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Raising Change

Community Farming as Long-Term Ecological Protest

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College students wander around an interior courtyard at a southeastern San Antonio Head Start helping three- and four-year-old African American and Latino children pick out ladybugs to place on pepper, broccoli, and squash plants. University of the Incarnate Word (UIW) professors and students on this day are learning how to produce food in a food desert, providing delicious organic produce for families that can rarely afford or access it. Although seeing college students working with young children is inspiring, the ladybug release also uses beneficial insects to remove aphids that would consume crops while teaching these children basic ecological principles (it turns out that most of the student-teachers do not fully understand these principles either). The children's delight and interest speaks to the power of nature to create awe and catalyze their learning. And while some may hesitate to consider this activity a form of environmental protest, in the United States community farms[1] have become the sites of some of the most significant challenges to the current political economy and the structures of economic and racial injustice in America and the points of resistance to the industrial agricultural economy.

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In this chapter I examine the ways community farming can challenge the dominant industrial agriculture, undermine neo-liberal capitalism, address fundamental inequity in the United States, and help prepare for climate change. In so doing, I also evaluate some of the pitfalls inherent in this movement and crucial next steps. While the discussion is broad, I examine community farming in Detroit, Michigan; Milwaukee, Wisconsin; and San Antonio, Texas. The first two cities are studied as the movement arises from the community in response to serious economic stress and because they provide strong and innovative models for community farming as a site and source of social, economic, and ecological change. The discussion of San Antonio community farming reflects my positionality in the movement and demonstrates a model of activism that has potential for success but can also limit community engagement.

The image most readily called to mind when one imagines environmental protest is often associated with more active forms of direct opposition. For many middle-aged and middle-class Americans, the words *environmental protest* likely evoke Earth Day or the Sierra Club and successful Greenpeace-like direct actions. For many of my students, environmental protest sparks images of the more radical Earth Liberation Front or Earth First! Social media is filled with images of Sioux Indians and allies fighting to protect sacred land from the fossil-fuel industry, Pacific Northwest kayaktivists attempting to block an oil rig destined for the North Slope, Americans everywhere opposing the Keystone XL Pipeline.

Environmental protest as we know it began with late nineteenth-century women cleaning the cities to reduce disease, followed by the classic conservation work of Gifford Pinchot and Theodore Roosevelt. There was also the slower emergence of a preservationist philosophy and strategy exemplified in the failed fight against damming the Hetch Hetchy Valley in the first decades of the twentieth century, the successful efforts to protect Dinosaur National Monument from dam and reservoir construction in the 1940s and 1950s, the publication and powerful public response to Rachel Carson's *Silent Spring* in 1962, and the passage of the Wilderness Act in 1964. The successes of this complex environmental movement peaked in the early 1970s with the creation of an environmental regulatory state that included new congressional legislation such as the Clean Air Act, the Clean Water Act, and the Endangered Species Act, along with the creation of the US Environmental

Protection Agency. The temporary consensus around the need for a healthy environment collapsed after 1973 as Republicans framed environmental efforts as anti-job, anti-prosperity, and increasingly anti-American.[2]

While meaningful environmental legislation has been hard to secure in the ensuing decades, particularly in regard to climate change, this does not mean that environmental reforms and activism have stopped or even slowed in significant ways. Continuing creation and expansion of wilderness areas, restoration of habitat, and dam removals to restore fisheries indicate a thriving environmental movement operating largely at the local or state level. In addition, the growing environmental-justice movement, which primarily targets the dumping of wastes and pollutants in poor communities populated predominantly by people of color, has expanded the definition of environmentalism to include systemic injustice and structural violence rooted in inequitable distribution of wealth and deep-seated racism. The food-justice movement, which has gained wider appeal in recent years, has continued to widen and complicate the concept of environmentalism and environmental protest, creating new strategies and targets for those concerned with natural and human health as well as social justice. Community farming represents a new and potentially powerful form of environmental protest addressing several issues, or as Wendell Berry might say, "solving for pattern."[3]

Social critic Rebecca Solnit would agree, arguing that the community-farming movement is a "second green revolution," an attempt "to undo the destructive aspects of the first one, to make an organic and intimate agriculture that feeds minds and hearts as well as bodies, that measures intangible qualities as well as quantity. By volume, it produces only a small portion of this country's food, but of course its logic isn't merely volume. The first green revolution may have increased yield in many cases, but it also increased alienation and toxicity, and it was efficient only if you ignored its fossil fuel dependency, carbon output, and other environmental impacts."[4] A community farming revolution that is transformative and restorative and that brings production and consumption home to the community holds great promise and constitutes protest against a deeply damaging industrial agricultural system, destructive neo-liberal policies, and ongoing climate-change pollution and inaction. But those active in this movement need to be aware of destructive social and economic policies emanating from neo-liberalism and ensure

that community farming does not simply function as a form of mitigation of harmful policies.

