

FEEDING OUR FAMILIES:
RECONNECTING WITH FOOD, THE EARTH, AND EACH OTHER

By

Dawn Walker

A Thesis Presented to
The Faculty of Humboldt State University
In Partial Fulfillment of the Requirements for the Degree
Master of Arts in Social Science: Environment and Community Program

Committee Membership

Dr. Yvonne F. Everret, Committee Chair

Dr. Corey Lee Lewis, Committee Member

Dr. Mark J. Baker, Committee Member and Graduate Coordinator

December 2014

ABSTRACT

FEEDING OUR FAMILIES: RECONNECTING WITH FOOD, THE EARTH, AND EACH OTHER

Dawn Walker

This is a project to gather and tell the story of food, people, and the land that connects them. It is a work of creative nonfiction: one that combines narrative, participatory research, and scholarly reflection to trace the efforts of the Humboldt County community in growing local food networks. It documents community food system projects in Humboldt County: farmers' markets, CSAs, food gleaning programs, Farm to School programs, child and adult education, and small-scale processors and services. It shows how such community food system projects contribute to resolving issues of food safety and security, and social and environmental justice. The purpose of this research project is to document the emergence of community-based food systems in Humboldt County and analyze whether such systems result in the formation of new economic and social relationships, the infrastructures for economically and environmentally sustainable food systems, new forms of civic consciousness and engagement, and alternative visions of human-nature interactions. This work advances the possibilities of moving toward a safer, healthier food system and supports further community participation and action.

ACKNOWLEDGMENTS

This research project is a collection of stories about many remarkable and dedicated people working on food system issues in Humboldt County. It would not have been possible without their passion and willingness to engage in, share, and create a more just and compassionate way of being in the world. Thank you to all the farmers, educators, business owners, organizers, activists, and community members who live as though the planet is their home. I feel incredibly blessed to be a part of this community, and I am so grateful to share in the process of making this story with you. I would like to thank my thesis committee, Drs. Yvonne Everett, Corey Lewis, and Mark Baker, for their support, encouragement, and assistance in this process. Special thanks to Yvonne for helping me unravel the tangle of my thoughts and navigate the bewilderment of institutional bureaucracy, and to Corey for encouraging my creativity and advocating for an impassioned expression of ideas. I appreciate the efforts each of you has made in helping me achieve my goal. Thank you also to my colleagues, and the faculty and staff of the E&C program for contributing to such an exceptional educational experience. Deepest gratitude and love to my friends and family for supporting me and believing in me throughout this long journey: to my mother, who always has faith in me, especially when I have trouble believing in myself, to Wendy Willis for her big stack of (now-dog-eared) books, to Natalie Faris, my best cheerleader, for cracking the whip and distracting me most appropriately, to Melissa Zarp for her endless enthusiasm and encouragement, to Erin Derden-Little, my community hero, for her incredible inspiration, and to Salvia and Glynnis for their constant and consistent companionship, respectively. Thanks all!

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGMENTS	iii
TABLE OF CONTENTS	iv
PROLOGUE A PROCESS, PURPOSE, PLACE AND PARADIGM.....	1
Introduction	1
Purpose	5
Research Context.....	6
Methods.....	9
CHAPTER ONE MEETING A TERRIBLE DISTANCE:	15
GROWING A FOOD SOLUTION	15
Distance.....	17
Poisoning of the Planet.....	23
Poisoning of the Animals	31
Poisoning of the People.....	36
Our Only Choice	40
CHAPTER TWO SITES OF RECONNECTION:	42
EXPLORING COMMUNITY FOOD SYSTEMS PROJECTS.....	42
Farmers' Markets	46
Community Supported Agriculture (CSA)	49
Food Justice.....	54
Farm to School.....	56
Food Gleaning Programs	60
Growing a Future	63
CHAPTER THREE CULTIVATING A QUIET CONSCIOUSNESS: EDUCATION AS SOCIAL TRANSFORMATION	65

