Lies, Damned Lies, and Locavorism

Bringing Some Truth in Advertising to the Canadian Local Food Debate

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An ever-growing number of food writers and activists claim that our modern-day genetically modified “corn-utopia” is soaking up a rapidly vanishing petroleum pool while delivering junk food, rural poverty, and mutation-inducing pollution. Freeing ourselves from the monopolistic grip of agribusiness interests, their mantra goes, requires nothing less than a drastic carbon-fuel detoxification diet and a wholesale rethinking of the way everything is done from “plough to plate.” At the top of their list of recommendations is the (worldwide) revival of regional food economies, or “locavorism,” that is, the movement to increase local food production at the expense of long-distance trade. While some acknowledge that this prescription will be costly—a Swedish activist group even proudly calls itself Dyrare Mat Nu! (More Expensive Food, Now!)—they promise, in return, greater food quality, safety, and security, healthier bodies and natural environments, and improved community spirit and individual well-being.

As articulated most prominently by journalism professor and food writer Michael Pollan, the case against export-oriented monocultures rests primarily on the contention that they are “not simply the product of the free market” but rather “of a specific set of government policies that sponsored a shift from solar (and human) energy on the farm to fossil-fuel energy” (2008, 65). This argument, however, is problematic on several
counts. For instance, even a cursory look at American agricultural history reveals that some significant monocultures (indigo, tobacco, and cotton, for example) long preceded the advent of carbon fuels. (Needless to say, some export-oriented monocultures, such as olive, cereal, and wine production, were already well established during Mediterranean antiquity.) Another problem for Pollan’s thesis is that, in the United States, the agricultural landscape was already dominated by “agricultural belts”—regions that specialized in the production of specific commodities—in the age of (unsubsidized) coal (Finch and Baker 1917). Finally, export-oriented monocultures are also dominant in countries that provide very little support of any kind to their agricultural sector, such as New Zealand.

The goal of this chapter is to challenge the locavore’s rhetoric and to reiterate the importance of several factors that have long been understood to drive the ever more globalized nature of our food supply chain, namely, advantageous geographies, economies of scale, and advances in transportation and food preservation. The first section summarizes the rhetoric of Canada’s most prominent advocates of a return to regional food production, while the rest of the chapter illustrates how the road to social, economic, environmental, food-security, and nutrition-safety hell is paved with allegedly fresher and more desirable local meals.

SOLE FOOD AND CANADIAN LOCAVORISM

Over a century ago, the French entomologist Jean-Henri Fabre deplored that history “celebrates the battlefields whereon we meet our death, [but] it scorns to speak of the ploughed fields whereby we thrive; it knows the names of the kings’ bastards, [but] it cannot tell us the origin of wheat” (Fabre [1889] 2002, 334). In a complete turn of the intellectual tables, today a good many of humanities professors and graduate students in wealthy countries are concerned with little else. Unfortunately, this sole (sustainable, organic, local, and ethical) scholarship and its attending smorgasbord of television reports, magazine cover stories, popular books, and shock documentaries draw heavily upon older muckraking, populist, protectionist, romantic, and “vitalist” traditions. The result is a one-sided narrative in which the abundant, affordable, and safe food produced through advanced means and distributed over long distances is quickly drowned in a sea of complaints (see, for example, Pollan 2006, Walsh 2009).
Canadian food activists and writers are every bit as vocal about these alleged shortcomings. For instance, Sandy Houston, the president of the Ontario-based Metcalf Foundation, remarks that food, “a fundamental human concern and central to the health of our communities, economy, environment, and bodies,” is now produced in a “complex, rigid, and opaque” system (Houston 2010, 4). Because of this “outdated system designed for export markets,” farmers struggle financially, agricultural land is “fast disappearing,” food bank use is on the rise, and overall health is in decline owing to a “lack of access to nutritional food” (Metcalf Foundation 2010). Policy writers at Food Secure Canada further contend that our current food system has delivered food insecurity for “close to two and a half million Canadians” and obesity for a quarter of the overall population, while driving farmers and fishers out of business and pushing our “natural environment . . . to the limit.” The way forward, they write, includes making sure that “food is eaten as close as possible to where it is produced” by supporting domestic and regional purchasing policies for institutions and large food retailers, local farmers markets, and community supported agriculture (Food Secure Canada 2011, 2).