Children's bodies are the most vulnerable to the deleterious impact of industrial agriculture and neo-liberalism. Approximately one-quarter of children in the United States experience regular hunger; in over 300 US counties, one-third of children live in food-insecure households. In fact, 49 percent of infants born in this country are born to families collecting food supplements from the Special Supplemental Nutrition Program for Women, Infants, and Children.[5] The issue of access to healthy food for children constitutes a safe middle ground in the discourse of community farming; as farmers and activists engage with the structural issues that cause hunger and embrace food-justice precepts, the agenda and discourse of community farming inevitably pulls hard left. Embedded in it are fundamental critiques of industrial agriculture, the structural inequity of the American economy, trade agreements such as the North American Free Trade Agreement (NAFTA), labor conditions, and the continuing whittling away of the safety net and social services. Community farmers also explicate the role urban agriculture can play in exposing children to nature, offering educational opportunities, building community cohesion, and bringing social discourse back to a more neutral space.[6]

Community farms are a direct response to economic inequality and can help end food deserts. Food deserts are urban and rural areas where access to healthy food is limited by a lack of grocery stores, healthy restaurants, and land and tools for food production. Fast food, convenience-store fare, and traditional cultural foodways that emphasize meat, fried foods, and heavy use of salts and sugars comprise the majority of the diet in food deserts. The high portion of sugar, fat, meat, and starches in food desert diets, combined with low nutrient–value food, results in persistent health problems: high rates of childhood obesity, type 2 diabetes, stroke, and heart disease predominate. Food justice, then, is partially about achieving equal access to healthy food for all people while acknowledging and confronting the structural barriers to healthy food for the poor.[7]

Food-justice advocates also target the means of production in the nation's industrial agricultural economy and its trading partners around the world. Agricultural workers in the United States experience harsh working conditions for low or irregular pay, whether picking apples in eastern Washington or cantaloupe in the Rio Grande Valley:

A survey conducted by Pineros y Campesinos Unidos del Noroeste [Northwest Tree-Planters and Farmworkers United] (PCUN, Oregon's farmworkers' union) of approximately 200 Marion County, Oregon, farmworkers paid by "piece-rate" in the 2009 berry harvests revealed widespread violations of the state's minimum wage law. Ninety percent of workers reported that their "piece-rate" earnings consistently amounted to less than minimum wage, with an average hourly yield of about $5.30—37 percent below the hourly minimum wage at the time—and an average daily underpayment of about $25.00 per worker. In New Mexico, a survey of farmworkers revealed abusive conditions in the fields, including extremely low wages and high levels of wage theft. Sixty-seven percent of field workers were victims of wage theft in the year prior to the survey; 43 percent of respondents stated that they never received the minimum wage, and 95 percent were never paid for the time they waited each day in the field to begin working."[8]

These are but a few examples of common problems across the country.[9] Food-justice activists and community farmers seek to end the reliance on abused labor that makes food artificially cheap and end the abuse implicit in this economy.

In addition to suffering from wage theft and underpayment, agricultural laborers are also frequently subjected to working with herbicides and pesticides that are known carcinogens and can contribute to other health issues such as Parkinson's disease, sterility, miscarriage, and birth defects. Because of low pay, the lack of benefits, and no permanent housing in many cases, as well as constant hunger and malnutrition, this class of workers struggles to escape the lowest tier of the American economy.[10] Making between ten dollars and fifteen dollars an hour at most on an irregular schedule of inconsistent hours, they crowd into expensive apartments or live in shacks and old chicken coops. Ironically, these workers often cannot access healthy produce. Eighty-nine percent of the Salinas Valley farmworker population is obese compared with 69 percent nationally because they simply cannot afford to buy the fresh produce, like leafy greens and broccoli, that they pick all day and live next to. Not only does impoverishment trap many in a permanent agricultural underclass, but this poor nutrition limits the cognitive and physical development of children, further reducing the possibility that they will eventually escape the cycle of poverty.[11]

While advocates of neo-liberalism argue for expanding prosperity and increasing investment opportunities for consolidated capital in the United States and other countries, they fail to take into account many negative impacts arising from trade deals. As a result of NAFTA and trade with Mexico and Latin American countries, American consumers are implicated in an agricultural economy that is even more abusive of agricultural workers in those countries with limited and lightly enforced regulations protecting workers' bodies and the environment. Agricultural chemicals that are illegal in the United States are manufactured domestically and shipped to other countries that produce vast quantities of nuts, fruits, and vegetables for American consumption. High rates of cancer, miscarriage, severe birth defects, and other ailments are common in the agricultural labor population throughout Latin America; these damaged bodies help keep commodity prices artificially low in the United States.[12] Problems such as these are hard to address through protest or policy change, given the influence of industrial agriculture and the chemical industry in Washington, DC, the continuing expansion of a global neo-liberal economy, and Americans' stunning lack of awareness of the effect of their food consumption on other economies and workers.

