UNIVERSITY OF NORTH CAROLINA at ASHEVILLE

BRINING FOOD HOME:

An Investigation into Multiculturalism as a Pathway to Sustainability

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BY

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An Investigation into Multiculturalism as a Pathway to Sustainability

by

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DEDICATION

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¡Adelante!
(Onward)

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I. INTRODUCTION

No one would argue that food sustains life. Yet, a 2010 United Nations Food and Agriculture Organization (FAO) report estimates that 925 million people worldwide live in hunger or lack a suitable supply of food. In the current era of consumptive lifestyles, food has become a commodity within a global system that is highly vulnerable to economic and environmental shock—both of which are drivers for poverty and ultimately increase global hunger. This phenomenon is not limited only to the developing world. In Raj Patel's 2008 testimony before the United States House of Representatives, he states that thirty-five million American citizens fall within poverty parameters and have begun adopting tactics similar to those in developing countries. One example that Patel mentions is the conscious decision for individuals to skip meals—women in particular—in an attempt to leave more food on the table for their children. Patel, along with food experts from around the globe, cite poverty as the root cause of hunger rather than a lack of food supply leading to decreased access to healthy food. Activists, non-governmental organizations (NGO's) and aid agencies worldwide have responded to the hunger crisis by developing a multitude of food distribution programs to increase food security; yet, hunger and poverty rages on.

Food security has become a common and often highly politicized term, used by governments and organizations like the United Nations to describe a broad area of social concern and call attention to a host of environmental, agricultural and hunger-related issues. Factors such as food shortages, climate change, population growth, political unrest, economic instability, and limited natural resources (including land, water and biodiversity) all contribute to global food scarcity. In a 2009 report, "Global Food Security: US Commitment to Action," the State Department found that every five seconds a child dies of hunger—totaling six million children annually—more than the population of Manhattan and Paris combined. We stand at the dawn of

a new era as the sun rises on a changing planet: floods, droughts, and extreme weather all affect food production. Somewhere between panic and denial is a place where, as citizens of the global community, we have an opportunity to challenge hunger and poverty by reconnecting to one of life's most basic elements—our relationship to food.

Food justice, by definition, moves beyond the food security paradigm to address imbalances of power within a framework of human rights and social justice. The food justice movement aims to reshape the more politicized notion of food security by confronting the dynamics of racism, economic and social marginalization. The cornerstone of the food justice paradigm operates under the assumption that it is the right of all to have access to safe, affordable and culturally appropriate food. In response to growing global concern, food justice activists have focused on creating a multitude of successful community-based approaches to producing food in an affordable, environmentally sustainable way.

From Presidential addresses to high dollar "green wash" advertising campaigns, the concept of sustainability has become a highly popularized notion. The word itself has a plethora of definitions and interpretations—but is most commonly accepted as "the capacity to endure." Sustainability as a guiding principal applies across other disciplines. For example, in ecology the word describes how biological systems remain diverse and productive over time. For humans, it is the potential for long-term maintenance of well-being, which in turn depends on maintenance of the natural world and its resources. Author and environmental activist Paul Hawken distills the future of both into one succinct thought, "Sustainability is about stabilizing the currently disruptive relationship between earth's two most complex systems—human culture and the living world" (Hawken 172). One of the most compelling examples of this disruptive relationship is represented in the politics of food.

The alternative food movement in the United States has sought to create local jobs, promote good health and stress the importance of small farms. Community appetites around the nation have responded with enthusiasm indicated by the explosion of local Farmer's Markets and roadside produce stands. The USDA released a report in 2010 indicating Farmer's Markets were experiencing a sixteen percent growth—translating into an average of 850 new markets annually. Big corporations have also acknowledged the "demand drives supply" trend as big-box stores, such as Wal-mart, lead the nation as the largest retailer of organic produce (Halweil).

The alternative food movement has served as a conduit for both social change and environmental sustainability; yet, a divide remains between food justice activism and the marginalized population the model is designed to serve (Guthman). This gap is attributed to a lack of diversity represented in the alternative food movement. From policy initiatives not being implemented in poverty communities, the prevalence of language and "cultural codings"[1] in alternative food spaces being disconnected from the day to day struggles of under-served groups, and the divides that exist within poverty groups themselves, the food justice movement is not engaging the marginalized populations that it is designed to serve.

Through their research, Alison Alkon and Christie McCullen provide eye-witnessed acts of solidarity, anti-racism, and efforts to contest white cultural dominance. But little has been published about the investigation of multiculturalism as a means to achieve both justice and sustainability. Unraveling the barriers to transforming the alternative food movement into a more culturally and economically inclusive paradigm is critical to achieving a poverty food justice

[1] Cultural codes refer to the ways that members of society communicate, interpret and understand meaning. Language, behaviors, interactions, geography, laws and policies, etc. are all examples of how codes serve to reinforce meaning. Cultural codes are used to shape and demonstrate identity for both the sender and receiver of the code—and can serve to represent and communicate the values of a culture as well as signal membership "inside" the group as well as obscure meaning to members "outside" the group (also referred to as "the other"). Thus, reinforcing the experience of either **inclusion** or **exclusion—**communicating a sense of belonging or being unwanted (Hyatt).

model that places priority on a sustainable outcome. This investigation will explore the potential for bridging the gap between the food justice movement and the under-served populations currently being excluded by pursuing multiculturalism as a pathway to sustainability.

While the current standard definition of multiculturalism is accepted as the advocacy of extending equitable status without promoting any specific ethnic, religious, and/or cultural community values as central—social and political interpretations vary. For the context of this paper, multiculturalism exists when everyone who shares the food system has an opportunity to shape it—creating an environment where people of all backgrounds feel empowered and benefit from equitable participation while challenging self-identified inequities. Diversity strengthens agricultural systems. The same applies to human communities—increasing resilience in support of our capacity to endure. It is the belief of this author, that an added element of multiculturalism in the poverty food justice movement is essential in addressing the fragmented nature of the current alternative food model. While a multitude of successful hunger and poverty relief programs exist provided by non-governmental organizations (NGO's), non-profits, and advocacy groups to increase access, affordability and education around food. The currant fragmentation creates a lack of political traction needed to achieve the policy change necessary for reshaping the global food landscape into a more equitable and inclusive paradigm. If a multicultural approach can be achieved, a pathway for collective action will be established providing the foundation for greater resiliency increasing our capacity to endure. This investigation will examine the evidence and explore the solutions currently in practice to anchor the argument in favor of multiculturalism as a pathway to sustainability.

II. SUSTAINABILITY: THE THREE PILLARS

Reconciling the age old struggle of "man versus nature" is no small task. Shifting the agendas of what the United Nations calls the "three pillars of sustainability"—environmental, social and economic sectors—toward a common vision for conservation and preservation will require social change of epic proportions (2005 World Summit Outcome). "Saving civilization is not a spectator sport," says Lester Brown of the Earth Policy Institute. The campaign will require sustainability leaders from every societal stratum. Particularly considering that we live in a time where the indicators of a healthy economy tell us it is "cheaper to destroy the earth in real time than renew, restore and sustain it," says Paul Hawken (Commencement Address).

Further complicating the issue is a phenomenon that is being hailed as the greatest migration in human history (*Nature of Cities*). According to a March 2010 United Nations report, "just over half the worlds population already lives in cities—but by 2050, over seventy percent of the world will be urban dwellers. By then, only fourteen percent of people in rich countries will live outside cities and thirty-three percent in poor countries" (Vidal). This population shift toward urban living will add concentrated stress on the earth's already strained resources. "Rising food prices will have an effect almost all over the world but especially in poor countries where food and energy are the major things people spend their money on," says George Magnus, a senior economic adviser, in a January 2011 BBC News report ("World Food Prices").

a. ENVIRONMENTAL

In *The Long Summer: How Climate Changed Civilization,* Brian Fagan illustrates how historically even the most sophisticated ancient societies have been made or broken based on their relationship with food. Limited or unstable natural resources such as land, water and

biodiversity all contribute to food scarcity. "In many parts of the world, water supplies are declining and agricultural land is drying out," said Ban Ki-moon, United Nations Secretary-General, in his opening remarks to the 2009 World Food Summit in Rome. As a result, economic instability and global political unrest are predicted to rise as food supplies become more scarce. "We don't have to wait for targets set in 2020 or 2050 to see the impacts of climate change and feel the financial cost of inaction," said Dr. David Uzzell on the BBC World Service. "On the back of droughts and floods, fluctuating oil prices, hedge fund speculation, and increases in consumer demand," food prices along with other commodities began an upward spiral in 2008 (Vidal "High Food Prices"). Already elevated global food prices rose even higher in 2010 after severe drought and fires in Russia devastated wheat crops there ("Global Hunger")—which accounts for 11% of global exports ("World Food Prices"). When Russia found her own wheat supplies falling short in meeting domestic needs, officials instituted an immediate ban on crop exports. In 2011, Australia, also responsible for 11% of global wheat exports, fell victim to severe flooding leaving their crops in ruin ("World Food Prices"). While Australia fought back flood waters, the *BBC News* reported that Argentina (the world's second biggest exporter of corn behind the US) suffered through extreme and prolonged drought.

Domestically, America didn't fare much better in 2011. A wet spring "delayed planting in the Corn Belt…after record rainfall and flooding in Ohio, Indiana and southern Illinois" leaving US farmer's feeling anxious about their growing season (Masterson). In an interview for National Public Radio, Kathleen Masterson spoke to Bruce Babcock, an Iowa State University agricultural economist, about the situation in the Midwest. He said, "A lot is riding on this year's crop yields"…they have a "big effect on grain prices, and ultimately what we pay at the grocery store." In the same NPR story, Bob Nielsen, Agronomist for Purdue University,

highlights the dismal forecast for world grain reserves to fall to their lowest levels in years—compounded by crop troubles in the Midwest, stating that "the already vulnerable global market could experience another jolt" in prices.

Increases the price of row crop commodities don't just affect human consumption. The severe drought in Texas, Oklahoma and Virginia during the summer of 2008, impacted cattle ranchers—forcing many to send young cows to slaughter prematurely because they could no longer afford the feed. "If a cow even thinks about getting old, we get rid of her," says Robert Seldon, a central Virginia farmer (Noguchi). Seldon says the price of feed increased fifty percent during 2008, while hay prices doubled…combined with increases in gas and diesel resulted in "profits from a beef cow pricing out to be half of what it was." As a result, meat prices spiked. A 2011 severe drought in Texas brought another wave of stress to cattle ranchers. Emory, Texas, a predominately cattle-ranching town in the eastern part of the state, faced the "worst drought in state history…and threatened a way of life" for many residents during the summer of 2011 (Goodwyn). An August 2011 NPR story reported seeing cattle standing in a 107-degree heat in the shade, with ribs showing and clearly under stress, waiting to be sold at auction at "nearly three times the average number." After nine straight weeks without rain, by August 2011, ranchers were giving up and giving in—the Lone Star State was "emptying itself of cattle" (Goodwyn) which is predicted to force another spike in beef prices. Stanley Austin, a rancher whose family farm was hit hard this year, said "we've had this place for seventy-five years and it has never been without water…but it is without water now…and has been since the fifteenth of June." With neighbors selling entire herds and others losing their homes to fire, Austin told National Public Radio that he "felt lucky to still be in business" while predicting that the "drought will change the economy of Texas forever" (Goodwyn).

Recognition of the impending food shortage dilemma, also known as “the silent hunger” (Leybold-Johnson), is forcing nations around the world to develop Food Scarcity Contingency Plans—including the United States. “The silent hunger crisis—affecting one sixth of all of humanity—poses a serious risk for world peace and security," says Jacques Diouf, director general of the UN Food and Agricultural Organization (FAO) (Kashka). As availability of natural resources decline, the world population continues to grow. The FAO predicts that food production will have to increase by seventy percent over the next forty years to feed the world’s growing population—which is projected to increase from the current 6.7 billion to 9.1 billion by 2050 (Food Production).

While demands for food production increase, global fertile agricultural areas are continually converted to pasturelands for inefficient food production or developed use for housing and commercial space. Cattle ranching is the leading cause of deforestation in the Brazilian Amazon. “Between May 2000 and August 2006, Brazil lost nearly 150,000 square kilometers of forest—an area larger than Greece. A large portion of the deforestation can be attributed to land cleared for pastureland by commercial and speculative interests” (Butler). Over the last eighty years, the United States has continued to till under food producing fields in favor of capitalism, concrete and urban sprawl. According to American Farmland Trust, our nation loses two acres of farmland per minute to development—decreasing our potential for food security. For example, from 1992 to 1997, America developed more than six million acres of farmland—an area the size of Maryland (American Farmland Trust)—creating more expansive housing and retail opportunities at the expense of preserving biodiversity.