The Grow TO urban agriculture action plan of the Toronto Food Policy Council shares a similar diagnosis and prescriptions. Increasing local food production, its authors claim, “creates business opportunities, enhances economic development, generates income,” and develops a wide range of job-related skills. It also “builds community, encourages life-long learning, reduces social isolation,” and “uses under-utilized land and rooftops” while connecting us “to the food we eat and to the broad food system,” providing “physical activity for all ages,” improving “health and nutrition,” and enhancing “urban food security.” The local environment is said to benefit in several ways: increased and more diversified urban green spaces, more ecologically sound stormwater management, greater local biodiversity, and reduced air pollution (Toronto Food Policy Council 2011, 9–10). In her bestseller Locavore, journalist Sarah Elton describes the path to a greener food system as lined with farmers’ markets, urban farmers, and community-supported agriculture programs, while another Canadian journalist, Thomas Pawlick, states that expecting international corporate agribusiness to “be ‘reformed’ or pressured into becoming a reliable, responsible source of healthy food and a protector of the environment” is akin to expecting foxes to be trained as “guardians for the world’s chicken coops” (Elton 2010;
Pawlick 2006, 203). The only way to defeat corporate power, he argues, is to go around it by thinking locally and fighting locally.

The benefits of locavorism put forward by these and other local food activists can be summarized as follows:

• **Social**: Farmers’ markets can help mend the local community ties that have been torn by the globalized food supply chain and big box retailing by promoting camaraderie, informal conversation, and good will.

• **Economic**: Local food purchases improve the economic circumstances of mostly small-scale farmers who otherwise struggle in the face of international competition. Money spent locally stays in the community rather than ending up in the distant headquarters of monopolistic large retail chains, shipping companies, and mega corporate farms. More local jobs are created as a result.

• **Environmental**: Because locally produced food items travel shorter distances, they generate fewer greenhouse gas emissions than food shipped from distant places. In addition, local food production systems that serve a broad array of needs are more diverse than large, export-oriented monocultures. Promoting local food production is also an indirect way to fight urban sprawl and to promote better environmental stewardship.

• **Security**: Local producers are more dependable in times of political crisis and economic collapse. By contrast, international food markets cater only to the highest bidders and have no interest in the fate of marginal populations. Diversified local agriculture is also less likely than monocultures to succumb to pests and diseases.

• **Taste and Health**: Because locally grown food is fresher and picked in a more ripened state, it is tastier and more nutritious than items that have travelled long distances. Food contamination is also more likely in central processing facilities where vast quantities of food from diverse geographical origins come into contact and are exposed to undesirable elements. By contrast, the small scale of local food production ensures that problems remain localized and are easily traced.

Despite the popularity of locavorism, controversy still surrounds the geographical scale it refers to. Few people would advocate returning to the days of subsistence farming, but what is “local”—the approximately 50-kilometre
radius within which urban denizens historically got most of their perishable agricultural commodities before the advent of the railroad and the steamship (Rodrigue, Comtois, and Slack 2009, 42)? Or the now iconic “100 miles” (161 kilometres) for consumers in our car-dominated era? Or, as the provisional definition of the Canadian Food Inspection Agency would have it, “food produced in the province or territory in which it is sold” or “food sold across provincial borders within 50 km of the originating province or territory” (but evidently excluding adjacent American states)? Or even the whole of Canada, as suggested by supermarket chain Loblaw’s “Grown Close to Home” campaign (Flavelle 2009)?

Adding to the confusion of what constitutes “local” food are a few other thorny issues. What about food that was actually grown near its final point of purchase but was then transported significant distances to be processed and inspected in a large plant before being shipped back to a retailer near its production site? Shouldn’t we also care about the distant geographical origins of seeds, embryos, fertilizers, and pesticides, or about the electricity, gasoline, diesel, packaging materials, computers, and software used by local producers?

From an economic perspective, some local foods make perfect sense because they provide the best ratio of quality to price available at certain times of the year (think of Prince Edward Island potatoes or British Columbia salmon consumed locally). And, in isolated rural areas where land is cheap, game animals abundant, and economic opportunities limited, it often makes perfect sense to spend significant chunks of one’s time growing a large vegetable garden, keeping a few animals, and hunting, fishing, and harvesting wild food. In other cases, such as hobby gardening, economic criteria are essentially irrelevant.