Farm to School	68
Story of the Seed	75
Digging Deeper	78
Toward a New Common Sense—Adult Education	83
CHAPTER FOUR NOURISHING THE NEIGHBORHOOD: LINKING FOOD PROCESSING, SERVICES, DISTRIBUTION AND LOCAL CONSUMPTION	87
Preparing the Soil	88
Adding Amendments.....	94
Sowing Seeds	97
Sprout and Sprout Some More	102
Pulling Weeds	106
Establishing Roots.....	110
Sharing the Harvest	113
EPILOGUE COMPLETING THE CYCLE	115
A New Narrative	116
Acquiescence or Action	120
Living the Paradigm Shift	123
One Final Story	126
REFERENCES	128
APPENDIX A—“FARMTASTIC” SCIENCE CAMP CURRICULUM	135

PROLOGUE

A PROCESS, PURPOSE, PLACE AND PARADIGM

“Food is the product of a region and of what has happened to it, of the people who live there, of its history, and of the relations it has established with other regions. One can talk about any place in the world simply by talking about the food that is produced and consumed there. In telling stories about food, one tells stories about agriculture, about restaurants, about trade, about local and global economies, and even about famine.”¹

This is a project to gather and tell the story of food, people, and the land that connects them. It is a work of creative nonfiction: one that combines narrative, research, and scholarly reflection to trace the efforts of the Humboldt County community in growing local food networks. Through active participation in these efforts, this research engages with the process of creating local food solutions. It integrates the intellectual, emotional, and spiritual aspects of food security issues by telling the stories of the farmer, the sauerkraut maker, and the third-grader digging for carrots in the school garden. This multifaceted approach is used to relate the experiences of our community in defending the health of our families against the threats of the global food system. And ultimately, the narrative of these experiences illuminates the possibilities of cultivating new relationships with each other and the environment.

Introduction

The story begins with distance—the physical and spiritual distance between people and their food; a distance framed by the destructive and alienating effects of

¹ Petrini, C. (2005). *Slow food nation: Why our food should be good, clean, and fair*. New York: Rizzoli Ex Libras, p. 37.

industrial agriculture and the global food market; a distance propagated by the modern food system. The first chapter tells the story of a culture of unhappy, unhealthy and unconscious eaters—this dangerous distance manifested in supermarket aisles and school cafeterias. It emphasizes the physical, emotional, and spiritual disconnections between people and their food, and by extension, a disassociation and alienation from nature. It is the narrative of our abusive food system: a system that threatens the safety of food and community by separating people from the knowledge of, and control over, how their food is produced, processed and transported; a system that has resulted in the poisoning of the planet, the animals, the food and the people. The remaining chapters are about meeting that distance with proximity. They illustrate how a community can build the networks necessary to create and sustain a decentralized, place-specific food system that supports, nourishes, and protects our families.

The second chapter documents local food system projects that link food production with food consumption in an intimate relationship between community and place. It demonstrates how local food economies help reorganize social and productive capacities around an alternative food system—one that can lead to a happier and healthier future and protect against the dangers of the global food market. These projects include CSAs, farmers' markets, Farm to School programs, and farm gleaning programs. They are projects that require direct participation in the local food system and are based on social and economic relationships of cooperation and mutual trust. They create opportunities for people to reconnect with the food production process, the land, and the

community. Such relationships reawaken a sense of belonging and responsibility, and are the foundation of a food culture dedicated to biodiversity, sustainable agricultural practices, civic engagement, food security and social justice. It is a story of reconciliation with nature, health, and community.

The third chapter reviews local garden-based education programs as a method for reconnecting children and adults with food, place and community. It tells the story of the children's garden, and the games the children play there. It reflects on conversations, lessons, games and activities that help kids understand sustainable food practices and issues of food production and distribution. Through play, laughter, song and storytelling, these activities provide children with an opportunity to communicate with the earth and adults in positive ways, gaining an understanding of the land and its care. The chapter explores how experiential, place-based learning of this sort encourages students to become active, informed and creative members of society, helping them understand their capacity to shape their own lives, especially in relation to food and lifestyle choices. It is the story of the patient cultivation of our future farmers.

