

From Field to Table: Building a Cooperative Sustainable Food System in Balance with Nature

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What is the main goal of Added Value and the Red Hook Community Farm?

What we're trying to do here is create a more sustainable world; the way we want to do that is through youth empowerment and urban agriculture. We are taking public space that was programmed for one use, one economy, and one social structure, and transforming it into something else. What we believe we're doing as an organization and a learning community is transforming what was a 20th-century park into a 21st-century park – literally a public commons.

What a 21st-century park means to us is that we can use a public space to educate people about a truly democratic process: how to care about social issues. We can provide them with skills development and training to help build that world, while simultaneously building an economic process that nurtures the community and nurtures the environment. It doesn't just lessen the ills that we've done. This is a project that harvests waste from the surroundings to generate nutrients, to generate ideas and energy. Often when we think about our work, we talk about words like: catalytic, inspirational, transformative, community.

I'm not really interested in any of my teens becoming farmers. What I care about is that they grow up caring. They know they're cared for. They know that caring matters. They have skills to help them articulate that and actualize that in terms of building a more caring world.

Ian Marvy in Campbell and Wiesen (2011, p. 202)

PROFOUND CONTRADICTIONS

Wendell Berry (1990) describes eating as an 'agricultural act'. Agriculture is inherently ecological and dependent upon natural systems such as decomposition, water and nutrient cycling, and soil dynamics. Through these connections food can be viewed as deeply ecological, and yet, when it comes to creating a

sustainable food system that is in balance with nature, the picture is profoundly contradictory. Major global food problems exist related to the dominant industrial food system, and these are being deepened by climate change, growing income inequities, and the looming health crisis that is in turn fuelled by market dominance of the least nutritious, most processed food. Despite this bleak picture, changes are happening in all sectors of the economy and society, providing optimism and exciting blueprints for pathways to reconnect people to nature through food. One of the most hopeful opportunities is the alternative global food movement that champions closer connections to nature through eating more whole food (e.g. Monteiro et al., 2015). Among the most successful and promising of these initiatives are direct 'field-to-table' distribution linkages between food producers and urban residents, and vibrant innovative community-based programs that are increasing access to healthy, affordable, local, culturally relevant food. Taken together, the last two decades have seen the emergence of new cooperative and sustainable distribution mechanisms and programs, and a new food culture, in the midst of a crisis-ridden dominant food system. These new food systems offer better-connected pathways between eaters, their food, and the natural environments that produce them. Tied closely to the push for healthier, whole foods, there are also education programs that seek to fill gaps in eaters' food knowledge and skills as a way to reconnect both with food and with nature (e.g. the Ontario Edible Education Network, 2016). Food distribution and food education are thus two important sources of potential solutions to the profound contradictions of the industrial food system, and to healing the divide between what we eat and the ecosystems that produce our food.

To frame opportunities to build connections with nature through food, it is useful to better understand the current disjuncture caused by the industrial food system. There are three main, interconnected components that characterize the global food crisis and distance people from their food environments (Kneen, 1993): food and income; food and health; and food and agriculture (Figure 68.1). The first point of disconnection is evidenced through hunger, and measured as food insecurity. The second point of delinking, which emerges most obviously as diet-related illness, lies at the intersection of poor food quality and health. The third problem, unsustainable food systems, links food production, processing, distribution and consumption to environmental, social, political, and economic food system challenges.

This framework for understanding the points of disconnection between people, food, and nature was created in the 1990s by FoodShare Toronto and its then executive director Debbie Field. With roots emerging out of the local anti-hunger movement, FoodShare is a globally recognized food security organization and civil society leader focused on providing 'good healthy food for all' through growing, distribution, and education programs that operate using a food justice lens. One of the reasons FoodShare has had such a profound impact

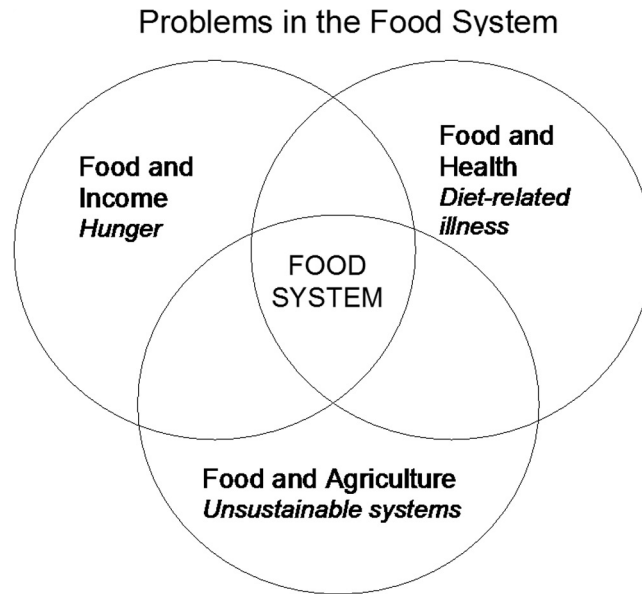


Figure 68.1 Interconnected problems in the industrial food system

on the international food movement is because it has been able to frame the day-to-day details of food system challenges within more conceptual, big picture perspectives, while concurrently delivering practical programs that impact tens of thousands of children and adults. The three-circle framework describing the root problems of the industrial food system is an example of this thinking. This framework is also used by other prominent organizations such as Food Secure Canada as a tool for explaining the problems within the industrial food system, as well as potential solutions and places where the divide between people and their food can be bridged. One of the overarching perspectives FoodShare utilizes in bridging these divides is the potential for people to reconnect with nature, the ecological source of all sustenance, through the food they eat and the ways in which they access it. We explore the intersections of the three circles in the following section and discuss some of the conventional private sector responses to the push for healthier, whole foods, and the ways in which these approaches fall short. We then provide examples, based on FoodShare's extensive 30-plus year history, of linked-up, multifunctional food system solutions that are helping to heal the industrial food divide and offer opportunities for people to connect with nature through their food. The first solution offered is FoodShare's Good Food program, a food distribution system that has the potential to be adapted to other community contexts (scaled out) as well as to influence government policy that could address food systems issues (scaled up) (Johnston & Baker, 2005). The second solution offered encompasses a variety of food education techniques. This suite of approaches is illustrated with the

example of FoodShare's School Grown program, a critical approach to learning about and through food.