Uncompetitive local food promoted solely for its geographical origins is another matter entirely. As I will argue below, the policy recommendations put forward by local food activists can only deliver a world in which poverty, environmental damage, food insecurity, and diseases are much more prevalent than is presently the case—in other words, the true world of yesterday as opposed to the romanticized view of the past so common among locavores. In the remainder of this chapter, I examine each of the inaccurate or baseless myths propagated by activists, beginning with the notion that increased direct interactions between consumers and producers can only be beneficial.
Myth #1: Locavorism Nurtures Social Capital

From the beginning of markets and civilization, intermediaries have been engaged in the assembling, grading, packaging, processing, storing, transporting, financing, distributing, and advertising of food and other goods. For perhaps just as long, these people have been described as superfluous by social critics who, as the French economist Frédéric Bastiat observed over a century and a half ago, “would willingly eliminate the capitalist, the banker, the speculator, the entrepreneur, the businessman, and the merchant, accusing them of interposing themselves between producer and consumer in order to fleece them both, without giving them anything of value” (Bastiat [1850] 2007, 19). Locavores are but the latest activists to indict food wholesalers and retailers under charges of social parasitism and to promote various schemes to bypass them. Like their predecessors, however, they fail to grasp their valuable contributions.

In order to better understand the role and persistence of food intermediaries, one must first keep in mind the heterogeneity of agricultural productions. For instance, not all apples—even if grown on the same tree—are identical. Depending on their characteristics, they are graded as Canada Extra Fancy, Canada Fancy, Canada Commercial, Canada Hailed, Canada Commercial Cookers, Canada No. 1 Peelers, and Canada No. 2 Peelers. This system ensures that specific apples are put to the best use they warrant, from direct sales to consumers for the highest grades to making juice, pie and pastry fillings, jelly and other products for the others. Grades and standards help ensure that producers of quality output obtain maximum value in different markets, that buyers do not have to inspect every shipment, that handling and transportation can be done more efficiently, and that waste is minimized.

The development of modern brands further saved consumers the trouble of establishing the trustworthiness of multiple small-scale producers, which was once a significant issue. Unbeknownst to present-day activists, a number of their nineteenth-century predecessors were forever denouncing the shady dealings of local businesspeople, whom they accused of adulterating food in various ways, such as adding water to milk, wine, and beer; roasted chicory roots, peas, and beans to coffee; or horsemeat to beef (Wilson 2008). Trust issues in farmers’ markets now mostly manifest themselves in the form of resellers peddling nonlocal products under false...
local pretenses (Etter 2010), a problem made worse by the fact that small operators have much less at stake than large companies, whose deep pockets unavoidably attract the attention of trial lawyers.

The shortcomings of locavorism are most obvious in community-supported agriculture (CSA) schemes where farmers prepare a selection of pre-paid seasonal items. Regular deliveries (typically once a week) take place either at participants’ doors or at locations where farmers can meet a larger number of consumers. Alternatively, consumers might be required to show up at the farm and perhaps even do volunteer work there. The truly defining feature of CSA, however, is that participants “share the risk” with the farmer they support, meaning that the weekly pickups may be larger than expected when things are good but smaller when they aren’t.

Unfortunately, a typical complaint from a former CSA participant is that “inconvenient drop-off locations or contracts . . . require more time or money than you can afford” while the “sudden onslaught of produce” might require the acquisition of significant cooking skills and equipment, along with a serious time commitment for food preparation. When the latter is not possible, much produce ends up on the composting pile. Production problems on the farm, be they related to weather, pests, or equipment, also mandate “budget busting” trips to the local grocery store (Ghezzi 2009). One disgruntled former CSA adherent found out that “many times ‘shared risk’ meant receiving produce with major insect damage,” while on other occasions “the produce was beautiful, but I expected that there would have been more.” Inflexible delivery schedules and quantities delivered also turned out to be problematic when scheduling conflicts occurred or when children were suddenly gone for a few days. The result was either significant waste or additional supermarket trips. As she pointed out, and as is now readily acknowledged, “wasted produce is the most common reason for people not to continue with a CSA program.”