The Green Revolution

In developed countries, such as the United States, many have become disconnected from the production of food—one of the most basic exchange with the earth. Catalyzed by technology and the notion of progress, humankind has lost sight of the natural rhythms and processes of the planet which is evidenced by the continual generation of unsustainable policies driven by insatiable consumption. According to agricultural economist Dr. John Ikerd, "Beginning at the middle of the last century, American farm policy has taken our nation into the dead end of industrial farm production and food distribution" (Small Farms). He goes on to say that "farming, at its core a biological process, has been transformed into an industrial process— thus demolishing the economic and cultural values upon which this nation was founded."

The industrial food complex of our current system was developed to produce maximum short run efficiency relying heavily on petroleum based fertilizers, pesticides and herbicides—increasing our dependence on foreign oil. "Traditional agricultural practices coupled with industrial-scale monocropping (growing one crop at a time), have divided nature's solution of plants and animals working together into two problems—both of which generate severe consequences for the environment and human health," says Michael Pollan (Fresh). In the subsidy supported drive toward more and cheap food, America has created an unsustainable food system ushering our nation to the summit of a precarious position of food insecurity. The potential for developing a sustainable roadmap for equitable food security exists by drawing inspiration from indigenous wisdom and resuming a posture that acknowledges our place among the living systems of the earth.

In order to make the argument for increased food security through the action of local and sustainable agriculture –we must first examine the real cost of food from farm to fork.[2] What does "real cost" mean? The typical mouthful of American food travels an average of 1,500 miles from farm field to dinner table (McKibben *Deep Economy* 64). America's industrialized agribusiness farms employ chemically-intensive systems that pollute land, air, and water generating costs that are not reflected in our grocery bill. "The real cost of food is paid somewhere. If it isn't paid at the register—it is charged to the environment, charged to the public purse in the form of subsidies, and charged to the account of public health" (Fresh). The Sierra Club Sustainable Consumption Committee published some research, and found the real costs of goods produced by our current food system to be staggering. Seventy-eight percent of the beef Americans consume comes from Confined Animal Feeding Operations (CAFO)—or "Animal Cities" (Manning). An estimated 238,000 working farms and ranches in the United States are considered CAFO's, generating about 500 million tons of manure each year (EPA "Protecting Water"). Livestock factories take a lot of energy and resources to run—energy needed to run the factory, grow corn and grain for feed, and ship the meat to stores. By combining those costs, the end result equals one gallon of oil per pound to yield one pound of steak (Manning).

At a time when global water supplies are becoming more scarce, CAFO's require excessive water use and consumption—2,500 gallons of water per one pound of steak (Lappé 76). On average, cows require thirty gallons of water per day for drinking, seventy gallons per cow per day for washing and sanitation, and 500,000 gallons to irrigate each acre of feed. Currently, seventy percent of the world's water is used in food production while less than one

[2] Farm to fork is a term that references the entire food production process—from seed or birth (with regards to livestock) through growth, harvest, processing, packaging, transporting, storage, etc until the food item reaches the consumer's dinner plate.

percent of the global water supply is usable for drinking ("The Looming Water Crisis"). In addition, for every sixteen pounds of healthy grain and corn a cow eats, the end yield is merely one pound of beef (Lappé 69)—which is an inefficient use of energy and nutrition. "Hunger and nutrition are not exclusively foreign concerns" limited only to developing and poor nations, says Tristram Stuart in his book *Waste: Uncovering the Global Food Scandal*. He reports that thirty-five million Americans "live in households that do not have access to healthy and nutritious food while an estimated forty-three million in the European Union are at risk for food poverty" (xix). According to the Center for Food Safety, eighty percent of row crops[3] in the United States are allocated for feed sent to industrialized farms, while only eighteen percent is being fed to people (Manning) and the remaining two percent being waste (lost to disease and/or pests).

Cattle who are fed from a diet concentrated of corn and other grains suffer from excessive gas called methane. United States cattle alone emit 184 billion cubic/feet of the greenhouse gas methane per year—enough to fill four million blimps (Methane Generation). Methane contributes more to climate change than carbon dioxide (Forster et al 133). Even though research has shown that factory feedlots are the biggest culprits in methane emission, soil degradation, and water contamination—the 2009 American Clean Energy and Security Act, HR 2454, specifically excludes methane emitted by factory farms (The Library of Congress 590-591). When you add up the: excessive fuel consumption, water use and wasted nutrition; loss of grasslands, rainforests, and biodiversity; massive pollution from manure and methane; and human health costs—the real cost of beef far surpasses the current market retail price.

A remedy for this problem is to reduce meat consumption, right? Because, in the current global food economy, it is always growing season somewhere making produce readily available year-round. The current global agricultural model creates another set of environmental and

[3] Row crop refers to grains.

health problems. The Green Revolution, chacterized by monocropping which is typical of agribusiness, creates an ecological imbalance that is asphyxiating the earth's primary productivity[4] potential. Unfortunately with the monocropping system a single pest or disease can wipe out the entire livelihood of a given farm. Monocroppers rely heavily on petroleum-based herbicides and pesticides to reduce their risk. By dousing fields with one billion pounds of toxic pesticides and herbicides per year, the practice of monocropping contributes to agricultural runoff that poisons groundwater and upsets the balance of biodiversity (EPA "Nonpoint Source"). Conversely, diversity allows a system to "sponsor its own fertility" (Jackson 43).

Chemical use, combined with other industrialized farming techniques, results in the loss of twenty-four billion metric tons of top soil worldwide per year (Committee on Global Change 111). In addition pesticides, kill beneficial insects that make healthy soil—undermining long term soil productivity. As a result, "the real cost of food production on land in this condition is far higher than on land where the topsoil layer remains intact," says Lester Brown in his Forum address, "What Does Global Change Mean for Society" (Committee 103). Monocroppers try to replace the effectiveness of real topsoil with petroleum based chemical fertilizers. This approach requires increased use of chemical products over time to achieve the same results, according to Brian Halweil. Along with pesticides and other agricultural chemicals, the Environmental Protection Agency (EPA) cites agricultural runoff as the top pollutant of US rivers—killing entire habitats, decimating wildlife, and contaminating groundwater. Thus, creating what the EPA terms nonpoint source pollution[5] which has been identified as the nation's largest water

[4] Primary productivity refers to "the total amount of plant mass created by the earth in a given year—which equals the total budget to support life (Manning).

[5] Nonpoint source pollution, defined by the EPA, differs from "pollution from point sources such as industrial and sewage treatment plants, because it comes from many diffuse sources. Polluted runoff is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and

quality problem (EPA "Nonpoint Source"). In a similar study, the EPA reports that America could save fifteen billion dollars worth of water treatment costs through the reduction of agricultural toxins (EPA "Agricultural"). Add up all toxic chemicals, the topsoil loss, water contamination and health threats, massive pollution generated by shipping produce around the country, and unfair subsidies and the hidden costs far exceeds the current market values of produce.

Agribusiness[6] receives approximately fourteen billion dollars per year in subsidies (Abbott)—regardless of how much or little they produce. Two-thirds of the fourteen billion dollars are allocated to fund the production of only two crops: corn and wheat (Manning). The political illusion of subsidies is that they are necessary to maintain the small family farmer—an image of the enduring American spirit. In truth, small family-operated farms are not the primary recipients of US tax dollar supported subsidies. In 2002, Nicolas Heidorn reported in the San Francisco Chronicle, that "seventy-eight farms (none small or struggling), each received more than a million dollars in subsidies. The bottom eighty percent of recipients averaged only $846 per year." By 2009, Congress awarded "fifteen billion in farm subsidies, of which ninety percent went to large corporations for the production of five crops—corn wheat, rice, soy and cotton—used primarily for animal feed and industrial applications" (Picard). Combined with environmental conservation subsidies (established by Congress) that pays farmers **not** to cultivate their land, subsidies ultimately increase food prices for crops that are made more scarce

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human-made pollutants, finally depositing them into watersheds through lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water" (EPA "Protecting").

[6] Agribusiness is a term that refers to the broad range of participants within the modern food production industry—including farming, seed suppliers, chemical suppliers, production and processing agents, marketing and retailers. According to the North Dakota State University, agribusiness accounts for nearly one-fifth of US gross national product (GNP) and employs close to one-fourth of the US labor force. The term holds both a positive connotation and a negative one, depending on the context of use. Supporters of the alternative food model generally use the term "agribusiness" to refer to the corporate industrial monopoly and manipulation of the global food market—from seed patents to subsidies.

while decreasing the livelihood and survival of smaller family farms. "There are strong national security as well as public health arguments for de-centralizing our current food system," says Michael Pollan (Fresh). He goes on to argue that America has created a "monocultured food supply" that is vulnerable to market oil prices, political stability of developing nations and continued availability of natural resources—which is simply not sustainable.

Climate and Food Scarcity

A precondition for food sustainability is a stable climate, making climate change[7] one of the greatest human rights threats affecting the global population during our lifetime. The United Nations Human Rights Council Resolution, released in March 2008, states climate change "poses an immediate and far-reaching threat to people and communities around the world." From environmental refugees, widespread famine, to political unrest—every human being is vulnerable to the impacts of a changing climate. Climate change is not a nebulous impending doom lurking on the horizon nor is it a politico bargaining chip. We are, in fact, already living on a changing planet. Currently, 2.8 billion people live in areas of the world immediately vulnerable to the impacts of climate change (Global Humanitarian Forum 58).

The prevailing naiveté and denial by Americans, who consume more resources and contribute more per capita to the problem than any other group, potentially raises the tipping points to astronomical collapse of worldwide economic, political and social systems (Diamond, Durning, and McKibben "Deep Economy"). According to Bill McKibben, "While there are ways to start to deal with climate change…all of them rest on acknowledging just how large the

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[7] Climate change is defined by the United States Environmental Protection Agency as any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer).

challenge really is" (McKibben "First, Step Up"). Counted among the global consumer class[8], our nation is completely unprepared for the rupture of our carefully constructed technology driven oil dependent bubble that we know as the American dream. Globally, the consumer class takes home sixty-four percent of world income, which is thirty-two times as much as the poor (Durning). The United States alone is home to "50% of the world's wealth but only 6.3% of its population" (Manning). Consumerism, by its very nature, brings responsibility back to the individual. No matter how intentionally we spend money, choose a product, or alter our behaviors—even a "consumer with a conscience" is responsible for contributing to the depletion of global resources and adding stress to the carrying capacity of the planet by the nature of our infrastructure and life-style. Catalyzed by technology and the notion of progress, humanity's preoccupation with ownership and "stuff" has made changes in climate easy to ignore.

At the 2009 World Summit on Food Security in Rome, the United Nations Secretary-General Ban Ki-moon said, *"*Weather is becoming more extreme and unpredictable—In many parts of the world, water supplies are declining and agricultural land is drying out. Food security and climate change are deeply interconnected…There can be no food security without climate security." Floods, droughts, and extreme weather patterns all affect global food production. Yet, until recently, these events took place on some foreign shore affecting only people who were tucked easily out of sight and mind from our consumptive preferences. Areas affected by changing climate, "such as increased floods, droughts and rising sea levels that making fresh water too salty for use in irrigation," have imposed greater hardship on the poor who do not have the resources to impose mitigation strategies. In developed countries such as America, the reality of being one bad food harvest away from mass starvation may seem like a work of science fiction. But, as food prices continue to increase so does the number of Americans

[8] Consumer class refers to the "richest fifth of humanity as measured by per capita income or life-style" (Durning).

seeking assistance. In 2011, approximately forty-three million Americans are already receiving food stamps, or EBT, assistance (Kitze).

Population Growth, Land Use and Food Scarcity

The United Nations Food Agency predicts that food production will have to increase by seventy percent over the next forty years to feed the world's growing population—which is projected to increase by 2.4 billion by the year 2050 ("Food Production"). Limited or unstable natural resources such as land, water and biodiversity all contribute to food scarcity. A growing global population creates an even greater need for energy production, consumption of resources and unsustainable development—all of which undermine efforts to counteract climate change.

While demands for food production increase, global fertile agricultural areas are continually converted to pasturelands to support the beef, pork and chicken industries. Each year an area of rainforest averaging 60,500 square miles—at a staggering rate of more than four football fields per minute—is cut down, logged or burned for agricultural use ("The Destruction of the Rainforest"). Globally, destruction of the tropical rainforests releases seventeen percent of the world's carbon emissions—more than all the world's cars, trucks, ships, trains and planes combined (*Conservation International*). A news story published by *The Telegraph* revealed that severe droughts in the Amazon, in 2005 and again in 2009, have already reduced the rainforest's capacity to serve as buffer between made-made carbon emissions and the atmosphere ("Amazon Rainforest").