INTERCONNECTED PROBLEMS IN THE INDUSTRIAL FOOD SYSTEM

Persistent Hunger

A lack of adequate income translates into compromised access to quality food, creates persistent hunger, and ultimately leads to under-nutrition. Though the World Food Organization reports 795 million hungry in 2015 or 200 million fewer hungry people than the high of 1 billion in 1990, Olivier De Schutter, the former UN Special Rapporteur on the Right to Food argues that hunger has remained static as governments have pursued inappropriate strategies to produce more food rather than implement long-term community-based solutions (De Schutter, 2008).

The majority of these millions of hungry are former peasant farmers in the Global South, without access to land to either feed themselves or sell any food to make a living. These former farmers are frequently forced off their land and into cities, where they live in highly compromised conditions (GRAIN, 2014). In these communities, food insecurity is persistent and high. Another group are farmers who experience seasonal food insecurity as they are unable to produce enough food to feed themselves and their families throughout the entire year.

While the majority of countries where food access is a problem continue to report high or higher rates of hunger, China and Brazil account for most of the reduction in absolute numbers. Though China's rapid industrialization is clearly not easily reproducible for most countries, Brazil's reduction is the result of the Zero Fome (Zero Hunger) policies of income transfer and subsidized food programs, which, along with their ground-breaking national nutrition guidelines, point in the direction that other governments need to follow to reduce hunger.

Hunger remains persistent in the Global North as well, as real incomes and a lack of social safety nets make it harder and harder to 'pay the rent and feed the kids'. The creation of food banks in many northern countries has not been capable of providing a lasting solution. Food insecurity is both the expression of and a mechanism for deepening social inequality. Who suffers the most from food insecurity? Indigenous and communities of colour, the poor, the old, rural populations, the newly unemployed, and of course millions of children. In Canada, First Nations communities suffer from higher than average food insecurity rates with some communities reporting levels as high as 69% (Council of Canadian Academies, 2014). Climate change and associated shifts in animal migration patterns and decreased food sharing in some communities are severing traditional links between people, the land, and their food, resulting in an increased reliance

on store-bought food instead of country food. In a world of plenty, food insecurity or hunger is about access rather than production.

Overproduction and Overconsumption of the Least Healthy Foods

The second point of disconnection between people, food and nature is the escalating diet-related illnesses in which the health of an ever-growing percentage of the globe's population is compromised by the least healthy food being consumed. From Michael Pollan's *In Defense of Food* to Rob Albritton's *Let Them Eat Junk* (2009) to Mark Schatzker's *The Dorito Effect: The Surprising New Truth About Food and Flavor* (2015), the case has been built for the disastrous health impacts of the contemporary food system's relentless promotion of the least healthy, highly processed food. Individuals bear the burden in their bodies, and the health care system as a whole pays a tremendous cost for diet-related illnesses ranging from diabetes to obesity.

Amongst the poorest communities and countries, there is a truly grotesque overlap in which people who cannot afford to buy adequate food can only afford to buy the cheapest food available, which is often the least healthy. *A Place at The Table* (Jacobson and Silverbush, 2013) follows millions of Americans who face this challenge. We see a twin pattern of over- and under-nourishment in growing percentages of the world's poor. *The British Medical Journal*, in reviewing 27 studies in 10 countries, reported that healthier foods were more expensive (Rao, et al, 2013). No wonder a growing number of doctors are calling for a reversal in this process. According to the 2013 Union of Concerned Scientists' report on the state of health in the United States, *The \$11 Trillion Dollar Reward*, increased consumption of fruits and vegetables could save more than 127,000 lives and \$17 billion in health care costs from heart disease each year. The value of these saved lives would exceed \$11 trillion. The authors go on to link these health dividends to the need for revamped US farm policies to foster a healthy food system instead of processed food. Public education and enhanced understanding about healthy food systems is also part of the solution to this health crisis as it can help reconnect people to healthier food and encourage them to feed themselves whole or minimally processed food (Ministry of Health of Brazil, 2014).

Problems for the Agricultural Sector

For the purposes of this chapter, the third problem that decouples people from food and nature stems from the industrial food system and is reflected as a crisis of agricultural unsustainability with deep challenges to both the economic and environmental viability of farming. It is both tragic and ironic that food producers face such economic difficulties themselves. Whether in the north or the south, farmers are often unable to provide nourishment for themselves and their

communities, as ‘profits from agriculture are generally suffering from long-term downward pressure and shorter-term instability’ ((Hill & Bradley, 2015, p. 21). Farm bankruptcies, the increasing average age of farmers, or the threat to independent family farms push farmers to the brink around the world. Nothing expresses this in a more tragic way than the pain and suffering of farmers as the number of farmer suicides increases annually in India and other countries (Weingarten, 2017). The top pressures pushing farmers to die by suicide are indebtedness, crop failures, and family issues.