A central food-justice mandate is that economically and culturally marginalized communities find ways to gain economic and cultural autonomy through local food production and entrepreneurship; community farming is a means to those ends. As an example of how this might happen, consider the local response to the collapse of the Detroit industrial economy and the city's life on the economic edge. With an estimated 45 percent unemployment rate in the city and a population that dropped from around 2 million to approximately 700,000 from its peak in the 1950s to 2015, Detroit has been in crisis for a long time. The city's declaration of bankruptcy—the largest municipal bankruptcy case in US history—captured the country's attention, as did stories of fires unanswered by fire departments, the rise of crime, packs of feral dogs roaming the city, and the destruction of an iconic industrial city.

The lack of access to healthy food, while difficult in other food deserts, is nearly catastrophic in the Motor City. Eighty percent of the population currently relies on convenience stores, pharmacies, gas stations, and party stores for food purchases. Residents responded to this situation by creating an urban agricultural economy throughout the city. As a result, they commenced fashioning a new type of urban economy that may presage the future of cities in

the Anthropocene while also engaging in a significant and potentially powerful form of environmental protest. With more than 30,000 distressed properties and 20,000 acres of available land, many residents took advantage of the space and began squatting on lots and growing their own food. The Detroit Black Community Food Security Network (DBCFSN) led the way in creating a food sovereignty movement, with strong emphases on local food production and consumption, community entrepreneurship, and building community strength. Community activists initiated innovative programs such as the Land Bank, a city-managed program that sells side lots for $100.[13]

Even as community-farming activists in Detroit go about turning lots into farms, they are also educating the community about food production, incorporating youth into these programs, and developing stronger neighborhood cohesion. Several thousand people own backyard or front-yard gardens or work on farms. Keep Growing Detroit[14] is an organization that encapsulates and promotes key tenets of food sovereignty and food justice while confronting structural injustice through advocating for and building stronger community. Consistent with food sovereignty concepts, the goal of the organization is to have most of the fruits and vegetables consumed by Detroit residents grown within city limits. It provides seeds and transplants to thousands of people and offers numerous classes on farming throughout the city as well as technical assistance to gardeners and farmers. This work also emphasizes community solidarity through potluck meals, shared workdays, and open planning meetings.

Integral to building a movement and creating long-term change is Keep Growing Detroit's emphasis on developing community leadership. The organization trains youth and adults to teach classes and take on leadership roles in association with food production and farm management. To nurture economic resilience, the organization supports and promotes approximately seventy farmers who sell their produce in farmers' markets and other outlets across the city, generating economic activity through increased consumption and the sale of Detroit-grown foods.[15]

Michigan Community Farming Initiative's creation of an "agri-hood" in the Northend neighborhood of Detroit represents another innovative form of community farming. It has a 200–fruit tree orchard, a two-acre garden, and an energy-efficient community resource center that includes two commercial kitchens. The farm produces approximately 20,000 pounds of food a

year, providing nourishment to approximately 2,000 citizens in the area and supporting churches, volunteer organizations, and other community programs. By centering the farm in the community, it provides a place where neighbors can interact and serve each other. But cities will require many more examples like this for community farming to make a deep impact and create long-term and meaningful structural change.[16]

Detroit community farming activists, many of whom trace their direct protest roots back to the Black Liberation struggles of the 1970s, view food-justice activism as direct action against an unjust society. Food sovereignty and reducing or removing dependence on corporate capitalism are central to community health, strength, and activism in the future. Although it is difficult at this early stage to determine the impact of community farming and activism on local democracy, the DBCFSN headed a task force to develop a food policy that has gained support. The Detroit City Council voted to create a Detroit Food Policy Council and to support proposals by the task force leading to food sovereignty, which indicates initial democratization of city politics as the result of community farming.[17]

Milwaukee is another city that struggles with widespread poverty, and, as in Detroit, community farming has gained widespread support. Much of Milwaukee's success in this regard is identified with local entrepreneur and civic leader Will Allen and his nonprofit company Growing Power. Allen comes by his agricultural interests naturally, as his parents were sharecroppers in South Carolina and purchased a small farm in Maryland on which he grew up. Following a collegiate basketball career (he was the first African American to play for the University of Miami) and a stint playing professionally in Europe, Allen began a career in corporate America, working in executive positions for Kentucky Fried Chicken and Proctor and Gamble. He continued small-scale agricultural work on the side during his career, and in 1993 he purchased two lots on a busy street in North Milwaukee. With his children in college, he left his career to farm full-time. Selling produce directly from his garden, he also built a greenhouse to start transplants and provide opportunities for young people to learn and gain employment by working the farm; this strategy remains the bedrock of Growing Power's mission today.[18]