The farm industries that supply our table with beef, pork and dairy accounts for eighteen percent of global greenhouse emissions—also a larger share than the entire world's transportation combined (United Nations "Livestock Impacts"). In 2000, Americans spent more than $110 billion on fast food alone (Schlosser 3), reinforcing the lobbying power of the beef and

dairy industry. Animal agriculture unleashes some of the most destructive greenhouse gases—methane from cows' stomachs (twenty-five times stronger than carbon dioxide) and nitrous oxide from animal manure and the use of nitrogen fertilizer (298 times more potent than carbon dioxide) (Dauncey).

The United Nations Food and Agricultural Organization projections estimate if more land is not used for food production now, 370 million people could be facing severe famine by 2050 ("Food Production"). Proposed solutions are uncertain because climate change poses new challenges to meet the increase in demand. For every one degree rise in temperature, we get a ten percent decline in agricultural production (United States "Global Food"). Water shortages threaten to reduce the global food supply by more than ten percent in the next twenty-five years. Without action, climate change will further decrease crop yields in areas of the globe already facing extreme poverty and food shortages will be the worst affected—such as Africa, parts of Asia, Nepal and Mexico. As oil becomes more expensive, the cost of food will soar. Inaction could lead to loss of our ability to grow enough affordable food and hunger could consume even the most powerful developed countries. "With food prices remaining stubbornly high in developing countries, the number of people suffering from hunger has been growing relentlessly—aggravated by the global economic crisis which deepens poverty and affects jobs" said the UN Food and Agriculture Director-General Jacques Diouf ("Leaders Pledge"). The race to develop alternative energy technology, such as bio-fuel production, has presented additional competition for food production.

b. SOCIAL and ECONOMIC

How do we engage and empower marginalized populations to become their own advocates? Through her examination of the nexus between community food assessments,

community practitioners and food insecurity, Maxine Jacobson concluded that human beings are meaning-makers who seek to make sense of the world and our experiences in it—which is filtered through personal lenses such as culture, race, place, gender, and class. Each of these lenses shapes our interpretation of power. Using the example of Mexican women grassroots organizers, Jacobson interprets our ability to understand power and translate that into action. She suggests the following four different levels of power: (1) "power over" is institutional and personal forms of and practices of oppression; (2) "power from within" is the discovery of inner strength by way of sharing struggle with others; (3) "power with" is realized by collaborating with others to achieve change; (4) and "power to do" is taking action to accomplish goals. Her research critically examines the development of a community food assessment model (CFA) as a tool for change to promote and sustain action—by combining community organizing, policy advocacy, research, coalition building, and community development. Thomas Lyson's theory of civic agriculture speaks directly to Jacobson's community food assessment model by illustrating how re-localization of food production provides a different model for community connectivity by outlining ways in which civic agriculture bridges the economic, social, cultural and political dimensions of community life. This model serves to address the contemporary decline of communities worldwide.

In our current economic system, "there is another kind of erosion at work—erosion of social capital, erosion of community, and the erosion of an understanding of our place in the scheme of things" (Tasch *Inquires* 21). We did not arrive at this eroded system overnight—nor shall we part the seas of capitalism to reveal a path toward sustainability in one commanding gesture. We can, however, look critically at the destructive consequences of our past choices to plot a more equitable future. In his book, *Inquiries Into the Nature of Slow Money: Investing as*

if Food, Farms and Fertility Mattered, Woody Tasch asserts "In the last 300 years, economics has been dominant over humanism and culture…In the last 100 years, capitalism has become the motor for culture and politics on a universal scale" (ix). Humanity's insatiable drive to develop, consume and dominate has built an economic house of cards—or what has been categorized by Dr. David Korten as the suicide economy[9]. In his book, *When Corporations Rule the World*, Dr. Korten elaborates on the suicide economy and the impacts on community.

Economic Dysfunction

Welcome to the world of the suicide economy—

> Wall Street bailouts. Unemployment. Enron. Accounting fraud. Mad cows. Wal-Mart. Monopoly. Political corruption. WTO. Disintegrating schools. Downsizing. WorldCom. Tax havens. Cancer clusters. Loss of small businesses. Class warfare. Climate change. Corporate welfare. Temp workers. Economic refugees. Big banks. Hidden partnerships. Blackwater. Billionaires. Money laundering. Citibank. Financial bubbles. The housing crisis. Prison crowding. Insider trading. Infomercials. Halliburton. Price gouging. GMO's. Subsidized industrialized agriculture. Terrorism. Malnutrition. Monsanto. Uninsured workers. Nike. Sweatshops. Trade wars. Outsourcing. Unemployment. Hunger. Homelessness.[10]

It is a place where "rule by global corporations and financial speculators engaged in the single-minded pursuit of money is destroying communities, cultures, and natural systems" all over the planet (Korten "Economies"). By feeding the growing economic and social inequities between community members, the suicide economy threatens the long-term sustainability of society—a divide that continues to increase at unprecedented levels. For example, the poorest half of Americans currently lives on one-eighth of total U.S. income while the top one percent takes in more than one-fifth (Ikerd "Local Foods"). Allowing the wealthy few to control the resources

[9] Suicide economy is a term used by Dr. David Korten to reference economic dysfunction of global epidemic proportions (*When Corporations*).

[10] The list represents symptoms of a suicide economy and was compiled by Dr. Korten in an article printed in YES Magazine ("Economies for Life") and has been updated with additional evidence by this author.

and opportunities for the many has created a concentration of power, thus, deeply rooting an economy where people don't matter.

Our national drive to accumulate personal wealth has led to a country that has ceased to produce anything of real value. In the US, manufacturing fell from twenty-seven percent of gross domestic product in 1950 to twelve percent in 2005—while financial services grew from eleven percent to twenty percent (Korten "Why the Economic Crisis"). "In an audacious social engineering experiment," Korten believes, "corporate interests [historically] drove a public policy shift that made **finance** the leading sector of the US economy and the concentration of private wealth the leading economic priority" ("Why This Crisis"). As a result, unchecked political power wielded by corporate machines has driven our national public policy agenda in favor of the wealthy. The system suppressed the wages of the majority while continuously cajoling them to buy more than they could afford using debt they had no means to pay. (See Figure 1) This formula for economic suicide has been reinforced by political leaders, countless spiritual leaders from weekly pulpit addresses, and the constant stream of advertising designed specifically to turn vulnerabilities into wants and needs driving dissatisfaction and insatiable consumption. This vision of a world in which the United States would "dominate the global economy by specializing in the creation of money and the marketing and consumption of goods produced by others" has paved the way for our suicide economy (Korten "Economies"). All of which have been driven by human choices motivated by a love of money and the illusion that monetary wealth is attainable for all.

"Money, the ultimate object of worship among modern humans, is the most mysterious of human artifacts: a magic number with no meaning or existence outside the human mind," says Dr. Korten ("Why This Crisis"). Yet, we have built our entire economic system around this

phantom value at the expense of the basic needs of people. Was our capitalist collision with common sense inevitable? When Adam Smith conceptualized the idea of the market economy in his classic *The Wealth of Nations,* he had in mind economies that would allocate human and material resources justly and sustainably to meet the self-defined needs of people and community (Korten *When Corporations* 119). Yet, our current market economy violates (in Smith's own words) the notion that the pursuit of self interest would **not** override the nature of man to be "sympathetic" to others—rather man's moral and philosophical sympathy would enable him to moderate his behavior to preserve harmony (*Adam Smith*). When these elements are in place, there is a natural incentive for all concerned to take human and community needs and interests into account.

Smith's optimistic vision for moderation was obscured by the monetization of relationships—replacing mutual caring with money as the primary medium of exchange—which accelerated after World War II when growth in Gross National Product, essentially growth in monetized relationships, became the standard for evaluating economic performance (Korten "Why this Crisis"). As a result, public policy bias in favor of monetizing relationships to create phantom wealth grew at the expense of the pursuit of real wealth (Korten "Don't Fix Wall Street")—defined as the tangible elements that support a meaningful life: love, personal health, a job that provides a sense of self-worth and contribution, membership in a strong, caring community, a healthy vibrant natural environment, and peace on political, social and spiritual levels (Center for Partnership Studies). Our current economic system is an illusion driven by the inflated assumption that money is wealth and the process of making money (at any expense) results in generating wealth. The illusion perpetuates the false notion that given hard work, every citizen has an opportunity for equal access to their own piece of The American Dream.

Just as the value of money is a human invention, so are the rules that govern it. These rules favor mobility over community, speculation over productive investment and volatility over permanence all while promoting unlimited consumption (Mitchell). Because markets respond only to the needs of those with money to pay, the financially affluent few control the resources and financial futures of the many.

Food Economy Spoiled by Speculation

The food economy is not exempt from the toxic speculations and exorbitant inflations of the suicide economy. A series of reports in the international media have drawn attention to "the role of professional speculators and hedge funds in driving up the price of basic commodities"—foodstuff, in particular (Steinberg). The sharp increase in food prices has been felt across the globe creating what the United Nations has termed the "silent tsunami." This is a situation that threatens to plunge 100 million people on every continent into hunger—people who were not previously in the urgent hunger category. Globally, more than one billion people live in households that earn less than one dollar per day (United Nations "World Summit"). A 2008 article by Mark Lynas, published in the British *New Statesman,* cites the financial crisis as the reason behind the rising food crisis due to speculation in commodity futures that followed the collapse of the financial derivatives markets. According to the Center for Globalization Research, "Desperate for quick returns, dealers are taking trillions of dollars out of equities and mortgage bonds and dumping them into food and raw materials…It's called the "Commodities Super-cycle" on Wall Street, and it is likely to cause starvation on an epic scale" (Steinberg). Regardless of market adjustments, prospects for food security remain grim. Conventional economic theory says that prices are regulated by a "supply and demand" equation. For example, commodity prices are driven up when demand exceeds supply. In "Speculating in

Hunger: Are Investors Contributing to the Global Food Crisis," Ellen Brown states that in this case, "demand does not mean the number of hands reaching out for food. It means the amount of money competing for existing supplies." Poverty populations cannot express their food needs in economic terms because they lack the financial means to participate in the "supply/demand" driver of the market cycle. As a result, the world has seen an explosion of violent food protests.

In a March 2011 article published in *The Guardian*, UN special reporter Oliver Schutter was quoted as saying, "The cost of food production has been very closely following the cost of oil." These high costs also drive poverty and hunger, sparking recent outbreaks of violence and political unrest in developing nations where "even a relatively small rise in the price of food can mean that the survival of millions is suddenly threatened" (Kitze). In 2011, *Reuters* released stories depicting violent riots in twenty-six countries (Vidal "High Food Prices") including Cameroon, Haiti, Egypt, Mozambique, Tunisia and Algeria—all linked to soaring food prices ("World Food Prices"). "When people are hungry, stable and peaceful communities can become stunningly violent pretty quickly," observed Chris Kitze in a January 2011 article published in *The New Market Oracle*. In Algeria, for example, angry protestors gathered in the streets and "began throwing fire bombs at authorities" as police attempted to corral demonstrators (Kitze). "Several protestors even set themselves on fire," reported Kitze, in an act of resistance against the economic conditions. The police response has been equally violent; hundreds of protestors have been reported killed, leaving once peaceful city streets looking more like a war zone. During this period of intense political unrest, oil prices averaged $115 a barrel ("Eco-Farming" *The Guardian)*.

III. MULTICULTURALISM

According to the current standard definition, multiculturalism is widely accepted as the advocacy of extending equitable status without promoting any specific ethnic, religious, and/or cultural community values as central. For the context of this paper, multiculturalism exists when everyone who shares the food system has an opportunity to shape it. Working from the assumption that diversity strengthens agricultural systems—multiculturalism of the poverty food justice movement diversifies human communities, increasing resilience and supporting our capacity to endure. Multiculturalism as a pathway to sustainability is about reducing the marginalization of people—by creating an empowered framework to support both policy and structural shifts. Reducing marginalization is a critical precursor to supporting our capacity to endure. The food justice movement aims to reshape the more politicized notion of food security by confronting the dynamics of racism, economic and social marginalization. Marginalized thinking damages our whole society by impacting the landscape of our current food system reducing access and affordability of healthy food. Extensive published research speaks to the importance of increasing access and affordability of culturally appropriate food (Agyeman & Evans, 2004; Alkon & Norgaard, 2009; Dowler, 2008; Jacobson, 2007). It is at the intersection of these sectors that communities find greater resiliency – increasing our capacity to endure. Yet, bridging the gap between the food justice movement and the under-served populations currently being excluded has proven to be a challenge. "We live so easily in a society in which other people don't have a chance," says Dr. David Hilfiker ("Seeing Poverty").

Reconciling Marginalization

Reconciliation of marginalization, through the pursuit of multiculturalism, addresses sustainability (as a living practice) and engages the greatest number of people. This solution

generates policy change and confronts identified gaps in the food justice model. How do we reconcile, in an organic way, issues that have historically proved highly invidious, to create a paradigm of multiculturalism that fosters alliances and partnerships—while avoiding a feeling of forced diversity that ignores issues specific to poverty populations?