Environmental unsustainability joins economic unsustainability in a complex interwoven set of conflicting priorities for farmers as they struggle to earn a living and be good stewards of their land. When we add the cost to the environment of current agricultural practices, the picture is even bleaker, with estimates of the cost of environmental degradation in the billions in the United States alone: ‘The major economic and environmental losses due to the application of pesticides in the USA were: public health, \$1.1 billion year; pesticide resistance in pests, \$1.5 billion; crop losses caused by pesticides, \$1.4 billion; bird losses due to pesticides, \$2.2 billion; and groundwater contamination, \$2.0 billion’ (Pimental and Burgess, 2014). Climate change creates even more difficulties in most of the world as temperatures, precipitation variability including droughts and floods, and other extreme weather events threaten yields. ‘Particular hazards are the possibly increased flooding of low-lying areas, the increased frequency and severity of droughts in semi-arid areas, and potential decreases in attainable crop yields. It happens that the latter countries tend to be the poorest and the least able to make the necessary economic adjustments’ ((Fischer et al., 1996, p. 233). The impacts of industrial food systems on the environment and the rift this creates between people and nature have created a negative feedback loop of increasing degradation and separation. As our current dominant food systems perpetuate the divide between the food we eat and the ecological systems it comes from, people are even less equipped to understand and respond to the challenges of environmental degradation such as climate change and soil erosion.

LOCAL AND NUTRITIOUS GOES MAINSTREAM: THE PRIVATE SECTOR RESPONSE

In the early thirteenth century, the English monarchy proclaimed the first food regulatory law, the Assize of Bread, which prohibited bakers from mixing ground peas and beans into bread dough. Ever since, it has been a cat and mouse game between the food industry and the public (fast forward to China 2008 – cheap poisonous melamine in milk powder). In the US, food regulation dates back to early colonial times.

As the problems situated at the intersections of food and income, food and health, and food and agriculture impact people’s lives, there has been a growing

concern around food systems and a concomitant shift in consumer demands. In response to concerted consumer pressure and changes in government regulation, in the 1990s fast food outlets, processed food manufacturers, and major food retailers all began to add local and organic options as well as promote healthier retail choices. For example, McDonalds added salads to their menu and, more recently, created their Nutrition Centre, which allows customers to see calories, fat, protein, carbohydrate, and sodium content (McDonalds, 2016). In 2012, Burger King committed to purchasing only cage-free eggs and pork by 2017 (Daily Mail, 2012). These initiatives point to the positive synergies from links in consumers' minds between wanting to eat healthier, less-processed food that is more natural and humane, and addressing concerns for animal well-being. In response to consumer questions about the safety and source of food, food outlets began seeking new sources of products from local producers, and those producers who might have better environmental and farm sector policies, particularly in the treatment of animals.

As part of this shift, among the most significant changes in the private food sector has been the growth of farmers' markets and direct marketing of farm products to consumers. In the US in 2014, there were 8,268 farmers' markets operating, representing 180% growth since 2006. Though there was somewhat of a levelling off in 2015 as compared with previous years, farmers' markets, community shared agriculture, and direct farm-to-table sales have all continued to grow in the US, Canada, the UK, and New Zealand, joining strong farmers' market traditions in most countries of the global south and Europe. The Project for Public Places organized the 2015 Market Conference in Barcelona so delegates could learn from Barcelona, 'arguably the international model for a Market City', (Project for Public Spaces, 2015) in which every neighbourhood has a market. Though a strong movement for local food now exists in most countries, these solutions tend to be partial in nature. Rather than working toward a sustainable food system that links food to the natural world, many approaches give too much ground to neo-liberal practices that erode the sustainability of ecosystems and continue to distance people from nature and the food they eat. For example, much of the food movement is preoccupied with strengthening market forces, increasing the price of organic, healthy, and local food to create new distribution channels (Guthman, 2008). Arguably this strategy deepens the underlying contradictions of the existing food system, raising the price barrier for the 1.1 billion hungry, or the 1.2 billion who are over-nourished from too much cheap industrial food and facing obesity and diabetes.

On the other hand, farmers and community food security organizations have developed practical solutions such as farm cooperatives and community food hubs that support subsidized school meals and community food markets and prefigure a more equitable food system in balance with nature. For example, as will be explored in the next section, FoodShare runs the Good Food programs and the School Grown program to address both food distribution and food education

issues. Following on from Jeremy Rifkin's *The Zero Marginal Cost Society* (2014) and Henry Mintzberg's *Rebalancing Society* (2015), programs such as these highlight the role of third-sector farm and community organizations, supported by government policies, in escaping the limits of market forces through the development of genuinely alternative, adequately and appropriately scaled, sustainable, and cooperative forms of food production, distribution and consumption, which are designed with a post carbon ecosystem approach. These new models help to reconnect people to their food, and to the natural environments it comes from. These are critical initiatives not only in light of food systems issues but also because many experts state that we are moving away from an appreciation of nature to a state they have called 'videophilia', a new tendency for people to 'focus on sedentary activities involving video media' (Pergams & Zaradic, 2006, p. 387). Based on their analysis of national park visits and the 16-year downtrend beginning in the late 1980s, they go on to caution that this may be a sign that people's appreciation of nature is in decline. More than ever, initiatives that can successfully address the disconnect between people, their food, and its inherently ecological roots are needed.

FOODSHARE: RECONNECTING PEOPLE WITH NATURE THROUGH COMMUNITY FOOD INITIATIVES

FoodShare provides numerous opportunities to connect customers of their food distribution programs with the ecological sources of their food, as well as to connect students with nature through gardening and food (FoodShare, 2015). From 2014–15 one of the authors (Wever) had the opportunity to embed herself in many aspects of FoodShare's food distribution and education programs, and much of the following sections are drawn from her role as a researcher-practitioner in the organization during that time. This section also draws heavily from Wever's Wever's thesis (2015b), both in terms of context and findings. Consistent with the introduction for this chapter, Wever makes the point in her thesis that the industrialized food system increases both the physical and metaphorical distances between eaters and the source of their food – the land, water, animals, and ecological systems that support its production, the people involved in its growth and processing, and the systems of power that dictate food access (see also Kneen, 1993). This distancing from nature, coupled with the convenience of industrial food, contributes greatly to the deterioration of food-related skills and knowledge, continuing the negative feedback loop of declining skills and connections to the natural environment.