Such problems are a useful reminder that intermediaries in the food sector create value by delivering greater convenience and minimizing waste. True, initiatives that help consumers to meet food producers might create new genuine friendships, but spending more time and money to acquire food less efficiently means fewer opportunities to nurture social capital in other ways, from charitable giving to volunteering opportunities. Overall, CSA and other attempts to bypass intermediaries might actually decrease social capital in a local community.
MYTH #2: LOCAVORISM DELIVERS A FREE ECONOMIC LUNCH

Celebrity food writer Michael Pollan has suggested that channelling “even a small portion of institutional food purchasing” within a hundred miles would “revive local agriculture,” “create more jobs on farms,” and promote “rural redevelopment” (quoted in Moyers 2008). Increased local spending by hospitals, military bases, and other government agencies and bureaucracies, he argues, would not only “vastly expand regional agriculture,” but it would also “improve the diet of the millions of people these institutions feed” (Pollan 2008, 70).

The basic problem with Pollan’s proposal is that it skips over the fact that no one would buy more distant food if it did not provide a better quality-to-price ratio over local options. This point was made rather forcefully, if somewhat unintentionally, in Alisa Smith and James Bernard MacKinnon’s iconic hundred-mile experiment in some of Canada’s most productive agricultural and coastal areas. For example, locally produced honey cost about $11 a kilogram instead of $2.59 a kilogram for sugar. Furthermore, acquiring and preparing food for both immediate and later consumption turned out to be comparable to holding a part-time job, thus providing a useful reminder that the one thing money cannot buy is more time (see Smith and McKinnon 2005, 2007). Needless to say, these costs would have been much higher if other residents of the British Columbia lower mainland had similarly turned their back on the globalized food chain and been much less productive as a result.

Because he ultimately cannot deny the higher price tag of his prescription, Pollan has long requested that “food-stamp debit cards should double in value whenever swiped at a farmers’ markets” (2008, 70). Like many other local food activists, however, he is quick to denounce the unfair playing field on which small producers ply their trade and the “unconscionably expensive” price of cheap food because of subsidies paid to large agricultural farms, the general disregard for the well-being of agricultural workers and the environment allegedly displayed by agribusiness, and what he claims is the poor quality of the food delivered to consumers. Yet Pollan and other locavores appear oblivious to the geographical disadvantages of certain locations—from poorer, rockier, or less levelled soils to an unsuitable climate for certain crops (too cold or too hot, too humid or too dry)—and to the fact that smaller markets do not warrant major investments in
the development of more productive plant and animal varieties or in larger and more cost-effective production and processing facilities.

Another consideration often lost on local food activists is that, regardless of the location or time period, economic growth has never occurred without the development of cities. There are several reasons for this. Among others, the geographical agglomeration of diverse economic activities makes possible the profitable operation of a transportation hub through which firms can better serve a broad range of activities (both in local and more distant markets). Being located next door to suppliers, customers, and creative people in general facilitates the diffusion and development of a broader range of skills and the launching of new innovative businesses. Urban labour markets are also much larger and diversified than those of rural areas and smaller towns, thus making it considerably easier for entrepreneurs and managers to find the specialized or temporary workers they need and for individuals to invest in the acquisition of ever more refined skills. In the words of economist Edward Glaeser, there is “a near-perfect correlation between urbanization and prosperity across nations” (Glaeser 2011, 7). The key point for locavorism, however, is that urbanization has long been impossible without substantial food imports from distant locations. As some of Plato’s characters in his Republic observed nearly two and a half millennia ago, to find a city “where nothing need be imported” was already then “impossible” (Plato [c. 360 BCE] 2008, Book II). In short, economic development is impossible without urbanization, and urbanization has long been impossible without long-distance trade in food and other items. A world that would abide by the locavore’s creed would unavoidably use scarce resources less productively and deliver lower standards of living, as has always been the case in all predominantly rural societies.