In "Whiteness, Space and Alternative Food Practice," Rachael Slocum suggests that the cultural and economic segregation that exists in the alternative food system fosters a feeling of collective sadness because people are not engaging with each other outside of their cultural sameness. Slocum's work speaks to Julie Guthman's assumptions by highlighting the limitations of pursuing the formation of a model that is, by the nature of the racialized geographies, a negative association. In "Breaking the Food Chains," scholars Allison Alkon and Kari Norgaard suggest that the concept of food justice may serve as a bridge between sustainable agriculture and environmental justice while appealing to low-income people and people of color who lack access to healthy affordable food. This bridge would create the foundation for the formation of new alliances, galvanizing a more proactive, solution-driven approach to address common agendas and concerns.

Alkon and McCullen's research found the same lack of racial diversity both in vendors and visitors in the farmer's markets that they studied. However, their findings represented, in some collectives, a desire to re-imagine the politics of food through explicitly anti-racist and anti-classist actions that suggested a trend in alternative food that holds the potential to become more inclusive. Hailed as the new "edible town square," farmer's markets are viewed as public venues where acts of solidarity and anti-racist challenges to white cultural dominance illustrate the potential to create transformative spaces that are inclusive, diverse, and equality based. For example, in one California farmer's market, they observed vendors displaying photos inside their

stalls depicting their "farm family"—including the migrant farmhands who contributed to the production cycle. In "The Green Movement Turns Black and Brown," activists Majora Carter, Dayo Olopade and Kai Wright, speak out about the lack of diversity in the environmental and food justice movements while offering suggestions for calling minority communities into action through culturally relevant and historically significant ways. Each activist acknowledges that even though, as humans, we are all part of one ecosystem—institutionalized racism that exists in public policy and cultural tensions block the formation of coalitions and partnerships between cultural and economic groups.

Lived Diversity

In an article published in *The Guardian*, Kenan Malik acknowledges the value of lived diversity while challenging the common interpretation of multiculturalism as a political process. Malik distinguishes that for some, "multiculturalism expresses the essence of modern, liberal society, transformed by mass immigration…is less insular, more vibrant and cosmopolitan." In this interpretation, society rich with multiculturalism is most certainly positive. Cities like Trenton, New Jersey, and Asheville, North Carolina, are bringing the diversity conversation to communities through "Stand Against Racism" events sponsored by local YWCA chapters. "Stand," which began in 2007, is a series of free community events designed to highlight cultural diversity and the continuing struggle against racism. The 2011 Asheville event registered 157 groups—more than any other city in the nation—made up of small businesses, nonprofits, activist groups, local government, the University of North Carolina-Asheville, the Asheville Chamber of Commerce and Mission Hospitals (Forbes). In an effort to bring the issue of diversity to the table, groups hosted community potlucks, educational forums and fairs. These events highlight ways that structural inequity contributes to poverty in under-served populations.

However, illumination of the issue only exists for those who participate in the conversation and possess the cultural codes necessary to interpret the intended meaning.

Managed Diversity

While some collectives celebrate the diversity conversation, others experience multiculturalism as something very different. According to Malik, "it describes a set of policies—the aim of which is to manage diversity by parceling people into neat ethnic boxes, defining individual needs and rights by virtue of the boxes into which people are externally assigned—and using those boxes to shape public policy." This, Malik argues, creates an opportunity for the external defining body to police the boundaries of those boxes and the rules that govern them (whether physical, cultural, or imaginative) while placing blame on minorities to hide structural injustices and marginalization.

As a result, says Malik, when multiculturalism influences the political process, no matter how just the intentions behind policy formation, "it can transform conflicts into a form that is irresolvable." Thus, the policies that were intended to serve as a means of "empowering communities and giving them a voice" in turn leave them feeling misrepresented and disenfranchised (Malik). For example, federal urban renewal initiatives during 1950-70 that created subsidized housing also led to the formation of ghettos (after the introduction of federal interstate highway programs, integration initiatives, etc). Over a fifteen year period, 1950-65, neighborhoods were decimated leading to urban "dead zones" of poverty, crime and violence ("Seeing Poverty"). Dr. David Hilfiker says, as a result, affluent whites began to associate ghettos as being "originally the fault of some inherent flaw that existed in people of color" rather than structural forces beyond the control of poverty populations. According to Malik, that is the biggest indictment of the concept of multiculturalism and all its interpretations—instead of

building tolerance through diversity, it has "helped turn racism into another form of cultural identity" shaped by yet another box. Examples of this disparity continue to exist in the racialized geographies of the food system. On average "a quarter of the residents in U.S. metropolitan areas live below the poverty line and that rate is higher for African Americans and Hispanics" ("Seeing Poverty"). Historically, Federal programs designed to lift Americans out of poverty were not open to the disadvantaged and the poor (the majority of whom consisted of people of color). Our current food system applies similar pressure due to geographic, economic and social factors that decrease access and affordability of healthy culturally appropriate food.

Racialized Geographies and Food Deserts

In "Breaking the Food Chains," Alkon and Norgaard unravel the complexity of the institutionalized nature of being denied the sustenance necessary for life based on racial identity. In essence, institutionalized racism affects the structure and geography of the food system creating barriers for equitable access. In addition to poverty, Alkon and Norgaard's research examines how contemporary racialized geographies shape the physical landscapes of communities preventing access to quality food while confining consumptive choices to processed, fast and commodity foods (290). This definition describes the criteria designating an area as a "food desert." Alkon and Norgaard's work corroborates the findings of other scholars, such as Elizabeth Dowler's data from her United Kingdom study, whose research has substantiated a positive relationship between the existence of grocery stores and income and a negative one between grocery stores and communities of low income (Dowler; "Food Crisis;" "The Green Movement"). A 2009 report released by the USDA found that urban "food deserts" with limited food access were characterized by higher levels of racial segregation and greater income inequality than transportation as a defining issue.

In "Food and Health Inequalities," Dowler examines the relationship between socio-economic status, diet and health in relation to inequalities and sustainable consumption in the United Kingdom. Her work presents findings that low-income populations are less rooted geographically—often due to lack of home ownership and unreliable income—and demonstrate less interest in participating in an alternative food practice due to their transient nature. Food activists have responded by establishing alternatives to the industrialized food system by re-introducing farmer's markets and local produce stands into communities (Alkon and McCullen; Alkon and Norgaard; Dowler; *Fresh*; Johnston; Lyson; Sheriff) and have the flexibility to place them in geographic areas that are within walking distance to poverty areas. To maintain multicultural inclusion, food activists are taking advantage of spaces frequented by under-served populations such as local health department parking lots to increase access. One example is the "Mini-Mobile Farmer's Market" established by the Wayne Food Initiative (WFI) in North Carolina. In partnership with the city of Goldsboro, the WFI has established a farmer's market with easy walking access to both the county Health Department and the Department of Social Services. The project was made possible through partnerships with local organizations, business, institutions and individuals who invested in developing a sustainable local foods initiative. As highlighted by Guthman's research, poverty populations respond to these types of initiatives only minimally citing their disregard for the alternative food movement stated simply, "it is *alternative*—we want a Safeway (or other established chain) in our neighborhood." Yet, from a sustainability perspective, corporate food chains represent a reinforcement of the current food market that is highly vulnerable to environmental, economic and social changes. Therefore, access to the food supply through a big-box chain store will not increase access or affordability because by nature, these corporate institutions are heavily reliant on fossil fuels and energy

intensive agricultural practices to maintain supply chains. This is an example of how marginalized thinking also damages our ecosystem reducing our capacity to endure environmental, social, and economic challenges.

As one group makes advances toward supporting diversity, another collective experiences increasing challenges and falls deeper into hunger. For example, in "Whiteness, Space and Alternative Food Practice," Rachael Slocum challenges what she terms the "romanticism of community" by highlighting the limitations that contribute to cultural misunderstanding, distrust and conflict. After hurricanes Katrina and Rita in 2005, Slocum observed an essay posted on a community food list-serve that suggested "high gas prices in the wake of the hurricanes could be a boon for locally grown food." This was, indeed, a logical assumption—although filtered through a privileged lens. The frame of the argument neglected to acknowledge the gravity of suffering and those whose post-hurricane experience consisted of "people killing each other over warm soda and potato chips" (Slocum "Whiteness"). This example demonstrates marginalized thinking and establishes why the divide between well-intentioned food activists and marginalized populations continues to exist despite creative efforts toward solidarity.

Where then, does the bridge for multiculturalism as a pathway to sustainability exist? Achieving productive, diverse and equitable communities working together toward a common goal is challenging as illustrated by the multiple examples presented in this investigation. Aside from being united by our common humanity—environmental, social and economic marginalization creates equal potential for division and conflict. This investigation revealed that the foundation for an empowered and equitable approach to inclusion begins at the community

level. Community organization, as a precursor to achieving a multicultural framework, is the first step toward creating a roadmap for a sustainable future.

IV. CONCLUSIONS—BRINGING FOOD HOME

As I pursued my investigation of multiculturalism of the poverty food justice system, a paradigm feeling more like "forced diversity" than a natural process emerged. A layer of connection was missing from my research. As a means of gaining deeper understanding of the elements that drew people together, I examined other movements where diversity and multiculturalism in its purest form were a source of strength rather than friction. Drawing inspiration from the civil rights movement, specifically the Freedom Rides of 1961, I began to question whether sameness could be an opportunity rather than a limitation. Not "sameness" in the sense of racial identity, income, class, political affiliation or other divisive social construct; but, a sameness of spirit, intention and shared experience.

Multiculturalism as a Pathway to Sustainability

In *Freedom Riders: 1961 and the Struggle for Racial Justice*, Raymond Arsenault narrates an account of "collective engagement and empowerment" through direct action against injustice braided together by a diverse group of activists (8). The collective was made up of "black and white, young and old, men and women…some college students who had just left home…others dedicated veterans of the old left…ministers of all denominations and rabbis" (xii). Images of the collective standing together in the face of "hostility, fear and violence" to challenge segregation "jolted the consciousness of America," says Arsenault. Journalists and photographers were often attacked as brutally as the activists themselves, which resulted in shocking headlines published around the world. The diversity represented in the activist population demonstrated a true representation of multiculturalism united in such a way as to

create political traction. Public outrage pressured the previously uncooperative federal government, who were backed by powerful regional and national institutions and their traditions, to challenge Jim Crow[11] in all its forms and "galvanized the movement for racial justice across the nation" (9).

Community as a Building Block to Multiculturalism

Drawing inspiration from the Civil Rights movement, consider the potential for modern-day social change grown from the natural formation of a collective energized by the latitude to self-navigate, coalesce organically, with the autonomy to identify both challenges and solutions. It is through community formation that a more diverse marketplace is created—one with the political traction needed to challenge the cultural dominance that reinforces the marginalization that exists in the politics of food while providing an equitable platform to address other sustainability issues. For the purposes of this paper, community is defined in the following two ways: geographic community is a group of people with a common characteristic or condition living together within the larger society; and a community of intention is defined as an interacting body of persons unified around a common interest(s), such as environmental, social, or economic concerns, but who may be geographically spread apart. At this stage of analysis, I discovered that the natural formation of community, in whatever form the collective takes (in some cases may indeed be diverse and in others it may not), was a stronger bond than any artificially imposed collective. Therefore, it is my conclusion that community must exist as a subset of multiculturalism.

In the wake of recent natural disasters whose challenges parallel those facing the food crisis, Dr. Daniel Aldrich, a political scientist at Purdue University, found that community was

[11] Jim Crow refers to the "segregation laws and customs which came into being after Reconstruction ended in 1877 and continued to the mid-1960's" (*Jim Crow Museum*).

the most powerful agent to address the immediate needs of individuals, build resiliency and increase our capacity to endure. Through his research into natural disasters, Dr Aldrich cited "neighbors and community" as being more important in survival over rescue crews, government aid, and emergency response assistance ("The Key to Disaster Survival"). For example, after the March 2011 earthquake in Japan, Dr. Aldrich found that "fire trucks and ambulances didn't save the most lives—it was neighbors who knew which part of homes held bedrooms; thus, knowing where to dig." The earthquake struck in the early morning hours. His published research demonstrates the important role that neighbors played. By digging in the correct vicinity, "victims were pulled from the rubble early enough to survive," reported Dr. Aldrich. Neighbors also knew who suffered from what medical condition or disability and could alert medical responders about who needed specific attention. "When governments step in to help after a disaster, they are usually focused on infrastructure" ("The Key to Disaster Survival"). Neighbors are focused on survival.