In this section, we will discuss two main categories of programs in terms of their ability to address the issues of food and health, food and income, and food and agriculture, while also decreasing the physical and metaphorical distance between eaters, their food, and its ecological source. First, we will consider

FoodShare's Good Food program as a case study for food distribution systems with the potential to address the above concerns. We will then consider the role of food education programs in critically and explicitly addressing these gaps between people, food, and nature, with FoodShare's School Grown program used as an illustration of this potential.

FOODSHARE'S GOOD FOOD PROGRAM

FoodShare was founded in 1985 as a 'hunger hotline', a \$30,000 pilot program with one staff member begun by mayor Art Eggleton in response to issues of hunger in Toronto, Ontario, Canada. It has since grown into an organization with close to 60 staff members and an annual budget of over \$6 million, operating numerous programs and initiatives in the categories of Cooking, Growing, Fresh Produce, and Schools. Programs include baby and toddler nutrition classes, student nutrition, community gardens, fresh produce distribution, food literacy and education, and social enterprise initiatives such as a catering program and the School Grown market gardens.

FoodShare's Good Food program focuses on the distribution of healthy, affordable, and culturally diverse fresh vegetables and fruit. It comprises four programs that achieve specific food distribution goals: the Good Food Box, Bulk Produce, Good Food Markets, and Mobile Good Food Markets. The Good Food Box (GFB) is a fresh-produce box distributed to customers through drop-off points that are coordinated by volunteers. Customers pay for the cost of the food plus a small mark-up, but are charged significantly less than they would be for comparable produce from a grocery store. The GFB program has delivered over 4,000 boxes of fresh produce to customers per month at its peak. In 2013, the program delivered an average of 3,000 boxes per month with gross annual sales of over \$600,000 (Wever, 2015a). While the program is universal, it tends to serve communities where food access is limited, either through a lack of affordable grocery stores or affordable transportation to grocery stores or farmers' markets. A second initiative, the Bulk Produce Program for Schools and Agencies, was introduced roughly concurrently with the GFB program. It entails schools and other community agencies purchasing large quantities of fresh produce for patrons, which is delivered from FoodShare's Good Food Warehouse. Finally, in 2005 FoodShare established its first Good Food Markets. This model requires that a community organization, such as a health center, partner with FoodShare and purchase a minimum of \$200 in produce per market. This produce is sold at a market hosted by the organization and staffed by community volunteers. The community organization agrees to purchase all of the food and then can use leftovers in its own programming. A spin-off of this model is the Mobile Good Food Markets program. These mobile markets serve high-density areas with poor food access, such as

high-rise apartments. They are staffed by trained FoodShare volunteers, who run the market for about 90 minutes before moving on to a new location. If a mobile market location proves to be successful for more than a year, it can be turned into a Good Food Market site.

Since creating the first Good Food Box program in Canada in 1994, FoodShare has developed the infrastructure, supply chains, and distribution networks of its entire Good Food Program. Each facet of the Good Food program utilizes the same warehousing and distribution infrastructure and staff. Orders are combined to create the volume necessary for FoodShare to act as a wholesale purchaser at the Ontario Food Terminal, a regional produce distribution hub that supplies Toronto with local and imported produce (Ontario Food Terminal Board, n.d.) as well as to purchase produce from approximately 25 family farms. FoodShare strives to offer fresh, healthy, and culturally appropriate produce at an affordable price to the communities it serves, while concomitantly supporting local farmers and striving to choose produce that has been grown in an ecologically sustainable manner. For example, whenever organic produce is available for a price similar to that of conventional produce, FoodShare will purchase that produce for its programs. One of the family farms supplying produce to FoodShare can also contact the warehouse with a surplus of a particular product, and FoodShare will work to incorporate the surplus into its Good Food programs for that week. FoodShare pays farmers fair market value for produce, and considers the link between local, ecological farmers and good, healthy produce to be an integral part of their programs.

In this way, FoodShare uses its food distribution system to address issues in all three of the circles shown in Figure 68.1. Food and health are addressed through distributing fresh and healthy food and choosing ecological food wherever possible; the link between food and income, or food access, is considered through making produce affordable and culturally appropriate, and choosing to pay farmers fairly for their work; and food systems issues are addressed through purchasing from local farmers, supporting ecological farming, and creating distribution mechanisms that do not rely entirely on the industrial food system. Other links are also apparent: for example, FoodShare paying farmers a fair wage allows them to be better ecological stewards of their land and natural resources.

Through addressing these interconnected issues, FoodShare shortens the physical and metaphorical distances between an eater and their food. Supply is linked closely to seasonality: customers experience seasonal surpluses and are more aware of how an abundance or dearth of particular foods is linked to natural systems such as temperature fluctuations and rainfall. Customers often cook together and learn to cook unfamiliar produce, facilitating improved food preparation skills and knowledge. And because of the nature and scale of an organization such as FoodShare, customers and farmers have the opportunity to connect more directly, either through face-to-face meetings or through newsletters and FoodShare's website. For example, one customer was given a GFB newsletter by

a friend prior to becoming a volunteer GFB coordinator. She stated that from the newsletter she learned

how the asparagus that we buy in the stores all comes from the [USA]. And the asparagus that we grow here we send to the [USA]. So we're burning a hole in the ozone layer so we can give asparagus a ride back and forth across the border. Meanwhile there's some guy who's growing asparagus two miles away who can't find a place [that will] buy it. So I heard that story and I was won over immediately, and I've been in love with FoodShare ever since.

She states that the customers she works with wish to support a healthier environment, support farmers, make healthier food choices, and 'They want their children to know that food is celery and cucumber and tomatoes, it's not frozen stuff from Loblaws [a national grocery chain]'. At the same time, these customers rely on FoodShare's reasonable prices to continue their purchases. This particular coordinator concludes by sharing that she loves the connection between her food and the environment that produces it. She describes her feelings about GFB produce by saying:

I think that we all want to have a sense of connection with the way that the world really is. We want food that's in season. We don't want to have strawberries in February [because] it confuses us on a deep level when we begin to accept these things as normal. And this [produce] is really good, it comes from real people, it comes at the right time of year, it grounds us. And I think that's what we all value about it, really.