MYTH #3: LOCAVORISM HEALS THE EARTH

In a 2008 National Geographic article, journalist Michael Mann discusses how unsound soil-management policies in communist China led to the creation of terrace agriculture in unsuitable conditions, along with the cutting down of trees and the planting of grain on steep slopes. The result, not surprisingly, was increased soil erosion and depletion. Daring to challenge official wisdom, some villagers replanted the steepest and most erosion-prone third
of their land with grass and trees, covered another third of the land with harvestable orchards, and focused their cropping efforts on the remaining lower flat plots that had been enriched by the soil washed down from the hillsides. By concentrating their limited supplies of fertilizer on the best land, Mann tells his readers, the dissident villagers were able to increase yields to such an extent that they more than made up for the land sacrificed, in the end delivering both increased output and reduced environmental impact (Mann 2008).

The outcome described by Mann is a microcosm of the long-standing economic and environmental benefits of high-yield agriculture and long-distance trade. As the Marxist theorist Karl Kautsky observed over a century ago, “As long as any rural economy is self-sufficient it has to produce everything which it needs, irrespective of whether the soil is suitable or not. Grain has to be cultivated on infertile, stony and steeply sloping ground as well as on rich soils” (Kautsky [1899] 1988, 254). In time, however, increased commodity production and overseas trade removed the need “to carry on producing grain on unsuitable soils, and where circumstances were favorable it was taken off the land and replaced by other types of agricultural production” such as orchards, beef cattle, and dairy cows (254). Exporting food items from production locations where water is abundant to consumers living in regions where it isn’t similarly removes the need to drain surface waters and aquifers in the latter regions. International trade creates more affordable food, in greater quantities, with reduced environmental impact.

Unfortunately, locavores not only exhibit geographical short-sightedness, but they have also embraced the notion of “food miles” as a proxy for greenhouse gas emissions. Yet this otherwise handy equation is generally not supported by life cycle assessment (LCA) studies, which examine the environmental impacts associated with all the stages of a product’s life cycle, from raw material extraction to disposal of the finished product. As has been repeatedly and rigorously documented in numerous LCA studies, and others, the distance that food items travel from farms to consumers is meaningless in terms of the overall environmental impact of agricultural production, for several reasons (Cuéllar and Webber 2010; Desrochers and Shimizu 2008; Edward-Jones 2010; Saunders, Barber, and Taylor 2006). Among other problems, producing food typically requires (much) more energy than moving it around, especially when significant
amounts of heating and/or cold-protection technologies, irrigation water, fertilizers and pesticides, and other inputs are required to grow things in one region but not in another. Reducing food miles typically implies a greater environmental footprint through the use of additional resources of additional inputs in a less desirable location. While imperfect because of subsidies and barriers to trade, market prices factor in most of the relevant environmental trade-offs because of the additional costs incurred through the use of additional inputs. Another problem well documented in LCA studies is that the distance travelled matters less than the mode of transportation. Shipping things halfway around the earth on a container ship often has a smaller footprint per item carried than a short-distance trip by car to a grocery store to buy a small quantity of these items.

As these studies further indicate, advances in transportation and conservation technologies have historically increased the importation of perishable food items produced at different latitudes and decreased local food production and storage, in the process delivering greater freshness, lower costs, and reduced energy consumption. For instance, importing New Zealand apples in the northern hemisphere in April, rather than preserving local apples picked in September in cold storage for several months, delivers fresher items while reducing both storage costs (attributable to factors such as the need to maintain higher than normal CO2 concentrations and to control temperatures to inhibit spoilage or prevent freezing) and losses to spoilage.

Reducing production and postharvest losses as well as consumers’ food waste should be given a higher priority than food miles, for reduction in wastage means either reduced production or less hunger (Marsh and Bugusu 2007). By virtually any metric, residents of high-density urban areas drive, pollute, consume, and throw away much less than people living in greener surroundings (Owen 2009, 7; see also Glaeser 2011). Concentrating human population in urban centres and feeding them from the world’s best agricultural locations is a more sensible way to lighten humanity’s load on the planet than reducing food miles.