The fourth chapter considers what it means to eat in place, to eat the food that is grown in your community, and how to navigate local alternatives amid the economic pressures and deceptions of the global marketplace. It describes efforts to get the food to the people without compromising the farmers' resources or the environment. It tells the story of connecting food processing and service efforts with local food resources, and of sharing nutrition and health information by instructing food preparation classes in a

community kitchen. It makes visible the many partnerships required in making nutritious food accessible to the community and the many opportunities we have to nourish and teach one another. It calls for an end to the excessive resource consumption inherent in the individualism of our modern food system. It examines how existing resources can be used to create networks and provide solutions to transportation and food distribution obstacles, so that we can feed our community with more affordable, fresh, local food, and at the same time, support the local farming economy. It also demonstrates how far we still have to go in order to create a sustainable food system, even on a community scale.

The final chapter emphasizes individual responsibility and the importance of participation in community food systems as a way to protect our families and our planet from the dangers of industrial agriculture. It encourages every member of the community to take individual responsibility in transforming our toxic food system by becoming an engaged citizen. It offers food solutions that focus on feeding families and local communities, solutions that resist the power and control of agribusiness domination of the food system and offer possibilities of creating new ways of being in the world. It reminds us how powerful food is as a means of social transformation and the importance of participation in alternative food projects as an act of self-defense. It also attempts to link our lessons to a larger local, imagining how these small, rural efforts connect to creative urban food strategies and contribute to a more sustainable regional, national and global food system.

Purpose

The purpose of this research is to document the emergence of community-based food systems in Humboldt County and analyze whether such systems result in the formation of new economic and social relationships, the infrastructures for economically and environmentally sustainable food systems, new forms of civic consciousness and engagement, and alternative visions of human-nature interactions.

This research emphasizes creative writing, storytelling, and presentation of narrative non-fiction. I use this form because I believe story is how we express to ourselves and to others who we are. Each of us has an individual story, and together we have a cultural, national and global story. Our lives are our stories being lived, and these stories define our reality. Unfortunately, our individual stories are rarely shared, and our cultural story is, for the most part, a nonverbal reality that we unconsciously recreate by simply not resisting the dominant narrative. This is a collection of stories—my stories and the stories of my community—to facilitate and validate the creation of a new, community-based narrative that challenges the dominant narrative. It belongs to us and it is real. It is in the sharing of our stories that we begin to make sense of our world; it is in the expression and corroboration by others that we will begin to reshape our relationships and our realities.

I am not interested in an abstract, sterile, self-alienating discourse that does not serve us in making sense of our lives. Through story, I hope to cultivate a discourse that allows us to be the subjects of our own history. By accepting the contradictions and

complicated nature of our experiences and embracing the problematic process of communication, I hope this work contributes to the creation of a cohesive narrative that changes the way meaning is produced and knowledge is negotiated.

Research Context

“Behind the redwood curtain” is a phrase often used to describe the geographical location of Humboldt County, California. It refers to the physical isolation of the region from the rest of the state and the country. On three sides it is surrounded by mountains, rivers and redwood forests and on the fourth, the Pacific Ocean. Located approximately 275 miles north of San Francisco and 400 miles south of Portland, it is a considerable distance from any major metropolitan areas. Until about 60 years ago, Humboldt County produced an array of grains, vegetables and fruits. In the 1890’s over 20 million pounds of food a year was exported to the San Francisco area, including eggs, potatoes, and a variety of fruits and vegetables.² As large-scale industrial agriculture practices began to dominate the food industry and cheap food became available nationwide, the face of agriculture in this county changed. Today we supply only 8-10% of our own food.³

Humboldt County has a long and rich agricultural history. It boasts of some of the most fertile soils, favorable weather patterns, and a variety of microclimates that allow farmers to grow an incredible array of food. “Within Humboldt we grow everything from peaches and lemons to chestnuts, Asian pears, grapes and kiwis, pomegranates, quince, celery, Jerusalem artichokes, barely, wheat, shallots, and an endless variety of the more

² Locally Delicious. <http://www.locally-delicious.org/about-us>, accessed August 18, 2014.