Of course, there is contention regarding whether programs like FoodShare's GFB genuinely address interconnected food systems issues. Allen (1999) points to the tension between a community food security (CFS) framework, which encompasses numerous aspects of FoodShare's program models, and whether these programs can realistically support sustainable farming while feeding people affordably. Several farmers who supply produce to FoodShare admit that they were initially surprised by how much of a market FoodShare provided them, while also stating that they rely on more conventional buyers such as large grocery chains for the majority of their income. The cost of produce in the Good Food Program is covered by the prices that customers pay; however, paid staff and infrastructure are supported by a combination of monetary and in-kind donations, and FoodShare relies on a strong volunteer base to facilitate their distribution systems. Are programs that rely on such mechanisms truly able to address food systems issues? Are they able to connect eaters with their food and with nature on a broad enough scale to make a real impact to the food system?

Baker and Johnston (2005) argue that these questions, while valid, may be somewhat missing the point. While the relative success of a GFB program seems insufficient to address the problems of the industrial food system, the authors point out that community food security 'organizations like FoodShare do not generate the structural factors that entrench poverty, force basic needs provisioning through charity channels of food banks, and make industrial food the most

affordable option for the poor' (p. 319). Perhaps the role of Good Food programs at FoodShare and beyond is not to provide the singular alternative to our current system, but rather to identify constraints for locally-based programs, and possibilities for addressing food systems issues at multiple scales. Baker and Johnston suggest that

A consideration of scale reveals the strengths and the limitations of being rooted in the local and suggests that programs like the GFB need to be both 'scaled out' to other local contexts and 'scaled up' to incorporate structural critiques of agricultural subsidization, unemployment, and inequality lying within the regulatory capacity of states. (p. 318)

In other words, the GFB and the rest of the Good Food program provide workable models that could be adopted by other localities. They simultaneously highlight the need for policy solutions that take into consideration why Good Food programs have been generated out of a lack of government solutions (i.e. the demise of the welfare state), and how these programs operate to address food systems issues.

The executive director of FoodShare for twenty five years until 2016 and one of the chapter authors, Debbie Field, has explicitly stated that the Good Food Program is not a traditional business or marketplace project, as it requires subsidies and support for staff and infrastructure through public and private donations. Creating a profit is not the end goal; the goal is to use public and private funding to create a new food distribution system that provides healthy, fresh, affordable food to communities in a dignified manner while directly supporting farmers. As Baker and Johnston (2005) suggest, this does not point to the ways in which Good Food programs are insufficient to address multifaceted food systems issues so much as it highlights the need for broader state support for such locally grounded CFS initiatives. Rather than subsidizing export crops, for example, the state could subsidize farmers to provide healthy, fresh produce to regional food systems or CFS projects that support marginalized communities. CFS projects, funded and enabled by government, could be adapted to fit their local contexts. Research on CFS initiatives could be used to support structural initiatives such as a basic income and long-term protection of farmland. Considered from this perspective, healthy food becomes a social safety net and a tool for addressing multiple food system issues.

Community food security initiatives will not solve the problems of the industrial food system on their own. However, they point to the need for state support in order to scale initiatives up and out. If programs such as FoodShare's food distribution models had state support, conceivably the food-related learning and food/nature connection demonstrated by participants would be available to more people. The farmers FoodShare works with would have access to a larger market and greater financial support without reliance on the conventional market system. While not the sole answer to a complex question, the Good Food program addresses the three circles in several compelling ways: by paying farmers fair

prices, supporting more localized food systems, conducting business with farmers who wish to be more sustainable, and addressing food insecurity in a way that maintains the dignity of the customers involved and addresses the links between food and health and food and the environment. Arguably, issues of hunger are deeply rooted, and require more than a healthy produce box to address. This is why since its inception FoodShare has supported increased minimum wages and welfare rates and a guaranteed income to address the need for people to have adequate incomes to buy the food they need (FoodShare, 2002; Raso, 2016; Saul, 2016). However, the traction of the Good Food Programs within communities suggests that government support for the proliferation of these programs may be a piece of the puzzle. As Baker and Johnston state:

Locally rooted models like the GFB are inspirational prototypes, but they cannot single-handedly satisfy the hunger of food insecure populations. Nor can they unilaterally ameliorate structural problems of industrial agriculture and unemployment that undergird a class-segregated food apartheid, providing cheap, industrially produced food for the poor and organic gourmandize for the wealthy (with a bit of both for the middle class). (2004, p. 321)

Fundamentally, programs such as the GFB require subsidies and donations to operate, and are addressing interconnected food systems issues both in reality and symbolically. This work thus creates a space for conversations and learning about the connections between people and the source of their food. What if there were more of these programs operating, not with the goal of creating a profit, but with the goal of addressing food systems issues and breaking even financially? What if these programs received stable government funding? Perhaps the profits would be realized in terms of savings in healthcare, more sustainable and ecologically and economically viable agriculture, and increased equity in regard to access to good, healthy food. From this perspective, farmers could be viewed as civil servants and as stewards of ecological and human health, and subsidized healthy food as a significant tool for connecting people to nature.