To the extent that it takes place in a competitive setting, modern agriculture is about getting more from less. That local food activists genuinely believe that doing the opposite is more sustainable is one of the greatest puzzles of the modern environmentalist movement.
Myth #4: Local Food Increases Food Security

At the 1996 World Food Summit, “food security” was defined as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life.” While perennial worries like food shortages and famines are now confined to the least developed and more conflict-prone parts of our planet, food activists periodically blame “neoliberal globalization” for persistent problems such as malnutrition in less advanced economies and recent international food price spikes. Their preferred solutions typically revolve around managed trade, the reaffirmation of national sovereignty, and increased local food production (see Mousseau 2010). Taking their cue from environmentalist icons such as Rachel Carson, who argued that under “primitive agricultural conditions the farmer had few insect problems” and that those arose with the “devotion of immense acreage to a single crop” ([1962] 2002, 10), some activists also believe that because local food systems must, by their very nature, be more diversified, they are inherently more resilient to pests and diseases than export-oriented monocultures. In times of rapidly rising commodity prices, political turmoil, all-out war, or sudden decline in the demand for a particular crop, they add, vulnerable communities will be better served by nearby producers. Defenders of agribusiness and trade liberalization observe, to the contrary, that there is currently (and can only ever be) enough food to go around because of modern food production technologies and long-distance trade. Furthermore, the vast majority of today’s malnourished people are African and South Asian subsistence farmers and rural landless labourers who cannot readily access international food markets and are therefore unaffected by international price spikes (see, for discussion, FAO 2010; Paarlberg 2002).

Locavores also misunderstand the greater resiliency of a globalized food system over polycultures. Simply put, agricultural producers have always had to strike a balance between the greater resiliency, but lower productivity, of growing different types of food simultaneously and the greater productivity, but increased vulnerability, of focusing all of one’s energy on a single lucrative commodity. Subsistence farmers understandably elect to follow the former method, but, in practice, this amounts to putting all of a community’s agricultural eggs into one geographical basket. As the historical record convincingly demonstrates, this is always and
everywhere a recipe for disaster when societies are confronted by natural events (from droughts and floods to tornadoes and tsunamis) that destroy much in their path, highly contagious diseases that affect a broad range of animals, and generalist insect pests (see Ó Gráda 2009).

Among other problematic facts for their case, locavores forget that dominant high-yielding and disease- and stress-resistant varieties were bred from multiple and geographically distant cultivars; that, because of their lower productivity, polycultures can never create enough wealth to support the human brains and capital required to create better varieties and improve crop and animal protection (Kirchmann and Bergström 2008); and that, whether because of biological or economic problems, countless producers have historically switched from one type of monoculture to another.

In the end, the claim that monocultures are a serious threat to food security can only be sustained in the absence of broader economic development (which provides other income opportunities if local agricultural productions become problematic), long-distance trade (including the movement of agricultural commodities when there is a local food shortage), and labour mobility (which makes emigration a realistic possibility when other options fail). As the Scottish historian William Wilson Hunter observed in his nineteenth-century classic *Annals of Rural Bengal*, the best way to prevent famines is to promote “every measure that helps towards the extension of commerce and the growth of capital, every measure that increases the facilities of transport and distribution,” and “whatever tends to develop the natural resources of a country” so as “to render each part less dependent on itself” (1871, 55).

The truly food-insecure people today practice (mostly) self-reliant polycultures in sub-Saharan Africa and South Asia. When stricken by famine, their best hope of survival is that food produced in distant monocultures will eventually reach them. Subsistence farmers are not food insecure because of the globalized food supply chain, but rather because they are not part of it.

**MYTH #5: LOCAVORISM IS TASTIER, MORE NUTRITIOUS, AND SAFER**

The widespread claims that locavorism delivers tastier, more nutritious, and safer food than does agribusiness typically boils down to the fact that,
according to Michael Pollan, “food eaten closer to where it is grown will be fresher and require less processing, making it more nutritious” (2008, 68). In other words, food sold at farmers’ markets will have been picked in a more ripened state than items shipped over long distances, ensuring superior taste and nutritional value. Another alleged advantage of local food systems is that they can tap into older “heirloom” varieties developed for taste rather than for resistance to transportation and storage. Pollan further believes that a single factory “grinding 20 million hamburger patties in a week or washing 25 million servings of salad” is more susceptible to accidental contamination and that, obviously, “the bigger and more global the trade in food, the more vulnerable the system is to catastrophe” (68). While he acknowledges that small producers will always experience food safety problems, Pollan states that they will be “less catastrophic and easier to manage because local food is inherently more traceable and accountable” (68). His solution to these various perceived problems and shortcomings is decentralization, a strategy now hampered by “a tangle of regulations” that mandate “a huge investment in federally approved facilities” for such innocuous things as farmers smoking a ham and selling it to their neighbours (70).