As of 2017, the company managed 300 acres of farmland in and around Milwaukee, producing 200 varieties of crops. While raising fish through hydroponic farming and raising goats, Growing Power also composts more

than 40 million pounds of waste each year, capturing important nutrients for farms while reducing landfill use. The multiple farms are important education sites; they offer classes, workshops, and training for the community and are increasingly the subject of university internships and academic research.[19]

The company has sought to energize community farming in other locales, expanding its efforts to Chicago and providing training in Alabama, Ohio, Georgia, Indiana, and New York, to name a few states. Established in Chicago in 2002, Growing Power manages several farms there: Altged Gardens Community Farm is a three-acre site containing eight hoop-houses that allow production during the winter months. Approximately 100 teenagers are employed in the summer working on the farm, and a dozen work there the rest of the year. As at all Growing Power sites, students learn a variety of farming skills, including pest management, composting, and the logistics and operations associated with the transport and sale of farm products. The organization also offers Fresh Moves Mobile, an old transit bus that carries fresh produce into the south- and west-side communities of Chicago, which are stark food deserts. The price of the food ranges from standard rates for those who can afford them to sharply discounted prices for those receiving Supplemental Nutrition Assistance Program (SNAP) benefits.[20]

Under the leadership of Erika Allen, Will Allen's daughter, Growing Power has explicitly addressed food-justice issues, most clearly with the organization's role in the Growing Food and Justice Initiative (GFJI). Built to address the persistence of structural racial inequality and racism, GFJI seeks to undermine racism by building community strength and identity through community food systems.[21]

The community farming revolution occurs in fits and starts in different parts of the nation, and San Antonio, Texas, provides an example of community farming developing in a manner different from the processes in Detroit and Milwaukee. Although San Antonio has not experienced the kind of economic collapse Detroit and Milwaukee went through in the late twentieth and early twenty-first centuries, it suffers from deeply entrenched poverty on its east, south, and west sides. There are also thousands of vacant lots and vast food deserts in these neighborhoods. Because of its more stable economy, however, community farming in the Alamo City has developed more slowly than in its urban counterparts in the Midwest. Green Spaces Alliance, a land trust and community gardening organization, has supplied much of

the local leadership; since 2013, it has helped grow the concept of community farming in collaboration with local universities, the San Antonio Housing Authority (SAHA), and an array of local nonprofits.

Ella Austin Children's Garden, located on the city's east side, is a successful community garden that has the potential to transform into a community farm. In collaboration with the Ella Austin Community Center and drawing off the energy and ideas of Stephen Lucke, one of my former students, I helped link the fledgling garden with the UIW. Lucke had developed an on-campus community in 2012; one year later we initiated a series of garden projects on the east and south sides of San Antonio. The focus of our efforts has been to introduce agriculture into local food deserts. The lack of access to healthy food and produce in many of San Antonio's communities has resulted in higher rates of overall and childhood obesity, type 2 diabetes in adults and children, and high rates of heart disease and stroke, among other, related health issues.

The first garden was started at Ella Austin with support from the United Way and was quickly followed by a garden at the Carroll Early Childhood Education Center, a Head Start program that serves approximately 320 children on the southeast side of the city. UIW was a key player in the expansion of these sites, in good measure because such work is consistent with the institution's mission. The Sisters of Charity of the Incarnate Word founded the forerunner of the university in 1881, and the order—and the institution—emphasize social justice and care for the needy. The Catholic Social Teachings, including the preferential option for the poor, the right of participation, and care for creation, reinforce this focus. These theological commitments, with support from the UIW Ettling Center for Civic Engagement and the community organizing work of Ettling Center director Monica Cruz and community coordinator Denise Krohn, found expression in the service-learning projects and workdays UIW faculty and students have devoted to the garden sites. Moreover, student fees provided crucial funding at Ella Austin and Carroll and in the expansion of an existing community garden at the Guadalupe Center, managed by Catholic Charities and located in western San Antonio. Student leaders such as Michelle Wilk, student government president in 2014, provided funding and labor for the gardens and, in the case of Wilk, continued to manage the gardens in later years.

The Ella Austin Children's Garden has grown substantially since 2013 and now contains fourteen vegetable plots that are eight feet by four feet in size,

several linear plots totaling approximately 300 square feet of blackberries and grapes growing along fences, and approximately a dozen fruit and olive trees. The garden produces upward of 1,000 pounds of food a year. When finished, with a full orchard and grape and blackberry vines surrounding the site, the garden is anticipated to have approximately twenty-five fruit, nut, and olive trees, including orange, peach, apple, pear, pomegranate, and plum. The intent was to create a mix of annuals and perennials to maximize crop production. Even in years when care is inconsistent, perennials will provide food. Permaculture crops such as berrying plants and fruit trees also build resilience in anticipation of climate change. The five-year goal was for this one garden to generate yields of 3,000 pounds annually, production that is expected to enhance the diets of the children and their families on the east side and thereby increase the neighborhood's access to healthy food. While the garden is still in its early stages and blackberries, grapes, and fruit trees will not produce in large numbers for two to five more years, large harvests of produce such as potatoes, kale, broccoli, tomatoes, peppers, carrots, beets, lettuce, and other crops occur regularly throughout the year. Most of the year we are able to provide weekly distribution of fresh organic produce to families with children in the center's after-school program.