FOOD EDUCATION AND FOOD/NATURE CONNECTIONS

At the end of their article, Baker and Johnston (2004) suggest that, in addition to state support and the work of third-sector organizations such as FoodShare, a 'pedagogy of good food' is necessary to make long-term positive changes in the food system. They are not alone, as numerous scholars and researchers allude to the power and necessity of education in addressing food systems issues (e.g. Levkoe, 2006; Jaffe and Gertler, 2006). Food education is also an essential component of reconnecting eaters with their food, and for using food as a tool to reconnect with nature. In the opening quotation of this chapter, Ian Marvy from 'Added Value', an urban farm project in Brooklyn, New York, captures many

essential points at the intersection of growing, the commons, caring, new ways of doing/being, and sustainability. Food education represents a possibility for encompassing these intersections and more. Although food education can take many forms, this section will focus on two specific areas: school gardens and farm-to-school programs. It will then highlight FoodShare's School Grown program as an illustration of the potential for food education programs to reconnect students with their food and with nature.

School Gardens

According to Nowatschin et al. (2017), making links to the environment through education for children is of growing importance given the increasing disconnect between people and nature (Kellert, 2002, as cited in Nowatschin et al., 2017, p. 104) describes this gap as 'the contemporary erosion of direct and spontaneous contact with relatively undisturbed nature, especially among urban and suburban children, and a corresponding substitution of more artificial and symbolic encounters'. Nowatschin and her colleagues (2017) also point to Orr (1992), who makes the link between declining exposure to farms and by association nature, as there are fewer farms, and many of those that remain operate on an industrial scale and lack ecological diversity. Louv (2005) suggests school gardens as a possible learning substitute and to counter the 'nature deficit disorder' he describes. According to Louv (2012, in Sandry 2013), community gardens are

proving to be a highly effective strategy in public high-rise housing estates [...] these gardens [not] only promote physical activity and good nutrition principles but create a great sense of belonging, friendship and generosity amongst the gardeners and a sense of community. (p.33)

Nowatschin et al. also point to Desmond et al.'s research that speaks to a garden's capacity to make a

'unique contribution not replicated in other pedagogies' (Desmond et al., 2004, p. 76) because of the way it engages the student in a stewardship relationship with other living organisms and teaches not only the science of life but also the interconnected nature of the web of life and how everyday actions can have profound effects on the long-term health of the system. (Nowatschin et al., 2017)

Further, gardens expose children to life cycles in all their complexity including growth and decay, pollinators, and soil functioning and nutrient cycles (Blair, 2009), thereby enhancing students' environmental awareness, ethics, and capacity for stewardship needed to deal with environmental problems at all scales from the local to the global. Canadian research found that composting, food growing, exposure to pollinator and other habitats, conservation projects including rainwater harvesting, and renewable energy projects all fostered environmental learning (Nowatschin et al., 2017).

There are a number of benefits associated with school gardens and the ways they build direct and indirect links between students and nature. As reported in Wever (2015b), Williams and Dixon's research (2013) found that students who work in school gardens have 'positive environmental attitude and empathy' and 'increased food literacy and healthy eating habits' (p. 212). In her review, Blair (2009) found that garden-based education resulted in overall increases in student engagement and reports of increased student enthusiasm for school and community, as well as enhanced bonds and networks. Also reported are increased levels of mental and physical well-being for primary and secondary students through enhanced connections with the natural environment due to food growing (Chawla et al., 2014). For example, one student explained, 'It all connects one way or another, so I figure that I'm helping the environment, it's helping the garden, I'm helping myself. It's not that everything is about me, it's that everything is about everything else' (Chawla et al., p. 9, in Wever, 2015b, p. 8). Williams and Brown (2012) offer school gardens as an antidote to our current mechanistic school system. Gardens are transformative spaces where students are positioned to be 'cultivating a sense of place, fostering curiosity and wonder, discovering rhythm and scale, valuing biocultural diversity, embracing practical experience, nurturing interconnectedness, and awakening the senses' (p. 14). Further, Breunig's research (2013) points to enhanced appreciation of nature and the environment through food for students taking integrated environmental studies programs. These students demonstrated increased pro-environmental and pro-social attitudes and behaviors when engaged in food-related activities such as caring for a garden or preparing a locavore meal. As Wever explains, 'This learning includes principles of ecological literacy. Such an education can serve to reconnect students to the source of their food and the ecological cycles upon which we all depend, countering the disconnect between food and consumer that epitomizes the corporate food economy' (Levkoe, 2006, in Wever, 2015b, p. 8).

Farm-to-School Programs

Farm-to-school (FTS) programs are another pathway to connect students to their food, and can include on-site gardens (Joshi et al., 2008), farms (Food School, 2014), farm visits for students or farmers speaking in classes, and food-focused school celebration events (Vallianatos et al., 2004). In Canada, the province of British Columbia offers support to FTS programs as they are seen to

empower students and school communities to make informed food choices while contributing to vibrant, sustainable regional food systems that support the health of people, place and planet. Farm-to-School programs differ by school, but always include one or more of the following: healthy local food, hands-on learning and/or school and community connectedness. (Farm-to-School BC Factsheet, 2017)

As one instructor explained in describing the Douglas School garden project in Langley BC, linked to Kwantlen University,

Children crave a place where they can create or better still re-create their connection to the natural world through their senses. As grownups, it is our responsibility to provide opportunities for our children to connect to the world. What better place than a garden to introduce children to the wonder of nature? (healthyeatingatschool.ca, n.d.)

The Farm to School initiative in British Columbia (farmtoschoolbc.ca, n.d.) also provides an online toolkit to high schools that want to incorporate gardens into their teaching. While the primary motivation for this program is to help students learn about the benefits of healthy eating and to improve food security through enhanced access to healthy food, the toolkit includes gardening guidance as well as lesson plans centered around building connections to nature through food. The program teaches about natural cycles ‘by promoting seed to table and back again (through compost)’ (Richmond Food Security, n.d., p. 4). The benefits of these grassroots initiatives that work to connect students with food and nature are documented in a Royal Horticulture Society commissioned report titled ‘Gardening in Schools: A Vital Tool for Children’s Learning’ (RHS, n.d.), with a view to assess the learning impacts and other benefits of the RHS Campaign for School Gardening that has been taken up by more than 12,000 schools across the UK since its inception in 2007. From a survey of 1,300 teachers and 10 case studies, the key findings of the analysis are that students involved in the campaign demonstrate better thinking and learning skills, are more engaged in community, and have a better developed sense of ‘sustainable living’, which emanates from children through their parents out in the broader community (RHS, n.d., p. 7).