Hurricane Katrina brought horrific images to quiet suburban living rooms across the nation. Along with the reality of subhuman conditions and squalor, heroic feats of neighbors rescuing neighbors from flooded roof tops, sharing what food and water supplies could be obtained, and neighborhoods working together to clear debris ("Seeing Poverty") renewed faith in the spirit of community. After the January 2010 earthquake in Haiti, the country drew on their history of sharing and cooperation to alleviate suffering and starvation on a national scale (Bell). In the weeks following the earthquake, solidarity was a critical part of the survival and recovery effort—community organizations, peasant farmers, churches, and townspeople all came together to house and feed hundreds of thousands of homeless and displaced people. In Yazoo City, Mississippi, Todd Hart found himself miraculously on dry ground during what has been named

"The Great Flood of 2011." With help from his father and a handful of neighbors, the farming community constructed an "archipelago of private levees" in a matter of days that saved Hart's 65-year old family farm (Robertson). What these case studies demonstrate is that "communities are not the sum of their roads, schools and malls…they are the sum of their relationships" ("The Key to Disaster Survival").

The building blocks to multiculturalism as a pathway to sustainability are founded in community. Extending equitable status so that everyone who shares the food system has an opportunity to shape it cannot exist successfully without just structures—and the political traction needed to initiate structural change comes from community organization. Community formation creates an inclusive openness for participation (the first tier) in which individuals can organize organically. One example is the Growing Power-Chicago[12] food justice initiatives that began in impoverished communities across the city. Chicago Urban Lights Farm, the first Growing Power-Chicago program, began in 2003 in the former Cabrini-Green neighborhood (a community infamous among failed urban renewal circles). In cooperation with the Fourth Presbyterian Church, Growing Power facilitated the growth of a community garden on a former abandoned basketball court. Community members labored along with food activists to hand-dig the cement lot and turn it over into a thriving community garden. "The overarching goal of the community garden was to help facilitate a diverse community and ensure that neighborhood residents not be cast aside" in the urban renewal process of transformation from subsidized housing to mixed-income housing (*Growing Power)*. Other projects across the city of Chicago reinforce the community approach to poverty food justice with multicultural threads. Growing Power-Chicago's 7-acre Iron Street Farm, established in 2010 in the poverty ridden Bridgeport

[12] Growing Power is a "national nonprofit organization and land trust supporting people from diverse backgrounds, and the environments in which they live, by helping to provide equal access to healthy, high-quality, safe and affordable food for people in all communities" (*Growing Power*).

neighborhood, represents the vision of "growing healthy soil and healthy communities" using closed loop ecological practices in order to produce local, healthy, and sustainable food year-round for Chicago residents.

Empowerment and Collective Action

If multiculturalism as a pathway to sustainability is about reducing the marginalization of people, then diversity is about empowerment and collective action. Through communities of intention—the next tier of organization—marginalized populations can transform society by changing institutions and policies by working in partnership with others, becoming the bridge to support a sustainable future. An ideal case study illustrating this example is the Chicago Food Policy Advisory Council,[13] a network of diverse communities across the metropolitan Chicago area working in concert to increase access, affordability and education around safe and healthy food. This network of advocates has been able to work in collaboration with the city of Chicago to drive policies supporting sustainable urban agriculture across the city. Impoverished neighborhoods, with the support of Growing Power.org, were some of the initial members of the network. Most recently, the Chicago Food Policy Council has succeeded in achieving the Urban Agricultural ordinance passed by the Chicago City Council on September 8, 2011. As a result, the ordinance expanded the size limit on community gardens to 25,000 square feet, allows urban farms to practice hydro and aquaponics on site as a step toward creating a more sustainable closed-loop process, allows for up to five beehives per urban farm, and allows for incidental sales at community gardens and farm stands increasing income potential for urban farmers through direct sales. In celebration of this policy victory, the Chicago Food Policy Council has

[13] The Chicago Food Policy Advisory Council is a "network of organizations and individuals sharing their experiences and concerns about food security in the Chicago region in order to influence policy makers to make informed decisions motivated by the goals of community food security with an emphasis on culturally appropriate, nutritionally sound, and affordable food that is grown through environmentally sustainable practices" (*The Chicago Food)*.

begun a Compost Working Group in partnership with agricultural stakeholders and local officials to lobby for educated change in Illinois laws on composting. Growing Power-Chicago's Iron Street Farm hosted the first set of talks at their southwest Chicago farm—a neighborhood known citywide for poverty and gang violence. Through the Growing Power-Chicago initiatives, this farm is transforming the community into a living neighborhood again by creating opportunities for members to come together around the issue of food justice and opening the door to conversations about other pressing issues.

Multiculturalism that creates alliances and partnerships fosters greater resiliency—not in a way that ignores issues specific to poverty populations—but by creating a platform that encourages the latitude to self-define and self-navigate problems and solutions. As group formation assumes a more empowered posture through solidarity, opportunities for multiculturalism of community food is not only possible, but has demonstrated success around the globe. Through the lens of the three pillars of sustainability, I will illustrate that when community exists, both freedom and security can exist as well. Ultimately, this investigation revealed that justice[14] is created when those who can organize and work to change the structure make the changes for those who can't—so that a just and equitable food system becomes what is not what is imagined. There will always be a percentage of the population that is unreachable; however, changing the structure of the food system creates access and affordability possibilities that previously did not exist.

a. CONNECTING THE DOTS—Edible Urbanism

By assuming a posture of leadership over their own solutions, local people are re-imagining their collective relationship to food by addressing disparities within the food system, advancing self-reliance and social justice. Dr. Graeme Sherriff concluded, through his

[14] Justice, concluded by this investigation, refers to equity.

evaluative research on the Bentley Bulk local food initiative in the United Kingdom, food projects focused on diverse membership in the decision making process reduce the pressures on inequitable and flawed social policies by empowering communities to reclaim their democratic power through establishing and maintaining a local food supply. Sherriff cites a combination of creativity and risk-taking at the local level as the driver of informed change. In *Civic Agriculture*, Thomas Lyson defines the rebirth of locally based agriculture and food production as civic agriculture, which relies on the creativity, innovation and ingenuity of human beings which cannot be industrialized. In *Public Produce*, Darrin Nordahl's work compliments Lyson's civic agriculture by creating a revolutionary vision for a kind of "edible urbanism" in which urban renewal initiatives transform barren city spaces into living, growing, edible spaces.

b. MULTICULTURALISM and EDIBLE URBANISM—a Roadmap to Sustainability

Regardless of what is **agreed** or **disagreed** upon on the national or international level regarding sustainability, food security, or any other challenge facing our future—the delivery end falls on local government ("The New Leaders"). Working with technology and practices already in use—from remote villages in developing nations to bustling European metropolitan hubs—the tools to create and adapt a multicultural roadmap to sustainability, defined as utilizing regional resources to affect global change, already exist. Shifting our relationship with the food system is a personal action toward building resiliency and sustainability. Local leadership becomes the bridge between idea and action—creating a multicultural roadmap to an equitable and sustainable future.

Cities—Demonstrating the Roadmap

Cities have the capacity to act as a collective body, representing the principals of multiculturalism as outlined in this investigation, to improve the quality of life for their residents

while impacting global change simply by reinventing their spaces. One case study that has proven successful in their approach to end hunger (driven by community efforts) is the city of Belo Horizonte, Brazil. By recruiting local farmers, the city "searched for solutions to hunger" under the premise that the status of a citizen surpasses that of consumer (Lappé "The City"). In her article, "The City that Ended Hunger," Frances Moore Lappé writes that "hunger is not caused by a scarcity of food but a scarcity of democracy." Juxtaposed against statistics in the United States where on average one in ten citizens is turning to Electronic Benefit Assistance (formerly known as food stamps), Belo Horizonte is making incredible strides to end hunger in their community through the implementation of a new food system. In a city of 2.5 million people, the Belo Horizonte, Brazil, has woven together the interests of farmers and consumers to create a model declaring "food as a human right" to every citizen (Lappé "The City"). From multiple *Restaurante Popular*, translated as the "People's Restaurant," that serve 12,000+ people daily using mostly locally grown food for less than fifty cents a meal to extensive community and school gardens that include nutrition classes, Belo Horizonte demonstrates that shifting the frame to "food as a right" creates a market that redefines the "free" in free market as meaning "freedom of all to participate" (Lappé "The City"). Lappé cites the cost of the new food revolution in Belo Horizonte as being $10 million annually which comes out to be less than two percent of the city budget. At a time when half the world's population already lives in urban areas, which is anticipated to increase to seventy percent by the year 2050, cities will be faced with an opportunity to shift agendas toward living democracy. These acts don't fall under the political realm—but become an act of reclamation—of our own power and ability to shift unjust structures toward a society that fosters life in environmental, social and economic systems.

b-1. ENVIRONMENTAL—Taste the Future

Environmental, health, and economic problems driven by consumer eating habits can be addressed through the development of an alternative food system created on a community level and catalyzed by multiculturalism. Exactly what does an alternative food system mean? "An alternative food system is not a return to your grandfather's farm—it is more than local and more than organic. It is a marriage of cutting-edge biotechnology with indigenous wisdom," says Joel Salatin, a Virginia Sustainable Farmer (*Fresh*). Alternative food systems work within a local framework called a foodshed. Building a foodshed, a community-based food system that supports local, organic and sustainable food production (with an emphasis on access, affordability, and education) is a promising step toward supporting our capacity to endure. According to Dr. John Ikerd, Agricultural Economist, "alternative food systems work because they are more dependent on the imagination and creativity of people" to problem solve, expand and grow to meet consumer needs while developing an equitable and sustainable food system that means good prices for farmers, works in communion with the environment using nature as a template, supports biodiversity and the health of our bodies while strengthening communities economically.

Researchers at the University of Chicago have "employed geospatial analysis to quantify resource potential" for establishing a foodshed in the Chicago metropolitan area, increasing regional food production, and assessing impacts of that production on human health and the environment (Schuble, et al). Their *Feeding the City* project, published in fall of 2011, is a unique assessment because it examines "energy use and greenhouse gases associated with small-scale sustainable agriculture on both rural and urban farms and the potential for foodshed development" utilizing the upper Mississippi watershed. The global food system could be

viewed as one enormous foodshed web. Proponents of a sustainability driven alternative food system suggest breaking foodsheds down to the "neighborhood level" as a means of improving quality of life within communities while addressing environmental liabilities within the current food structure. Another major US city has already established a precedent for change on a community by community basis. Former Mayor of Seattle, Greg Nickels, initiated a "climate neutral" city-wide campaign for the Seattle by (1) setting municipal targets for carbon reduction; then (2) literally went door to door to solicit community participation in those initiatives (*Americana*). His "door to door" campaign was designed to educate the public that addressing environmental concerns wouldn't hurt the economic livelihood of their city but would improve health. Localizing our relationship with food can also reset our health barometer while providing economic opportunities for neighbors.

Researchers working on the Chicago study cite the necessity of "emulating the environmental and economic conditions" of the region being mapped as accurately as possible to "inform regional planning and lead to environmental mitigation strategies while developing a more robust food system" (Schuble et al). After collecting data for a two-year period, the University of Chicago findings were promising. The foodshed area needed to feed the 3 million+ city inhabitants wasn't large—and mapped out to be approximately an 80-mile buffer around Chicago. The data collection input into the model only considered cultivated land already in use for agriculture eliminating the conservative argument for "plowing under houses for farmland and food production" (Schuble et al). The foodshed modeling system used by the University of Chicago has currently been extended to twelve states suggesting a broader more diverse interest in foodshed development.

Agroecology

As we move toward a post-carbon world, by re-harmonizing farming and forestry practices with nature's carbon cycle, we can increase food production while addressing the problem of climate change. The "Farming Systems Trials Study" conducted by Robert Rodale and the Rodale Institute, beginning in 1981, demonstrated that organic crops are more productive over time than chemically grown crops because organic soil is more biologically active and much more absorbent. The study goes on to report that "organic crops can produce more extensive root systems and benefit from the presence of beneficial fungi, which enhance moisture and nutrient uptake." Therefore, organic crop production is more resilient during wetter and drier years (increasing capacity to endure against climate challenges). Regenerative organic agricultural practices can be a powerful tool in the movement to mitigate climate change. Living among the healthy root systems—tiny fungal threads, called mycorrhizal fungi, capture and store carbon at an astoundingly high rate. Mycorrhizal fungi, however, cannot live in chemically saturated soil found in traditional farming.