Since autonomy and community strength are central to food-justice philosophy, those managing the garden strived to involve students in grades 2 through 6 from the beginning. All phases of garden construction and expansion have included faculty, college students, and elementary school children in work that includes building plots, hauling soil, fertilizing, planting, and harvesting. The emphasis in these efforts is to educate students on how to build, maintain, and nurture a garden. College and elementary school students are included in ongoing work such as weeding, thinning, fertilizing, and transplanting, with the hope that they will develop a love of and interest in gardening and eventually take over work at these gardens or start their own. This long-term strategy is consistent with the Detroit and Milwaukee models that seek to grow food and nourish community resilience. It also integrates a science, agriculture, and health curriculum in the after-school program that utilizes the garden to teach scientific ideas and concepts as well as food preparation, deepening the children's association of the garden as a site of community action, improvement, and education. While the lessons in the garden for these children do not emphasize direct action and democracy, the lessons of

community action, critical thinking, garden management, scientific thinking, and cooperation constitute the crucial foundation for creating activist citizens.

Rapid changes in opportunities for and attitudes about community farming in San Antonio have suggested a potential transformation of local food production. In 2016 the Food Security Council convinced the city government to remove barriers to raising produce for sale within city limits, and SAHA committed to providing $250,000 and a seven-acre piece of land on the east side for a micro-farm operation. The SAHA project holds the potential to be a cutting-edge site, but it also potentially reinforces existing economic inequalities. In the original conception of the micro-farm, with little to no community input, SAHA planned for it to be a Community Supported Agriculture (CSA) operation, selling food to those who could afford locally produced, organic produce, eggs, chickens, and goats. The SAHA sustainability officer proposed a fence around the seven-acre site located in a poor community and food desert populated almost entirely by Latinos and African Americans. SAHA identified its potential customers as those living on the city's more prosperous north side and indicated that neighborhood access would be available only to those who paid a premium "membership" price or those whom more affluent community members "adopted." My students and I generated a different model that integrated the community into the micro-farm, primarily through an asset-based development model; as of this writing, the originally proposed model was being modified to incorporate more active community participation.[22]

Like many community gardeners and food-justice advocates, we expended considerable time and energy writing grant applications to subsidize the creation of jobs in the gardens, offer market options, develop food hubs, launch farmers' markets, and stimulate other programs to produce economic benefits for the community. While well-meaning, these ideas literally and discursively reinforce the very neo-liberal policies that have wrought havoc on these communities. The focus on generating income and economic activity, as well as providing jobs through community farming and farmers' markets, abides by the rules determined by the mandates of ruthless capitalism rather than sustainability, compassion, and care.[23] While for many community-farming advocates a rhetoric of self-reliance through labor may emanate from their readings of Ralph Waldo Emerson and Wendell Berry, the language of labor and individual responsibility potentially reinforces the

neo-liberal organization of the world between those who "work" and those who "don't." Alison Hope Alkon and Teresa Marie Mares summarize this ideological minefield effectively in their article "Food Sovereignty in US Food Systems: Radical Visions and Neoliberal Constraints,"[24] arguing:

> Neighborhood residents are not envisioned as citizen-activists capable of forcing concessions from the state, nor are they and their families a unified group of the working class who could potentially unite and transform an economic system that has so thoroughly marginalized their community. Instead, they are generally constructed as potential entrepreneurs, who, through involvement in local food systems, can devise new ways to improve their economic livelihoods and provide services for their communities, or as consumers of their services. Alternately, some residents, particularly youth, *are* conceptualized as activists, though their activism is limited to changing their own eating habits in favor of local organic food, gardening, and educating their communities to do the same.[25]

The ideology of self-reliance postulates that individuals bear primary responsibility for flawed policies and structural economic injustice, while it also asserts that those same individuals and communities most harmed by socially destructive policies that shred the safety net, suppress wages, and limit economic mobility can, through their labor on urban farms, improve society as well as their own standing within it. One powerful critique of community farming asserts that by facilitating individual adjustment to neoliberal policies under the mantra of community organizing and social change, community farming precludes more radical agendas, achieving structural economic and political change; it also puts the burden of dealing with flawed government and economic policy on the already overburdened shoulders of those targeted by these policies. These activists can become culpable for facilitating neo-liberal policies while setting distressed communities up for failure. Community farming activists must understand the broader and complex socio-political landscape in which they and their ideas operate so their efforts to produce food do not reinforce structural violence and inequality.