As we will soon see, Pollan’s perspective is not backed up by either logic or the available evidence on food taste, nutrition, and safety. Crucially, too, it skips over the inadequate nutrition provided by all traditional local food systems, a topic that needs further elaboration before I address his other claims.

It is generally admitted that the diet of medieval Western European peasants was not only low in calories and proteins but also often lacking in lipids, calcium, and vitamins A, C, and D (Gies and Gies 2010, 96–98). Until the mid-1800s, most Europeans remained “in a chronic state of undernourishment,” while only elites could expect a daily intake of white bread and meat (Murton 2000, 1412). As late as 1940, vitamin deficiency diseases such as anemia, beriberi, and pellagra remained common in the United States (DeGregori 2002, 93). Indeed, as a result of nutritional inequalities, members from the richer groups in Western Europe and the United States were historically “taller and heavier than those from poorer backgrounds,” suffered less from chronic and debilitating diseases, lived longer, and were capable of harder and more sustained work (Floud et al. 2011, 1).

Gaps of this kind have now largely been closed in advanced economies: for instance, British aristocrats are now only two inches taller than average.
As the Marxist historian Jeffrey M. Pilcher observes of Britain, while there is much debate as to the actual timing, there is no controversy over the fact that “when nutrition did improve for common people, it came at the price of a growing distance between producer and consumer” (Pilcher 2006, 55). Dissecting the available data, the Nobel laureate economist Robert Fogel and his collaborators further found that “in most if not quite all parts of the world, the size, shape and longevity of the human body have changed more substantially, and much more rapidly, during the past three centuries than over many previous millennia,” a time period that coincides with the development of the globalized food supply chain (Floud et al. 2011, 5).

With these facts established, let us now get back to the locavores’ taste, nutrition, and safety rhetoric. The first problem for Pollan and other locavores is that their claim that freshness is key to superior taste is self-defeating. After all, barring massive investments in energy-guzzling greenhouses, fresh food is only available for short periods of time each year in temperate climates, whereas our globalized food supply chain delivers “permanent summertime” in the produce sections of supermarkets.

Second, the alleged nutritional benefits of freshly picked local produce depends more on its freshness than its geographical origins. For instance, a local item picked four days before it is sold at a nearby farmers’ market cannot be inherently superior to an identical item picked further away, but closer to the selling date, and preserved and transported in state-of-the-art conditions. Produce destined for freezing and canning is also typically picked in its best state, something to keep in mind because “depending on the commodity, freezing and canning processes may preserve nutrient value” better than refrigeration (Rickman, Barrett, and Bruhn 2007, 930). Interestingly, while some canned products (such as peaches) might be just as nutritious as fresh items, others (such as canned tomatoes) are actually more nutritious because the cooking process makes them more easily digestible (Durst and Weaver 2013). This being said, modern packaging and refrigeration technologies have also come a long way in terms of preserving nutritional values over time (Barrett and Lloyd 2012). In the end, there is no simple correlation between freshness and nutritional value.

Other practical considerations that undermine the alleged nutritional benefits of locavorism include the fact that the fortification of food items ranging from milk and butter to salt, flour, and pasta can be accomplished much more effectively and cheaply (especially if vitamins and minerals are
produced in large volumes) through large-scale facilities that serve a geographically significant customer base. Food imports can also be crucial for people who suffer from food allergies ranging from celiac disease to lactose intolerance, if adequate substitutes are not available locally. In the end, though, the real problem of the locavore’s stance on nutrition is that while human consciousness might care about the geographical origins of food items, human bodies don’t. From a physiological perspective, what matters about food is that it provides sufficient energy and nutrients. Because locavorism can only deliver a more expensive and monotonous diet, it cannot provide superior overall nutrition than the globalized food supply chain.