In March 2011, the United Nations released a report citing that a shift to eco-farming, or agroecology, could double food production in ten years which will go a long way to addressing the food needs of the projected 9 billion global inhabitants by 2050 ("Eco-Farming" United Nations). At present, "approximately one billion people globally go to bed hungry every night" (Kitze). According to the UN news release, agroecology applies "ecological science to the design of agricultural systems" to enhance soil productivity while protecting crops against pests by "relying on the natural environment" such as beneficial trees, plants, animals and insects. Olivier De Schutter, UN Special Rapporteur on the right to food and author of the report, corroborated the Rodale findings by examining a number of case studies in developing nations,

such as Africa, to confirm that building a healthy ecosystem "supports greater agricultural output—outperforming the use of chemically intensive methods in unfavorable growing environments—often where the hungry live." In addition to increasing food output, agroecology as an agricultural practice also reduces the cost of food production on poor farmers in developing nations by eliminating the economic drain of expensive inputs such as fertilizer, herbicide and pesticide. Agroecology projects in twenty African countries resulted in a "doubling of crop yields within three to ten years" ("Eco-Farming" *The Guardian*). "To date, agroecological projects have shown an average crop yield **increase** of eighty perecent in fifty-seven developing countries," says Schutter. The findings are very suggestive that increases in food production might be even higher in developed countries with greater resources, infrastructure and a means of communication for information sharing.

To alleviate wide spread poverty in nations such as Indonesia, changes in public policy are needed. Momentum is building for global action. Leaders of developing countries have recognized the need to invest in their own food security and they are utilizing a multicultural approach to get there. Private companies will not invest "time and money in practices that cannot be rewarded by patents and which don't open markets for chemical products or genetically modified seed patents" ("Eco-Farming"), so communities are taking the lead. At the 2009 L'Aquila G8 Summit, donors collectively committed $20 billion to agricultural development and a new approach to global food security (United States Department of State "Global Food Security"). Individual demand for supply change is creating wide-spread policy shift. For example, Gaviotas, a social experiment in the barren savannah lands of eastern Colombia, provides one model (Nicholls). The visionary community has created a thriving carbon-neutral city complete with hospital, solar water treatment plant, and wind turbines. After

planting trees and implementing organic sustainable farming practices, they are experiencing changing local rainfall cycles and restoring ancient rainforest—all in what was an almost uninhabitable landscape.

Reconnecting with food is an essential strategy in addressing climate change. When we engage in the most basic exchange with the planet (growing of food) the criticality of the other earth resources becomes abundantly clear. Successful food production requires available and consistent water, temperature and biodiversity. In "Living with the Land," Wendell Berry said, "Soil is not usually lost in slabs or heaps of magnificent tonnage. It is lost a little at a time over millions of acres by careless acts of millions of people. It cannot be solved by heroic feats of gigantic technology—but only by millions of small acts and restraints." "We won't solve hunger and stop climate change with industrial farming on large plantations," says Schutter, "the solution lies in supporting small-scale farmers by building their knowledge-base and experimentation" ("Eco-Farming *The Guardian*) of eco-farming practices that build healthy land to support resilient communities.

b-2. SOCIAL—Living Local for a Sustainable World

Dr. David Uzzell, an Environmental Psychologist, suggests beginning a call to action by establishing a connection to place—where we live, make our homes, and raise our families—and examining the impacts of climate change on the environment through those lenses ("One Planet"). His research at the University of Surrey suggests that individuals are more likely to move toward action when they develop an understanding that the impacts of climate change are immediate, personal, concrete and local. Through acts of living democracy, individuals not governments are driving the solutions. According to Dr. Stephen Peake, Senior Lecturer on Climate Change and Leadership at the Open University in the United Kingdom:

> Democracy is and is not a problem—It is both a problem and a solution. It is a problem when a population's fears of being regulated means that we don't make any progress whatsoever. Some of the things we need to do around changing patterns of consumption, expectations, lifestyle and the notion of well being cannot be regulated. There has to be a change in mindset at the level of the individual—the level of their attitudes, their tastes and their behavior about what they think spending their money, their carbon, and their time on is appropriate ("The New Leaders").

As states struggle to recover from environmental and economic shock, global food markets fall in and out of crisis, and while every major city in the United States is experiencing some form of protest against human marginalization and economic injustice—living democracy is at work building sustainable futures in support of our capacity to endure. "With the population of the world's cities expected to grow by over three billion between now and 2050" ("One Planet"), one solution is to reconnect city dwellers with food through sustainable urban agriculture. The Transition Town initiatives and biophilic[15] design serve as a model for sustainable living. The fusion of these approaches (combined with available technology and sustainability initiatives currently in practice around the globe) creates a new vision for living local utilizing regional resources to affect global change.

Transition Towns

Amid the prophetic bleakness that commands daily front page headlines, solution based action is being cultivated and replicated around the world. The drive to achieve this seemingly insurmountable task is springing forth from the very heart of communities themselves—the people. Instead of waiting for the scientific community to invent, industry to produce or

[15] The term biophilia refers to our (human beings) natural affinity for life and living things.

government to acquire the technological “magic bullet” to save the future, the tools for affordable sustainable living are accessible right now. Eco villages, utilizing a multiculturalist approach, and inspired living communities have “sprung up by the hundreds in more than a dozen countries” and are “designed to withstand severe energy, climate and economic shocks” while fostering a better quality of life in the process (Inman).

One such vision is the Transition Town Movement. Although the foundation for Transition Towns has roots in the United Kingdom, the movement is being hailed in the United States as an approach to diverse community empowerment, leading to large-scale multiculturalism, and change by raising awareness about sustainable living and building local ecological resilience. A transition town embodies a return to indigenous wisdom while utilizing the latest in technological advances to ensure the capacity to endure. Transition US, our national hub, has a vision "that every community in the United States will engage its collective creativity to unleash an extraordinary and historic transition to a future beyond fossil fuels; a future that is more vibrant, abundant, resilient and ripe with biodiversity; one that is ultimately preferable to the present.” They accomplish this through their “Transition Strategic Action Goals” that operate on the principals of multiculturalism (Transition United States)—

1. To raise awareness of the need to work together to build resilience in the face of fossil fuel depletion, climate change and economic crises.
2. To support the emergence and growth of Transition Initiatives and leaders in all regions of the United States.
3. To mirror the diversity of the United States in Transition Initiatives by supporting Initiatives' efforts to include all major cultural and demographic segments of their local communities.

4. To support the continued development and delivery of high quality education, training and consulting in support of the advancement of the Transition Movement in the United States.
5. To achieve financial sustainability for Transition Initiatives in the United States.

The Transition movement differentiates itself from other environmental initiatives and organizations by proactively transitioning communities away from fossil fuels and mitigating sustainability challenges through community visioned, community designed and community implemented plans. Self-determination as a parameter is a critical component in creating an empowerment model. The term community in this context includes all the key stakeholders—local people, local institutions, local agencies and the local government/municipalities. They succeed by "regeneratively using their local assets, innovating, networking, collaborating, replicating proven strategies, and respecting the deep patterns of nature and diverse cultures" in place of unsustainable consumptive behaviors (Transition United States). (See Figure 2)

At the core, Transition Towns seek to raise community awareness utilizing a multicultural approach about sustainable living and to build local ecological resilience—which is echoed in individual Town initiatives. One example is reducing the reliance on long supply chains that are dependent on fossil fuels for delivery of essential items. Food is a key area for driving an immediate and concrete shift. Through trainings and education campaigns, Transition Town leaders encourage participants to focus on "Food feet, not food miles"—the distance food travels from production to consumption. In the United Kingdom, Transition Montpelier has combined urban agriculture with the Food Feet campaign by growing food in allotments—city owned garden plots that people can sign up to use (Transition United States). The planters are

located along city streets creating both edible landscaping for the city and walking distance access for urban dwelling gardeners. Participants receive step by step instructions on sustainable methods that reduce water demands and use of petroleum based products. This process has enhanced community relationships through the teaching and sharing process. Neighbors have identified other skill sets worth sharing and reciprocating and opened discussions about overall resilience strategies. Communities are utilizing elder wisdom to help restore lost skill-sets such as calling on older generations to teach canning and food preservation techniques to the young. Food Feet (as opposed to food miles) campaigns being employed by other Transition Towns include starting community gardens, providing information and locations for participating in Community Supported Agriculture (CSA's), handing out free maps for local farmer's markets, and hosting "seed swap" parties.

Local businesses, using alternative forms of payment, play a key role in promoting the Food Feet campaign—while increasing accessibility through alternatives to monetary compensation. For example, Asheville, North Carolina's Sow True Seed Company sponsored a "Community Exchange Program" in 2011 by inviting "Guests" to provide assistance with seed packing, inventory and seed germination in exchange for four packets of seed per hour of work given. Sow True's commitment to supporting local biodiversity and resilience is evidenced by only selling open pollinated (non-hybrid) and untreated seed. Consumers can choose from "heirloom varieties along with traditional favorites of southern Appalachia and the greater south" (Sow True). They also provide education to consumers about successful seed saving techniques that encourages personal "seed banks" to replant, replenish, and repackage for sharing with others. This process promotes local biodiversity without the political tension of "seed patents" and "intellectual property" which has become a global $15 billion industry—primarily controlled

by a few large corporations (Stein). In addition, by growing regionally local varieties that have evolved naturally to the growing conditions of the area, the grower creates a foundation ripe for sustainable agricultural methods—absent of petroleum based fertilizer, herbicides and pesticides.

Other educational campaigns include edible schoolyards. These interdisciplinary programs integrate hands-on learning about food systems with practical cooking skills and healthy eating. Students, from communities who would not typically have access to the expansive food-system knowledge, gain experience about the ecosystems that support growing food—from pollinators to decomposers. These programs often include an environmental component to foster discussions about how our changing climate, development, soil loss, and population growth affect food security locally as well as globally. Initiating sustainable and organic gardens in schools around the nation is a significant step toward beginning the conversation about climate impacts, developing local solutions and supporting community sustainability. By participating in educational sustainable agriculture projects, tomorrow's leaders experience the impacts of climate on food crops and are challenged to develop sustainable solutions specific to their community and growing area. Community gardens open the conversation about identifying local problems and addressing the solutions.

Biophilic Urban Design

As communities transform, so do the landscapes that define them. By incorporating biophilic design into inspired urban renewal initiatives, nature becomes "second nature," which is critical to restoring our connection to ecological diversity fostering a stronger commitment to sustainable living. The term biophilia was introduced by Edward O. Wilson, a Harvard myrmecologist and conservationist, and popularized in his book, *Biophilia and the Conservation Ethic*, published in 1984. Wilson argued that our natural affinity for life–biophilia–is the very

essence of our humanity and binds us to all other living things. The biophilia hypothesis applies to urban design in that Wilson suggested that we need daily contact with nature to be healthy, productive individuals, partly because we have co-evolved with nature.

Since about 1960, urban planning has focused on cars and single buildings—which made cities less livable and ultimately unsustainable for people ("Creating Livable Cities"). Growth became less about life and more about development. Widening traffic lanes took precedent over sidewalks and green spaces. Multi-story garages were erected in the place of multi-residential dwellings. As buildings and infrastructure began to age, some cities have seized the opportunity to renew their spaces with elements of biophilic urban design—creating a new vision for the future by inviting life back in amid the concrete and the steel. These model communities have successfully pioneered and implemented urban renewal initiatives that are more adaptive to challenges facing our future while addressing the relationship between food, energy, water and biodiversity.

A classic example can be found in Patrick Blanc's vertical garden system, Le Mur Vegatal, in Paris. (See Figure 3) This design allows "both plants and buildings to live in harmony with one another"—and can be implemented indoors or out, as well as adapted for any climate or environment ("Patrick Blanc's"). The three-part system consists of a PVC layer, felt, and metal frame, providing a soil-free self-supporting system light enough to be hung on a wall, and even suspended in the air. The natural benefits of a vertical garden are improved air quality, lower energy consumption, providing a natural shield between weather and inhabitants, and adding a living quality to an otherwise impermeable and unfeeling facade. The vertical garden concept can be modified to grow certain food crops utilizing vertical space that is often abundant in urban settings where open land is not.

b-3. ECONOMICS—Economies for Life

Americans spend approximately $600 billion per year on food (Meter). In the current industrialized food system, farmers receive only ten cents out of every one of those food dollars—the rest going to support processing, packaging and distribution ("Eat Local"). The Maine Organic Farmers Association conducted a study and found that if American consumers shifted a mere one percent of their purchasing power to local sources—farmers could see a fifteen percent increase in income (Gandee). As a consumer, by choosing to support a local and sustainable food system, means that ninety percent of food dollars flow right back into farms and in turn promotes growth of living economies ("Eat Local"). Lobbying for changes in the current farm subsidy system would also decrease the cost of local and organic food while increasing nutritional access. Our current system heavily subsidizes corn and soy for animal feed, which are converted to high fructose corn syrup and hydrogenated oils used as a cheap addition to value-added food products, but does not support growing of fresh nutrient rich produce. Industrialized food is cheap at the check-out counter but has lost forty percent of key nutrients since 1950 (*Fresh).*

Transforming our food system by creating local living economies abundant with affordable nutrient rich food grown in cooperation with the environment begins with consumer demand and is driven by where we choose to flex the power of our dollars. It begins with our next meal: "We vote three times per day—and we can choose to hurt the planet or support it," Michael Pollan (Fresh). Communities all over the globe are choosing to reclaim their power over the existing food system in remote places like the Gaviotas, Colombia, all the way to Growing Power.org in Milwaukee, Wisconsin. Individual states are over-ruling national policy by writing their own legislation to support food security. One of the obligations of States under

human rights law is to cooperate internationally to address threats to human rights ("Human Rights and Climate Change"). The duty is of utmost importance when addressing climate change, which can only be dealt with effectively on a global level. Yet, governments (from local to international) are slow to define the scope of climate change, identify targets, and create their own plan for addressing the issue. Operating independent of international or national progress, cities within states are creating initiatives to eliminate food scarcity and address "the silent hunger" in their own neighborhoods. From edible schoolyards to asphalt vegetable gardens, farmer's markets to organic home gardens—the good food revolution has begun reconnecting people, food and communities utilizing a multicultural approach to sustainability.