While attempting to reform society and serve community needs, those working in this area also need to make a living. Community farmers struggle to survive economically, much less to prosper. The movement attracts many idealistic young people, but the difficulties inherent in maintaining these

operations often lead to raised plots overgrown with weeds, un-harvested food rotting in plots, and limited distribution of food and marketing as a result of strained circumstances. City Slicker Farms in Oakland, California, provides a good example of this tension. Well-known as a model for community farming and highly successful in its efforts to produce food and educate the community on health and food-justice issues, in 2011 the organization produced 9,000 pounds of food in its public gardens and estimated that the backyard gardening it teaches and manages generated approximately 23,000 pounds that same year. Its money problems have persisted, however. Rebecca Solnit notes, the "food is great, the community relations seem to be thriving, and yet the project faces the same problem so many people in the neighborhood do: money. They have to raise it, there is never enough, and there is no self-sufficiency in sight for the staff of seven and the public farms, whose food is sold at farm-stands on a sliding scale from free to full price. Since they're farming community and skills and hope as much as lettuce, there's no way to put a price on what they produce."[26] When high-profile farms such as City Slicker struggle, it becomes difficult to imagine the success of a community farm from conception to thriving, full-fledged community partner. Because urban farms are so often idealistic in nature and are designed to correct social problems, they offer free food, sliding-scale prices, and other measures that, while popular, undercut their capacity to generate profits and succeed economically.

In an effort to survive or prosper, many community farmers and food-justice advocates turn to foundations, government agencies, and other non-profits for funding support. There are a number of philanthropists willing to invest their capital in these projects. Organizations such as the Nathan Cummings Foundation, the Kresge Foundation, and the Susan and Michael Dell Foundation, for example, offer grants for community farming, food education, childhood health, climate-change preparation, and related issues. These grants can provide large infusions of capital, but they also require a high level of accountability, metrics collection, and analysis of both participation and impact. Grants are also highly competitive; they require expertise to apply for, to manage when they are secured, and to regularly prepare for and respond to required audits. Applicants must also be aware that these foundations and their donors are reflective of the financial rewards awaiting those who have succeeded in the current economy. They are deeply embedded in

the US political economy or, if critics of it, they may seek adjustments at its margins but not radical, structural change at its core. Those calling for greater social transformation in their grant applications might find themselves shortchanged. If successful, whatever funding flows to the applicant-organization may generate a level of dependence on the funding sources. That dependence may cause a moderating of rhetoric and even goals as community farmers strive to negotiate the biases and assumptions of wealthy donors and philanthropies. This reinforces the earlier argument that community farming may merely mitigate the extremes of neo-liberal economic practices. Worn out by paperwork, math, and learning the language of foundations and businesses, community farmers can lose sight of their more radical goals in launching these projects and become captured by a hegemonic discourse of capitalism, jobs creation, entrepreneurship, and self-reliance. This limits the ability of community farms to serve as sites of radical change.

While generating enough income to be self-sufficient and serve the community is a persistent problem for urban farms, they also suffer from the popular perception that they cannot generate enough food to offset industrial agricultural production. This brings up a crucial issue—it is essential for community farming to function as a form of environmental protest through the production of significant amounts of locally grown food. The linchpin of yield connects the ideas of change wrapped up in community farming to the actual changes that may occur and that may radically restructure Americans' relationship with nature, land-use policies in rural areas, urban health, and community strength.

One clear example of the ability of communities to produce food is the fact that 40 percent of domestically consumed food during World War II was grown in American Victory Gardens. Another example is what happened during the blockade of Sarajevo in 1992: urban food production there increased from 10 percent to an estimated 40 percent of vegetables and small livestock. Shanghai and Beijing currently grow upward of 80 percent of the produce consumed there, and Dar es Salaam, Tanzania, garners 60 percent of its milk from city dairy production and 90 percent of its leafy vegetables from local production.[27] More recent studies suggest that the agricultural productive capacity in US metropolitan areas is fairly strong. In a study of Cleveland, Ohio's, ability to become self-sustaining, the authors concluded that if the city used all available vacant lots, based on a low-yield projection it could produce 22 percent of its vegetables, fruit, eggs, honey, and poultry. If rooftops and hydroponic operations were brought into the mix, then Cleveland could produce 100 percent of its vegetable, fruit, and honey needs and approach that percentage in poultry.[28] A study of Oakland, California's, ability to achieve food independence is less sanguine but still suggests that community farming can be a reliable method to improve community health and autonomy and offset industrial agricultural production.[29] Evaluating the productive capacity of vacant lots and underutilized public land in the city against the recommended intake of vegetables, fruits, and other products rather than against the average existing consumption level, as other studies commonly do, the authors concluded that maximum production would reach approximately 13 percent of the recommended intake based on high-yield production on available land. Using current consumption as the baseline, the high-yield projection suggests that 40 percent of these foods could be produced on available public land in Oakland.

