, and became the focus of fears about disease and health in an age of terrible urban epidemics. In the United States, the decades between 1880 and 1930 witnessed profound shifts that anticipate some of the concerns today. One of the biggest shifts was the rise of loss of local farmlands to urban growth and to more efficient industrial farms.

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7 For example, the international organization Via Campesina, longtime advocates for diversified agriculture that produces food while sustaining small farmers. La Via Campesina, “Un Informe Mas de la ONU que Llama a Respalda La Agricultura Campesina y la Agroecologia: Ahora es Tiempo Para la Accion,” 23 September 2013. http://tinyurl.com/l663m6o. Accessed 29 July 2014.


9 Benedetta Grasso, “Polenta vs Couscous: Legally Banning Ethnic Food from Northern Italy,” i-Italy Magazine, 9 April 2010, http://www.i-italy.org/13883/polenta-vs-cous-cous-legally-banning-ethnic-food-northern-italy. The irony of this slogan appears to have escaped the Lega Nord. Polenta is made from New World maize while couscous is made from Old World wheat. Couscous, rather than polenta, has the deeper food tradition in the Mediterranean.
But did twentieth-century Americans care that they no longer ate locally? That is a hard question for historians to answer. There certainly were political movements around food in the early twentieth century. This era saw attempts to enforce a standard diet in the United States in the face of mass migration of poor white and Black Southerners into northern cities and immigration from Europe. Educated experts fought for some “American” foods and against “foreign” foods to promote assimilation into American culture, but also to promote health and reduce disease. But they were driven by middle class anxieties about persistent poverty and the passions of immigrant, urban workers. As food historian Harvey Levenstein found, middle class reformers sought to enforce conformity to a bland “American” diet they considered healthy and cheap. Those food activists cared what was eaten and who ate it, not how the food was grown.10

The poor on the other hand cared deeply about the price and quality of food. In 1900 half of a working class American household’s income went to purchase food. As industrial methods transformed US agriculture, prices dropped. In 1950 the national average was 22 percent. By 1998, food accounted for just seven percent of the average American household’s disposable income.11 Cheap food is a rare advantage for the American poor, who face many of the risks of life alone, without the ample social safety net available in other industrialized countries.

To understand how turn of the century Americans felt about food, can we look to literature, art, and music? This is the age of novels about leaving the farm, most of it celebrating the escape from rural drudgery and the dull country life. Only in the 1930s after the transformation was complete did a new nostalgic literature appear. But even the most famous of these novels, Laura Ingalls Wilder’s Little House on the Prairie series, depicted farm life with mixed emotions. One Christmas, young Laura receives the greatest treat imaginable—an orange from a thousand miles away. Her Ma and Pa reserved store-bought refined white sugar for guests, with the children allowed less-valued, locally made maple syrup.12

This past may seem irrelevant to local food activists today. Concerns about urban overcrowding and disease, about dangerous labor practices and transportation monopolies, rarely appear in our media. Nor is farm life even a memory for most Americans today. In 1930, farmers still accounted for more than one out of every five Americans. Today, less than one percent of the population are farmers.\textsuperscript{13} Despite these caveats, American history has some lessons for today. And it may have parallels in other settler colonies (Argentina, Australia, Canada) and industrializing nations in Asia and Africa. The dislocations we are seeing today in Mexico and Thailand are not so different from the exodus of farm families from the United States and Germany in the nineteenth century.

This past offers a few lessons for the present. As industrial food produced local food, it generally brought increased quantity and diversity and lower prices. Quality may have fallen with prices, but oranges in winter were a marvel. For the poorest consumers, cheap food may have been far more important than local food.

As an historian, it seems to me the trouble is that we want our environmental choices to be clean and simple. Very few of the readers of this journal are farmers. All are consumers. Consumers today yearn for a life in which they can do the right thing by buying the right thing. They want food that is socially just and environmentally sustainable, exotic and seasonal, authentic and affordable. But some of these things are at odds with others. Simple stories don’t exist in the real world, past or present. Food localization speaks to real problems, but it must not become nostalgia or fantasy.

We all want to eat right, to do the right thing when we buy and consume food. But what does it mean to do the right thing? Is locally produced, conventionally grown food better than organic food grown hundreds or thousands of kilometers away? Are traces of pesticide residue worth the lower cost? Is it possible to be for local without being against global? Who wins and who loses when we make our food choices? Those are the tough questions facing local food advocates today.

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In the face of recurring environmental crises, interest in local food systems has evolved from a fringe trend to a full-fledged social movement. Such localized food systems are viewed as a way of rejuvenating the foundations of people’s nutrition, incomes, economies, ecologies, and culture. However, the movement has been met with resistance from those championing the conventional, large-scale food system. This volume of *RCC Perspectives* offers insights into the motivations, benefits, and limitations of local food systems.