Economics as if People Mattered

It is through small acts in small communities around the nation—the green belt, the dust-bowl, rural Appalachia, urban food-scapes, Main Streets and forgotten streets where the seeds for a new economy are being cultivated while restoring real wealth to the American dream. According to Woody Tasch, founder and president of Slow Money (a nonprofit that connects investors to local economies), "We don't need more big ideas...We need small ideas…Beautiful ideas." Tasch elaborates on this notion in his book, *Inquiries Into the Nature of Slow Money: Investing as if Food, Farms and Fertility Mattered*. He explains his vision for ideas as being, "Beautiful because they lead to a large number of beautiful small actions capable of restoring balance to a system driven by unsustainable inequity and consumption."

In *Small is Beautiful,* E.F. Schumacher introduced his formulation for a set of economic values and principals based on "human scale" to create a new vision for living economies. His vision was derived from the synthesis of economic laws and spiritual values. Thus, according to Christian Schumacher, his grandfather's vision was about "giving birth to a (then) revolutionary

new lifestyle for developed as well as developing countries—in which every man, woman and child and their Earth are of primary importance" (Schumacher). Schumacher's vision for a new economy does not increase affluence and wealth for a few at the expense of the many, nor does it reinforce destruction of the environment. Instead, Schumacher outlined a roadmap for creating living economies where economic power resides locally, for the purpose of sustaining healthy community life and natural life as well as long-term economic viability. Within the modern implications of Schumacher's vision lies the foundation for a transformative journey toward creating sustainable economies for life—as if people mattered.

Scholar Elizabeth Dowler's conclusions reinforce the power for demand to drive supply—provided consumers have the opportunity and feeling of empowerment to express their desires. In her research, she found that alternative food practices, such as local food initiatives, were better equipped to serve the needs of people on low incomes either through location of their markets and selling lower prices due to the elimination of the mass-market enterprise. Brian Halweil offers the profit-making potential for a local food system to benefit both growers and consumers. His report in "Home Grown" defies the economic inevitability of an industrialized food model by suggesting the growth and profit potential for local farmers to shift from their current role as mass marketers of generic and environmentally vulnerable commodities toward an entrepreneurial approach that is responsive to local consumer demands and ecological priorities. The documentary *Fresh* features two alternative food activists, both in rural and urban settings, who have demonstrated successful business that are economically profitable and multiculturally appropriate while remaining ecologically sound. Utilizing Cornell University's "Local Foodshed Mapping Tool," intervention initiatives (such as those identified by Dowler)

can be simulated by regional and local strategic authorities for the genesis of collective solutions that hold public health, equality, and environmental sustainability as cornerstones.

In "Just Sustainability," Julian Agyeman and Bob Evans argue that the concept of just sustainability provides the vehicle for policy makers and activists to collaborate on local solutions that holds both agendas at equal status. In *Civic Agriculture*, Lyson argues that by giving environmental and social factors equal footing with economics, sustainable agriculture challenges the assumption that the economic aspects of farming should be the sole factor in dictating how food is produced. The work of these scholars relies on continued community demand for sustainable alternatives to drive forward momentum utilizing a multicultural focus. One way to ensure public support in a capitalist driven society is through economic incentive. Cities such as San Francisco have utilized a sustainability plan to engage public interest by growing their stagnant job market through the creation of a closed-loop food waste recycling system. Their Food Recycling Law illustrates a successful model for large-scale municipal action from planning and development to implementation and the redistribution of composted material—each phase creating job opportunities for a public hungry for employment.

The Business Alliance for Local Living Economies (BALLE) believes:

> "When income and ownership are equitably distributed, justice is served and political democracy is strong…When needs are met locally by locally owned enterprises, people have greater control over their lives, money is recycled in the community rather than leaking off into the global financial casino, jobs are more secure, economies are more stable, and there are the means and the incentives to protect the environment and to build the relationships of mutual trust and

> responsibility that are the foundation of community" ("A Local Living Economy").

Therein lies a living economy that supports equitability while building real wealth and sustainability. According to the E.F. Schumacher Society, "rejecting the notion that corporate rule is inevitable" is a fundamental principal in an economy for living—as if people, communities and real wealth mattered (Wicks). Through our individual and collective choices, we can grow the economic institutions, relationships, and culture of a just, sustainable, and compassionate world of living economies that work for all—a multicultural principle.

Directly or indirectly, agricultural work provides the financial livelihood for seventy percent of the world's poor (United Nations "World Summit"). Advancing sustainable agricultural-led growth increases the availability of food, keeps food affordable, and raises the incomes of the poor—particularly when the food is used to feed the mouths of the community who grew it. Addressing the impacts of climate change and implementing more sustainable farming practices will catalyze growth of viable and stable communities while combating hunger. Overcoming hunger and poverty and is a pre-requisite for overall economic growth. In Africa alone, doubling food productivity could lift seventy million people out of poverty (United Nations "World Summit).

Economic Localization of Food Economies

Supporting an alternative food system through the creation of local food economies is ripe for investing. Local has replaced organic as the most dynamic sector of the retail food market. Sales of local food grew from $4 billion in 2002 to $5 billion in 2007—and is projected to reach $11 billion by 2011 ("Local and Fresh Foods" 142). Local food systems serve to reconnect consumers with farmers and through farmers, reconnects people with the land. Local

economies do much the same thing by creating a shared commitment to the long-term economic wellbeing of the community, which depends on local people and local natural resources. The local food movement is about much more than a search for freshness and flavor, it engages a diverse population. It has come to represent the preservation of cultural and biological diversity that essential for the health of the earth and her inhabitants. "We have lost our sense of commitment to the 'common good' and to the 'good of the commons,'" says agricultural economist, Dr. John Ikerd ("Local Foods"). Local food production and family farms presents an opportunity to restore environmental awareness.

Economic localization empowers people to express their social and ethical values by considering the ecological and social consequences of their economic decisions (Ikerd "Local Foods"). They are more likely to do so when ownership of the system means having to live with the consequences of decisions. Sustainable and organic approaches to agriculture can have greater implications for land and water use as well as the need for conservation. For example, if community members were aware that their water supply is being contaminated by agricultural runoff, which the EPA cites as the number one pollutant of US rivers, and then became directly financially responsible for the fifteen billion dollars worth of water treatment costs associated with agricultural toxins (Environmental Protection Agency "Nonpoint Source")—sustainable agriculture may become more of a priority. In *Small is Beautiful*, E.F. Schumacher explains that, "small-scale operations, no matter how numerous, are always less likely to be harmful to the natural environment than large-scale ones, simply because their individual force is small in relation to the recuperative forces of nature." By modeling our food production on indigenous wisdom partnered with the latest in sustainable agricultural technology, communities can not

only feed their members but also nourish the living world around them which is a tenet of the multicultural approach.

How can concerned community members recruit others to participate in growing a real wealth economy? Elinor Ostrom, 2009 Nobel Prize winner for economics, developed a common sense strategy. Her model for collective action promotes cooperation which contradicts the current competition focus in standard economics. Ostrom's "Workshop in Political Theory and Policy Analysis" at Indiana University has produced "hundreds of studies of the conditions in which communities self-organize to solve common problems" (Korten "Elinor Ostrom"). Although her initial work focused on groundwater in California, Ostrom has developed a radical approach to principals of cooperation and people learning to cooperate. According to E.F. Schumacher in *Small is Beautiful*, "the true problem of living—in politics, economics, education, marriage—are always problems of overcoming or reconciling opposites." Ostrom's research seeks to resolve this obstacle to cooperation. Her work centers on collective actions in the commons—which can be applied to common land use, water issues, and to the local food issue. Ostrom's proposals are optimistic and solution-based. She operates from the fundamental belief that humans do not act simply within a short-term profit paradigm—but, that they will try to organize and solve problems. The breakdown usually occurs in lack of structure in the communication process. For example, at the Indiana University workshop series:

> Researchers have conducted hundreds of simulation experiments where an artificial form of common property is created—such as an imaginary fish hatchery or pasture. Participants have to make decisions about that property. When the simulation does not allow for any communication among participants, then they overharvest. But, when people can

> communicate, particularly on a face-to-face basis and brainstorm potential outcomes of decisions, then they can come to an agreement (Korten "Elinor Ostrom").

A key component in the positive outcome scenario is for participants to communicate and establish shared norms and rules. When those factors are not in place, the whole process breaks down. Ostrom's research directly supports the premise of a local living economy and the theoretical outcomes. Other models established by the workshop series addresses the *free-rider*[16] problem as well as structuring communities with a combination of private and common areas.

Living Economies

If the suicide economy is the product of human choices motivated by a love of money, then it is within our means to make different choices motivated by a love of life (Korten "Economies for Life"). If small steps and little decisions by millions of people have eroded the American Dream and led us to the precipice of financial and environmental collapse, then it shall be by small actions and individual conscious living that will bridge the divide separating us from real wealth and happiness—to construct an economy that serves life rather than money. The Institute for Local Self-Reliance has developed a new set of rules published in the "New Rules Project" that builds community by supporting humanly scaled politics and economics where people and communities matter:

1. Decisions are made by those impacted;
2. Communities accept responsibility for the welfare of their members and the next generation;

[16] Free-riders are those individuals who consume more than their fair share of a public resource, or shoulder less than a fair share of the costs of its production.

3. Households and communities are supported to possess or own sufficient productive capacity to generate real wealth.

Drawing on these overarching themes, communities are supported to create equitable wealth in support of multiculturalism as a pathway to economic sustainability.

A living economy is defined as one in which economic power resides locally, for the purpose of sustaining healthy community life and natural life as well as long-term economic viability—creating equitability and sustainability. Within the framework of a living economy, "the organization of economic life mimics healthy ecosystems that are locally rooted, highly adaptive, and self-reliant," explains Dr. David Korten. In his article "Why this Crisis May Be Our Best Chance to Build a New Economy," he identifies some characteristics of a living economy as follows:

- Information and technology are shared freely;
- Trade between neighbors is fair and balanced;
- Each community, region and nation strives to live within its own means in balance with its own environmental resources;
- Conflicts are resolved peacefully and no group seeks to expropriate the resources of its neighbors;
- Competition is for excellence, not domination.

There's more to life than measuring Gross Domestic Product (GDP) in terms of financial gain. The primary purpose of a true market economy is not to make money for the rich and powerful, but to support the creation of enterprises that are locally rooted, human scaled, owned by stakeholders, and held accountable to the rule of law by democratically elected governments

("A Local Living Economy"). When these elements are in place there is a natural incentive for all concerned to take human and community needs and interests into account. Economic localization empowers people to express their social and ethical values by considering the ecological and social consequences of their economic decisions (Ikerd "Local Foods"). Thus, building a foundation for stakeholders to create a new, viable values-based operating system to support social and environmental balance and the creation of real wealth—a sense of "belonging, contribution, beauty, joy, relationships, and spiritual connection" (Korten "Economies for Life"). How do we move from small pockets of local action to a global system of thriving living economies? "We grow it into being," says Korten. By rejecting the notion that corporate rule is inevitable, according to the E.F. Schumacher society, the opportunity exists for creating a network composed of independent, community-based businesses with the potential to redirect community resources in a sustainable way. This type of growth is already happening in the financial, energy and food sectors.

These economies for life may have once been in danger of being labeled a work of liberal science fiction except that they are already bearing fruit across the nation. Financial institutions are not the only way to link local capital with community enterprise—a growing number of local businesses are being financed directly by their customers. In the United States, Community-Supported Agriculture programs, or CSAs, which enable people to fund the operations of a farm in exchange for a share of its harvest, have multiplied to well over 3,000 (Mitchell).

In her lecture at the Bristol Schumacher Conference in Bristol, England, Stacy Mitchell offered some alternative approaches to economic structure. One example of an alternative model, suggested by Mitchell, relies on a mix of public and private investment—and cites Pennsylvania's Fresh Food Financing Initiative as a successful initiative based on this approach.