The study of food production in Oakland, California, did not incorporate a full-use model, as did the analysis of potential food production in Cleveland. The Oakland analysis may be a more realistic assessment of what is possible in terms of yield and acquiring space for farming, at least in the short term. That said, even using the lower-yield conclusions from the Oakland study, it is clear that cities have the capacity to produce significant amounts of food. That being true, then successful urban farms would have a spin-off effect, encouraging the incorporation of additional sites like rooftops, lawns, and private lands into production.

Community farming provides the means for a potentially radical reorientation of the relationship between city and country. Meaningful food production in urban areas and small towns would also enable rural acreage to be returned to habitat use and to be used for mitigation of and adaptation to climate change. Biologist Edward O. Wilson's recent proposal that half of the earth be set aside for the natural world, while seemingly outlandish, could be achieved with a growing community-farming movement.[30] A good example of such a process of returning land to nature is the Buffalo Commons project, in which the focus is to return Great Plains lands currently producing commodities such as wheat, hay, and cattle to short-grass prairie on which the keystone species—bison—could roam. A nation of cities able to produce half or more of its food would undercut arguments that the landscape is required for industrial production of foodstuffs.

Just as community farming builds economic and cultural resilience, it also strengthens ecological resilience by creating microhabitats. These small operations of a few plots and trees support pollinators such as butterflies, moths, and bees as well as other bugs. Songbirds, dragonflies, and frogs in these ecosystems help prevent a Silent Spring brought about by climate change. The increasingly common larger farms, like the several-acre City Slicker operation, support species listed above, raptors, small mammals, and any number of reptiles and amphibians. As new farms are started and existing ones grow, an urban greenscape will provide deeper and more complex ecosystem resilience. It will benefit migratory bird species as well.

Community farming might also help combat a key area of ecological decline—the eutrophication of the oceans. Eutrophication results from the deposition of the runoff of high amounts of phosphates and nitrates, largely from industrial, commercial agriculture operations such as corn farming and livestock feedlots, as well as from heavily fertilized lawns and golf courses. Coastal waters at the points where rivers enter the oceans around the world are now regular hypoxic zones, essentially dead of life. One of the best-known examples is the "dead zone" at the mouth of the Mississippi River, which carries heavy volumes of nutrients from agriculture, livestock operations, and lawns to the Gulf of Mexico. This zone averages over 5,000 square miles when it grows every summer, and in 2015 it exploded to more than 6,500 square miles.[31] With less than two-parts-per-million dissolved oxygen, nothing can live in this vast marine-scape. While this is the most dramatic dead zone on the coasts of the United States, these hypoxic zones are common, and collectively they reduce the viability and health of ocean ecosystems. These problems are also found in inland freshwater lakes, ponds, and streams. Community farming, following best practices of composting and fertilizing with organic material, will reduce the pollution that causes hypoxic zones. As this form of farming helps restore the capacity of oceans to sustain aquatic life, it may also help offset deterioration from climate change. Acidification of the oceans as a result of the warming of waters and increased carbon load is an unfolding process that is going to get much worse. A crucial mitigation and adaptation strategy, in the face of national and even global unwillingness to limit greenhouse gas emissions, is to repair ecosystems where possible. Removing pollutants from freshwater and the oceans to reduce eutrophication and improve ecosystem health represents a key resilience practice.

Hunger and lack of access to healthy food are issues that haunted our society prior to the Anthropocene, and community farming is a community-based tool that can be employed to address those injustices. Climate-change resilience for vulnerable communities necessitates local food production. Therefore, community farming constitutes an important resilience strategy. But feeding those in need and unjustly punished by a neo-liberal society is only one piece of the food-justice puzzle. It is also possible to enact long-term structural change for workers in the industrial agricultural complex and those removed from their land as a result of neo-liberal policies such as dam construction, land enclosure, and imported, subsidized crops. Farmers forced from their land would be able to put their skills to use in urban areas and villages close to home or even in countries to which they emigrate.

A robust, growing community-farming movement can reduce the impact of neo-liberal policies on international communities. As people grow food and consume it locally, the likelihood of their purchasing produce from distant economies diminishes. Community farming that includes active education about climate change and food-justice issues can convince a larger segment of the population to shop and consume locally. The drying up of the revenue stream into international agricultural conglomerates that benefit from neo-liberal policies and poor treatment of workers has the potential to engender the type of significant long-term structural change that has not been accomplished by activism and protest to this point. The power of producing food locally has great potential for change, but education and activism beyond simple locavorism are crucial.