Despite the potential for FTS programs in fostering food/nature connections, the research that exists is often from the US and focuses on either the economic benefits to farmers and local communities or on student health and well-being (e.g. Izumi et al., 2010; Joshi et al., 2008). There is very little research that focuses on students’ perceptions of the food system and the environment, or that uses a critical lens to evaluate FTS projects (Wever, 2015b). Allen and Guthman (2006) in particular raise valid concerns about who shapes FTS programs (e.g. local sustainable farmers or multinational corporations) and the capacity of champions to capture the benefits of these programs for more privileged communities at the expense of marginalized communities and their students.

FoodShare’s School Grown Program: Connecting Youth and their Communities to Food and Nature

Aspects of school gardens and farm-to-school programs can be combined to simultaneously support youth employment while fostering the learning discussed above. For example, impacts of The Food Project in Boston, a summer

youth employment program, identified appreciating food and sustainable agriculture as two of the six program outcomes (Brigham & Nahas, 2008, in Wever, 2015b). Urban Roots is a 3.5-acre farm on the east side of Austin, Texas focused on empowering and providing skills to youths through paid internships. The youths grow food for sale to their Community Supported Agriculture (CSA) members, a program where customers pre-pay and are guaranteed a certain quantity of fresh vegetables throughout the season). They also sell their produce at farmers' markets and to support their community. In 2015, they donated 11,000 pounds of fresh produce to the local food bank. They offer a spring farm tour to raise awareness and educate the public about activities on their urban farm. In another example, SupaFresh Youth farm in Oregon offers

a learning space in which youth can earn money and gain employment skills while learning about sustainable agricultural practices, environmental stewardship, and healthy nutritional habits...The farmers grow a variety of produce, herbs and flowers using sustainable, organic methods (SupaFresh Youth Farm, 2017).

Along the same theme, FoodShare has pioneered several path-breaking food education programs since its beginnings in 1985. These include the Field-to-Table schools programs, the Good Food Café, Student Nutrition Programs, and the focus of this section, the School Grown Program (SGP) (NB: content on the SGP is taken with permission from Wever, 2015b). The SGP aims to increase food education and literacy for youth through school gardens and markets coupled with youth employment training programs. Its roots began in 2010 with a small grant for a secondary school garden in the east of Toronto. It quickly became obvious that stable funding was needed to avoid the volunteer-precarious funding trap linked with too many community-based projects (Mount, et al., 2013) and to ensure a full-time coordinator for the program. FoodShare developed the SGP to provide on-going, stable project funding from the sale of produce from the garden(s), in addition to the grants and donations the program receives. FoodShare then tapped into a youth employment program through the Toronto District School Board to offer youth market garden employment training opportunities, allowing them to use their other funding sources to fill in gaps in employment, pay for infrastructure, and provide educational opportunities for the youth involved (Wever, 2015b). In 2013, FoodShare extended the model to a second high school. By selling its produce at farmers' markets, the SGP generated \$17,775 in revenues in 2014. By 2015, it was employing 14 youth full-time during the growing season and others part-time during the school year. In addition to building job and life skills including teamwork, communication, conflict resolution, and time management, these paid jobs also provide opportunities for young people to grow and market food, allowing them to learn about and connect with natural cycles and share this knowledge with their customers, other students, and community. As the coordinator of the School Grown program explains, 'We

grow food to grow people' (Wever, 2015b, p. 70). There are also learning opportunities during the school year as several classes either incorporate dimensions of the garden into their classes or structure entire courses around them.

Farming integrates food and nature by facilitating experiences in caring for soil and plants. This attunes students to natural cycles and needs including sunshine, nutrients, and water, while also building connections between students and their food. For example, students in the SGP showed an increased interest in eating fresh produce and were more interested in and knowledgeable about fruits and vegetables after being in the program. They also made behavioral changes based on knowledge of the connections between food and the environment. For example, several students reduced their meat intake after learning about how industrial beef is produced. As illustrated in Wever (2015b), students brought their new knowledge home and began to cultivate personal gardens and composting systems, and make connections between their food and ecology:

I learned how to maintain the compost, how plants grow and how much nutrition you need to put back in the soil to have the plants grow [...] my job is to make sure there's enough moisture, the temperature's OK and to see if there's more food scraps that need to be chopped up and put in the compost bin. [...] you need to continuously turn it to give it air so the good bacteria can start growing...I do this because it's fun and it helps the excess food waste being thrown into the land fill and it helps the school also and the soil... (Eisen, 2015) (pp. 77–78)

[F]or nature, like insects, I realized how reliant they are on things like our garden, like even if we don't want certain insects eating our stuff I see that they need it too and... just like how food and everything around it kind of all comes in a full circle. (p. 85)

Working, gardening, it shows you that you need to respect the earth because that's where all your food, that's where everything comes from. And if you destroy the earth then you kind of won't have anything left. (p. 86)

I've just stopped littering...Because if you don't take care of the environment then how are you taking care of yourself? All the food comes from the environment... (p. 86)

The SGP also empowers students through its social justice focus and by teaching students to take a critical perspective with respect to power, poverty, and marginalization. Students in the program regularly engage in discussions on food justice, from environmental racism in the food system to systemic issues of poverty and food access. From personal experience, students observed that junk food is the most accessible form of sustenance for those in poverty, while organic and healthy food is often out of reach:

One of my biggest problems in the food system is probably poverty because I don't really come from a lot, so I know how it is to struggle and not have food and good food in your house...I find if you don't have...a lot of money you can't buy healthy things, or things you need for your body, you can only buy chips and processed foods and fast foods and stuff because it's just faster and easier and cheaper...a bag of lettuce in the grocery store would probably cost two dollars but at like a farmers' market it costs four or five dollars and people who don't have that money to spend can't get that healthy food because it costs so much (Wever, 2015b, p. 82)

The same student comments: 'I see the way I eat at my house and then I see the way other people eat...I also see that we eat this way because we don't have the money to [...] eat healthy and to have organic foods or fresh food' (Wever, 2015b, p. 89)

Students also noted that their experiences in the SGP helped them to be more open minded, and to avoid stereotypes and generalizations. For example, one student discussed his experience visiting a farm in a part of the city that is often the brunt of negative stereotyping:

Since [the farm is in] like a bad neighborhood, they kind of use [the farm] as like a positive motivator so people can view [the neighborhood] in a more positive light and the same thing's for [my school], a lot of people think it's a bad school, so I'd say...the program helped me be more open minded... I'd say that for that 'aha' moment, maybe I just wish that other people had that moment, that like they saw what I saw, that maybe they shouldn't think that it's such a bad place...they shouldn't believe everything they see, and they shouldn't believe half of what they hear, they should hear it and just look into it for themselves. (Wever, 2015b, p.74)

As evidenced, the benefits from approaches like the SGP extend far beyond simply learning about food and nature. Typical outdoor recreation programs in secondary schools can further marginalize students without access to the funds, equipment, or support to participate. Such experiences can alienate marginalized youth, and create perspectives where nature is seen as something to experience 'out there' – if one has enough resources to do so. On the other hand, urban gardening projects highlight nature experiences within the city and can connect students to their food, the environment, and their community, as well as create opportunities for learning about social justice issues. Such learning has the potential to impact students' lives in countless ways. For example, according to Rifkin (2014), nature exposure helps to prepare students to live more collaboratively, a skill that he anticipates will be essential as society moves increasingly away from capitalism as grounded in 'free markets' to one based in the Collaborative Commons. Grounded in the work of Chawla and Cushing (2007), Wever (2015b) also points to the potential of the SGP to foster the skills and attitudes of responsible environmental behavior and civic engagement. Beyond the SGP, similar projects may also be seeding institutional change as they exist at the intersection of government (e.g. the Environmental Protection Agency), institutions of higher learning (e.g. Purdue University and the University of Pennsylvania), community organizations, and/or as extensions to elementary and high school classrooms. For example, the Agatston Urban Nutrition Initiative runs from the Netter Centre for Community Partnerships at the University of Pennsylvania. Their Community Farm and Food Resource Centre includes employment opportunities for youth in the summer on a 3.5-acre urban site that includes a vegetable farm, orchard, and community garden, as well as a greenhouse and community resources centre (Agatston Urban Nutrition Initiative, 2016).

EMERGING TRENDS AND CONCLUSIONS

Programs that expose people to nature through food have the potential to positively impact individuals and systems. Early childhood educator Narinda Sandry states that the implications of nature connection are multi-faceted:

A growing body of supporters believe that connection to the natural world also has broader social implications. Many humans have forgotten that our existence depends on the natural world. We have become so used to controlling everything and yet nature is the major inspiration for our art, our engineering and many of our sciences. To spend time in the natural world is regenerating. It provides for our food and the cleansing of our planet. If people do not spend time in truly natural settings they will become more and more desensitized until they will forget and no longer understand what it is they are missing and why it needs to be saved. (Sandry, 2013, p. 32)

Food is a tool for nature connection that can be utilized in multiple ways in different local contexts. From more equitable models of food distribution to critical food systems education programs, the opportunity exists to reconnect eaters to their food and to the natural cycles that support food production. The story of FoodShare provides excellent examples of how connecting the dots from field to fork and back again offers many opportunities to educate eaters about the benefits of healthy eating, the environment their food comes from, and associated sustainability and food systems issues (Wever, 2015a), thereby addressing issues in all three of the circles discussed in the opening to this chapter. Furthermore, as urban populations become more concentrated (United Nations, Department of Economic and Social Affairs, Population Division, 2014), we will need to build on the work of FoodShare and others in order to build intentional linkages between people and nature. Intentional food-based programming, including food distribution and education programs, also offers a pathway for (re)making these connections as part of a wider recalibration towards more balance between society, nature, and the economy.

Indeed, organizations like FoodShare may have a critical role to play in creating this balance in the years ahead. As Rifkin points out, “‘third sector’ growth is outpacing that of the market economy. The non-profit commons in the US, Canada, Japan, France, Belgium, Australia and the Czech Republic totals \$2.2 trillion in operating expenditures or about 5% of GDP” (Salamon, 2010, p. 198, in Rifkin, 2014, p. 17). As a sector of GDP, it exceeds utilities, matches the construction industry, and approaches the GDP value of banking, financial, and insurance services. And equally important to recognize is that the ‘third sector’ is where social capital is built and replenished as the social commons foundation for government and markets. As Polanyi (1944) and others made the point that we cannot have an economy without the environment, we also need the ‘third sector’ to have a society with a moral compass. For example, using food justice as a lens arguably enables FoodShare to address the issues it confronts in much more profound and meaningful ways. Such approaches are critical as they

support open economies, collectivity, and collaboration. It is well recognized that a shift is needed from market-driven forces to socio-environmental ones as we work to raise the profile of the environment and reconnect people to nature.

Future directions in this work include exploring policies and programs that support the reconnection of people and nature through food. These include supportive educational policy, such as funding and training for school garden programs as well as policies and programs that facilitate fair and equitable access to healthy and sustainable food, from a guaranteed annual income to government support of food distribution programs to subsidizing healthy food. Other areas in need of further exploration include solutions that can simultaneously address multiple issues in the three-circle model. For example, the potential role of farmers as civil servants and stewards of human and ecological health could be explored in the context of a national food policy.

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