This $120 million fund has provided low-interest long-term loans to finance over sixty locally owned food markets in neighborhoods and small towns that lacked places to buy fresh food. Of the these, all but one of these stores has succeeded, demonstrating that "food deserts exist in so many low-income communities not because grocery stores are not viable in these areas, but rather that banks have been reluctant to finance these ventures" (Mitchell "A New Deal"). This model, and others mentioned by Mitchell in her lecture, demonstrate the potential for alternative models to meet specific community needs—each with a vision for sustainability that can be modified by individual communities to establish similar funds increasing their capacity to meet a greater number of local needs.

A key element in the vision for a new economy is slowing money down. In the modern technology age of lightning speed connections promising instant gratification access to the global land of plenty, what does it mean to slow money down? The concept of slow money, according to Carlo Petrini, is to reorient capital away from endless cycles of consumption and a relentless attention to market growth, towards a new economy that reinforces quality and human relationships, on our relationships to one another and to the land (Tasch *Inquiries*).

Bringing Money Back to Earth

In *Inquiries into the Nature of Slow Money: Investing as if Food, Farms, and Fertility Mattered,* Woody Tasch introduced the idea of slowing money down—reconnecting it to the Earth while respecting carrying capacity, the commons, sense of place, and non-violence. Tasch describes the process as a transition from making a killing to making a living" (*Inquiries*). What does he mean by that? Slowing money down means "bringing it down to Earth by connecting it directly to the land and to places where investors live" by developing a new infrastructure to create a living economy (Tasch *Inquiries*). Currently, "Three trillion dollars a day zooms around

the planet in currency markets alone," says Tasch, "cutting money off from people and place—circulating at such crazy speeds and with such complexity that no one really understands it anymore" (*Inquiries*). As a result, the general public is forced into a state of paralysis, inaction, and false faith that the government and financial system is working on their behalf. This political posturing removes any chance we have at creating a living system that benefits families, communities and protects environmental resources is lost.

Putting capital (and the power to govern its use) in the hands of those most intimately connected with the consequences of those decisions inherently creates a checks and balance system where ripple-effect outcomes are felt in a more concrete, immediate and personal way. This connection between financial decisions and sustainability will foster our transition from an economy that focuses too much on extraction and consumption and too little on preservation and restoration—toward an economy for living. Local food is an ideal starting point for the slow money model because it is the one thread that all humans have in common—regardless of nation, religion, and political affiliation, social or economic status— we all eat. Thus, food is our most intimate connection to the earth. Financing of local food economies and development of regional food systems is one way we can begin to reorient the financial system in alignment with community needs. Once the new infrastructure is in place, using nurture capital dedicated to developing local food systems, the model can then be expanded to support worker-owned cooperatives and community lending institutions—reconnecting capital with community governance (Tasch *Inquiries*). Additionally, bringing money down to the land itself and to the very life sustaining element of food opens the gateway to other environmental issues. For example, "a precondition for food sustainability is a stable climate" according to Ban Ki-Moon

in a speech delivered in Rome during the 2008 "Food Security Summit." The planet as a whole made of many interrelated systems— all having an effect on one another.

c. CITIES—Urban Renewal that Bridges Diversity

Ironically, the creators of the roadmap to sustainability are not coming from rural communities, but from urban environments. Beginning with bike lanes in Copenhagen forty-eight years ago, cities around the globe are reshaping their focus to be more about people and less about cars. This trend in restricting vehicular traffic has paved the way for urban agriculture. Cities are literally feeding people from spaces that previously were concrete and finding that a greater sense of community ultimately serving multiculturalism, is being grown in the process.

Building Sustainable Futures through Inspired Urban Renewal

Sweden is pioneering sustainable living through a series development projects in the southern city of Malmö (Peter). Pilot projects in neighborhoods such as Western Harbour, a former shipyard and industrial site, have contributed to the development of a climate friendly livable city with resiliency at the foundation of urban renewal planning. In addition to buildings with massive glass windows and glinting solar panels, Western Harbour is dotted with green courtyards, biking and walking paths connecting it with the rest of the city. When development of the community is complete, Western Harbour will accommodate 10,000 residents and 20,000 employees and students—creating a multicultural community all living and working in a green residential area based on 100% use of urban produced renewable green energy. Malmö's sustainability plan also addresses water, energy and biodiversity through the following initiatives (Peter):

WATER:
● Drainage systems traps rainwater on numerous living green roofs, in courtyard ponds and open channels. That allows the water to run off slowly into a saltwater canal or the sea.
●Cisterns provide drip irrigation for community gardens.

BIODIVERSITY:
● Ponds and canals not only look attractive - they provide habitats for wildlife, supporting biodiversity.
●Nesting boxes are placed in community gardens, on green roofs, and in courtyards.

ENERGY:
●By 2020, the City of Malmö will be climate neutral and by 2030 the whole municipality will run on 100% renewable energy.
● Wind turbines provide much of the electricity with the rest coming from solar panels and underground aquifers.

A cornerstone of Malmö's green urban living initiatives is to reconnect residents with their food by literally bringing growing space right to their doorsteps. By restricting vehicular traffic access and relocating parking garages underground, parking lots are being redeveloped into community gardens—including space right outside apartment buildings giving residents immediate access to healthy fresh food. The gardens are watered from rain catchment cisterns that collect overflow from green roofing systems which also serve as test sites for agricultural techniques. Additional community gardens are located around town with ponds, walking and biking trails to encourage residents to spend time out of doors rather than in solitary spaces indoors.

Inspired by these initiatives, other cities have adapted their own strategies for getting residents involved. For example, the Chicago Food Policy Advisory Council (a coalition of food justice advocates from across the city including municipal representatives and urban planning) has created a single vision for rooting sustainable urban agriculture in neighborhoods, schools, and city parks. Their plan is comprehensive and is strategically designed to take the city literally

one neighborhood at a time. It began with developing a channel for communication through a common list-serve to the members and is open to interested parties—which generates a continual stream of volunteers and supporters. Communication plays a key role in the success of the good food revolution because it maintains a common focus while eliminating the fragmented legacy of the modern day environmental movement. As residents observe the transformation of their respective neighborhoods, they can immediately tap into the plan and find out where and how to get involved in every aspect from physically turning the earth to participating in education opportunities. A multiculturalism model offers residents an empowered and energized opportunity to play a role in shaping their quality of life—taking those on the fringe with them.

Cities like San Francisco, California, and Seattle, Washington, have created a closed loop process regarding their food system by collecting residential and commercial food waste to be composted and redistributed in the community to feed the next generation of crops. This aggressive approach has an economic benefit by generating a host of green municipal jobs that cannot be outsourced—proving that sustainability can support the economic health of a community.

Cities around the world are moving beyond writing and speaking out to a place of action and advocacy. They are taking their communities with them. Communities are creating networks for sharing ideas and pioneering local solutions. Multiculturalism diversifies human communities, increasing resilience and supporting our capacity to endure. This new collective vision supports food security, water and energy conservation while preserving biodiversity. At a time when manufacturing has all but vanished from American soil we have the capacity to make a better way of life. Therein lies the greatest opportunity to ensure our capacity to endure—

reclaiming power in our communities, over our resources, and for our future by living local for a sustainable world.

V. APPENDIX

Figure 1—Source: Gilson & Perot

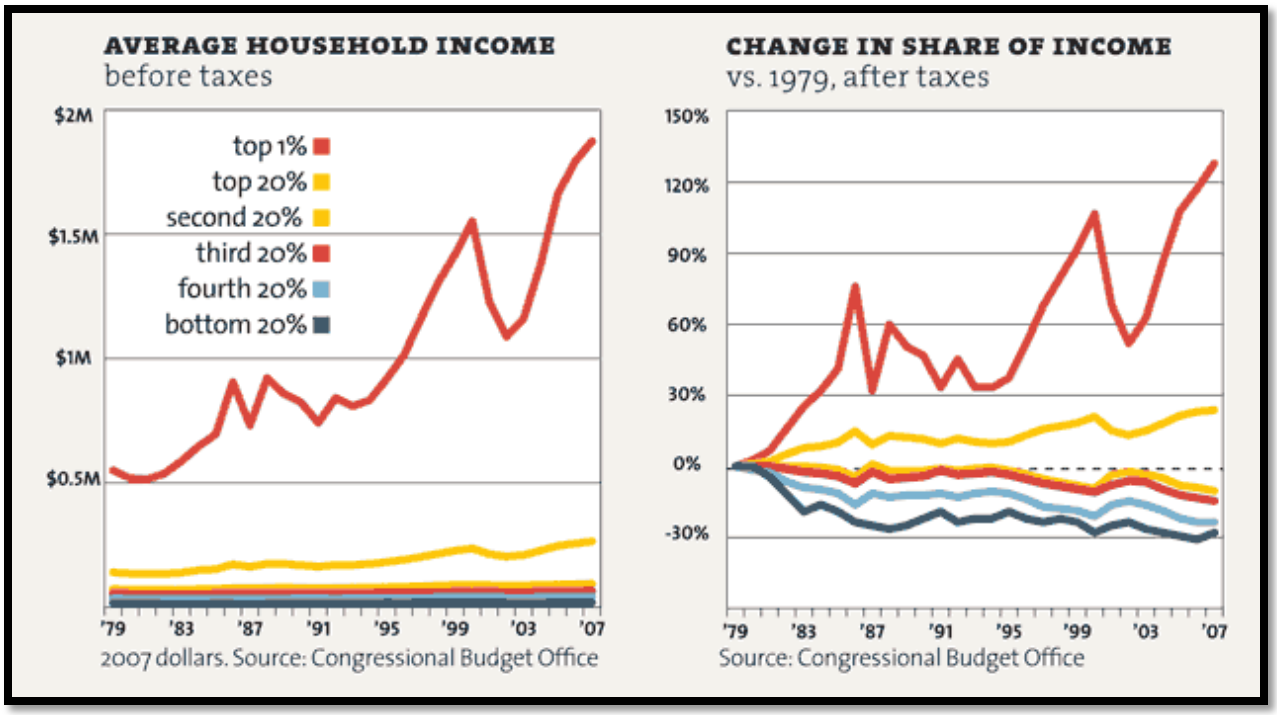

Figure 2—Source ***Transition Town Totnes***

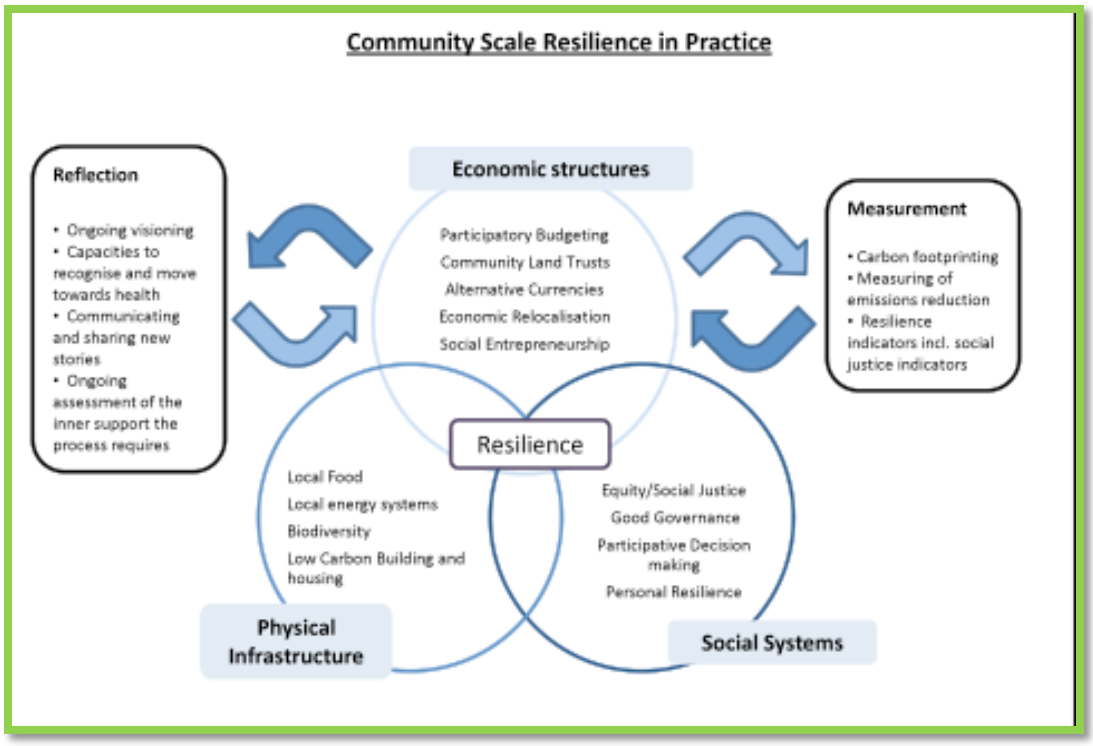

Figure 3—Source Patrick Blanc's Vertical Gardens

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