Finally, the locavores’ main food safety claims also rest on a romantic view of the past and a tendency to disregard the available evidence. Arguing that a food system devised around a limited number of large-scale operations is more likely to diffuse pathogens than highly decentralized regional ones ignores the importance and risks associated with the completely natural pathogens that surround us. Far from being healthier, our remote (and highly decentralized) hunter-gatherer and farming ancestors constantly displayed symptoms like nausea, fever, vomiting, abdominal cramps, and diarrhea—or even died—after consuming prey or domestic animals, produce, and water that had been contaminated by one or several types of viruses, bacteria, parasites, toxins, metals, and prions (DeGregori 2002). Still today, virtually all food-borne diseases are not attributable to synthetic pesticides but to completely natural pathogens such as Salmonella, Campylobacter, E. coli O157, or norovirus. Fortunately, advances such as proper canning, pasteurization, refrigeration, water chlorination, and sanitary packaging, along with greater scientific understanding of problematic agents and vectors and the development of ever more efficient countermeasures, have helped address these problems and made our modern food system the safest in human history. Apparently unbeknownst to locavores, economies of scale are significant in food safety and are better thought of as fortifications against roaming marauders than as hubs facilitating their movement. Humanity’s food supply was never inherently “pure, natural, and safe”; it has only recently been corrupted by man-made chemicals and careless industrial practices, but it has always been afflicted by a large number of pathogens that have been significantly brought under control through the development of industrial-scale food safety technologies and procedures.
Large supermarkets are also inherently safer than temporary farmers’ markets, which are typically poorly equipped outdoor structures whose traders have only received elementary food hygiene training. The warning of some health experts—that “given the restricted facilities at farmers’ markets and the early phase of implementation of hygiene management systems by market traders, it may be precautionary to restrict the sale of farm products at farmers markets to those that are regarded as low-risk”—should be given more consideration than it usually is (Worsfold, Worsfold, and Griffith 2004, 109).

Perhaps in the end, the most compelling argument on behalf of modern advances is the fact that, as the food policy analyst Robert Paarlberg observes, approximately 700,000 people die every year from food- and water-borne diseases in Africa, where “many foods are still purchased in open-air markets (often uninspected, unpackaged, unlabeled, unrefrigerated, unpasteurized, and unwashed),” compared to only a few thousand in the agribusiness-dominated United States (Paarlberg 2010, 84).

CONCLUSION

Freedom to trade and technological advances in the production, processing, preservation, and transportation of food have long eroded the local foundations of humanity’s food supply. Despite the benefits inherent in an increasingly globalized supply chain, the sense of lost community and increased political vulnerability that have unavoidably accompanied them have long triggered nostalgic and protectionist reactions. Although now often couched in environmental terms, twenty-first-century local food rhetoric undoubtedly taps, to a large extent, into these more primal emotions.

Of course, most past governmental interventions in agricultural markets (from production subsidies and trade barriers to ethanol mandates and country of origin labelling) have traditionally appealed to the same. Far from promoting a radical departure from past practices, locavorism is, in the end, just a new spin on an old agricultural protectionist rhetorical package. As such, it can only deliver the trying times that our ancestors left behind and that today’s subsistence farmers would escape if given opportunities to trade.

What enthusiastic locavores ultimately fail to understand is that their “innovative” ideas are up against regional advantages for certain types of
food production; economies of scale in food production, processing, transport, and safety; and the absolute necessity of large urban agglomerations reliant on long-distance trade for economic development. These unavoidable realities defeated very sophisticated local food production systems in the past. The sooner locavores redirect their efforts toward real agricultural problems—from costly production subsidies to international trade barriers—the better humanity and the planet will be. A necessary first step toward the creation of a better world is to stop communicating erroneous information and suggesting impractical and environmentally harmful solutions.

NOTES

1 The main thrust of “vitalism” is that living organisms fundamentally differ from nonliving entities because they contain some nonphysical element or are governed by different principles than inanimate things.
7 For the most recent food illness statistics, see Public Health Agency of Canada, “Estimates of Food-Borne Illness in Canada,” 2014, http://www.phac-aspc.gc.ca/efwd-emoha/efbi-emoa-eng.php; see also Thomas et al. (2013). While no mortality estimate is provided, it is reasonable to assume that it is proportionally similar to that of the United States.
8 Some of this history is covered in Desrochers and Shimizu (2012).
REFERENCES


Food Secure Canada. 2011. *Resetting the Table: A People’s Food Policy for Canada*. People’s Food Policy Project, Food Secure Canada.