As noted earlier, much of the change envisioned here, and the goal of much food-justice activism, is predicated on a growing movement and substantial yields. Similarly, the long-lasting impact of community farming is also contingent on radical changes in patterns of consumption. As community farmers and food-justice advocates need to focus on ordinances and legislation that support the movement and target food-justice issues, so, too, is it necessary to use these spaces to educate Americans on changing consumption patterns in a manner that undermines industrial agriculture and neo-liberalism while supporting local economies and food production. Teaching the food-justice and climate-change impacts of buying Chilean blueberries in January (or ever) while offering classes on how to preserve locally grown blackberries, strawberries, blueberries, or whatever is relevant to that region

provides clear actions that have ramifications across the world, ecosystems, and the atmosphere. Sustained education and an analysis of food economies that show local solutions represent a clear path forward. Demonstrating how consuming community-grown foods rather than corn or potatoes from an industrial agricultural business in a rural area helps mitigate climate change by reducing fossil-fuel–based greenhouse gas emissions and contributes to climate-change adaptation and resilience by opening up former agricultural lands in rural American to habitat restoration and carbon sequestration can help drive behavioral change as well. But it remains crucial for community farm advocates to clearly explain the linkages between local food production and consumption that incorporate broad structural change.

Philosopher Richard Rorty offers crucial insights into how community farming can function as protest and create a revitalization of American democracy.[32] He argues that small-scale local protest is crucial in energizing democracy. Real change that makes society more democratic is found in citizens getting their hands dirty by cultivating urban farms, challenging the sources of local air and water pollution, pushing ordinances to ban plastic bags, and fighting to restore or preserve local habitat. Rorty also notes the active political role played by the academic left in the first half of the twentieth century and asserts that academics need to take up that mantle again, providing leadership and guidance and doing the hard work of organizing, lobbying, and crafting legislation.

If community farmers are going to transform their neighborhoods and their health while improving the world, they need to move beyond Voltaire's advice to tend our own gardens and frame food production as protest.[33] For these farms to function as sites of dialogue and resistance and not as retreats or signs of resignation, the community farming community must push for supportive local, state, and federal ordinances, policies, laws, and land planning programs to create a vast community-farming system. Farmers and activists need to convince the state to protect urban farms from development and unreasonable taxation, prevent and limit gentrification in community farming neighborhoods, and provide subsidies for urban farm products to make prices low enough for the very poor as well as arrange mechanisms for distribution.

Even as we discuss the means to correct problems arising from ideology, flawed policies, and inequity, climate change is bringing a chaos and an unpredictability for which we are unprepared. Climate change, properly understood, induces despair; it is accurately described as a wicked problem. The consequences of non-action are devastating, and the impacts that are unstoppable will be catastrophic. Despair and fear create pessimistic inaction, an inability to see how to act or to believe that local action can accomplish anything meaningful. Regulatory mechanisms are needed, increased taxation and investing in alternative energy production and storage are needed, government-mandated and enforced limits on pollution are needed. Activism on the local level alone is not enough, but it can accomplish much more than many people assume.

Imagine, then, college students working with younger children to place ladybugs on tomato plant leaves. Or watch the large hands of the basketball team's power forward guide the tiny hands of a young girl as they dig a hole in the bed, insert a tomato plant, and then fill in the soil around its roots. At moments like these, professors, administrators, students ages three to twenty-five, schoolteachers, and parents join in something fundamental and hopeful, the breaking of the soil for plants, the nurturing of gardens to promote health and life. Maybe hope is also a ladybug or a bright red jalapeno pepper waiting for eager hands to touch and hold it. Through this communion of labor and sweat equity, each person helps construct a new kind of community, human and natural. In so doing, they forge relationships across boundaries that have limited social cohesion. What makes these spaces radical, with meaning created by labor and dialogue, is the very real possibility of subverting the hegemonic discourse about race, environment, class, and climate change. Discussions of food justice, environmental justice, economic equity, and climate-change resilience may lead to the creation of ideas and solutions not mediated by "common-sense" voices, grant-funding agencies, and government entities. In that space, "radical" ideas about turning cities into centers of food production challenge the dominance of the industrial agriculture economy. With the potential to affect so many aspects of our economy, society, and environment, community farming might turn out to be the most important, most durable form of environmental protest.

Notes

1. I choose here to use the term *community farming* for a few reasons. Use of the term *gardening* suggests something less than serious intent and labor, hence my

preferred use of *farming*. The term *urban farming* neglects efforts such as the Diné Food Sovereignty Alliance and local food production efforts in rural areas that also struggle with food deserts and food-justice issues. *Community farming* as a term captures rural and urban communities while denoting that these are serious efforts to produce healthy food and even food autonomy.

2. Adam Rome indicates the turning point as the opposition to a national land-use law co-sponsored by Republican president Richard Nixon and Washington State Democratic senator Henry Jackson. See Rome, *The Bulldozer in the Countryside: Suburban Sprawl and the Rise of American Environmentalism* (New York: Cambridge University Press, 2001).

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