³ Ibid.

common market produce like heirloom tomatoes and apples. At our markets we also have local grass-fed beef, lamb, goat, and rabbit along with free-range chicken eggs, honey, organic wines, mushrooms, hand-spun alpaca, llama, and angora bunny products.”⁴ The growing season and farmers’ market is year-round, and the abundance and variety of produce is unmatched in the region.

While most of Californian agriculture developed following the industrial model, Humboldt County remained predominantly small-scale, family-owned farms.⁵ Many of these farms distribute the majority of their food through direct marketing venues such as farmers’ markets, co-ops, schools, and restaurants.⁶ The thriving local food economy is made possible because so many individuals in the community are actively engaged with and committed to the local food system. Since the sixties, Humboldt has been attracting people who want to have a connection to the land, seeking a lifestyle of consciousness and independence.⁷ This mindset has been woven into the fabric of the local culture and community. Humboldt, like every community, is made up of many diverse values and varying levels of community participation in the local food system. There are, however,

⁴ Bramble, P. (2009). *A survivor’s guide to running farmers’ markets: The North Coast Growers’ Association experience, Humboldt County, California*. Master’s Thesis, Department of Social Science, Environment and Community, Humboldt State University, Arcata, CA, p. 59.

⁵ Stubblefield, D., Steinberg, S.L., Ollar, A., Ybarra, A., & Stewart, C. (2010). *Humboldt County community food assessment*. Humboldt State University: California Center for Rural Policy, p. 22.

<http://www2.humboldt.edu/ccrp/wp-content/uploads/2013/12/Food-Report-Final.pdf>, accessed November 14, 2014. “In 2007, the United States Department of Agriculture Census reported 852 farms in operation in the county. The size of the farms vary in acreage from 1 acre to over 1,000. The majority of farms range from 10 to 49 acres, with the next most frequent size ranging from 1 to 9 acres. Therefore approximately half of the county’s total farms are small farms operating on less than 50 acres each. On the opposite end of the spectrum, roughly 10- 12% of the county’s farms are over 1,000 acres in size.”

⁶ Bramble, P. (2009).

⁷ Ibid.; Buckley, J. (2009). *Food, land, and community: A social movement in Humboldt County*. Master’s Thesis, Department of Sociology, Humboldt State University, Arcata, CA.

countless individuals and organizations committed to healthy food and sustainable agriculture practices, working on issues such as food access, distribution, education, and advocating for local farmers.⁸ The remarkable food-conscious culture of this place is the foundation of the thriving local food economy. Farmers and food are regarded with gratitude and respect.

Place provides an extremely important context for this type of research. “Place is not simply something to be observed, researched and written about but is itself part of the way we see, research and write; place is deeply metaphysical. Place is an experience, a process, and a location.”⁹ The social and political realities of this community are embedded in the concept of place. I have experienced no other community so deeply committed to food than the one in Humboldt. We are blessed with the land and people to support a robust local food system, and the overwhelming appreciation for the abundance and variety of local food has become part of Humboldt’s cultural identity. It is with great awareness that I situate this work in the context of a very remarkable place, a place of abundant resources, both physical and cultural. It is my hope that the story of food and local food culture in this place inspires others to remain open to the endless possibilities of becoming more dynamic, creative, compassionate creatures and communities in every place on this planet.

⁸ Stubblefield, D., et. al. (2010).

⁹ Creswell, T. (2003a). *Place: A short introduction*. Wiley-Blackwell, Oxford, p. 15. In Bramble, P. (2009), p. 9.

Methods

This work evolved directly from my experience in community food system projects in Humboldt County. It is an accumulation of lived experiences and observations as an intern, volunteer, educator and community member from 2005-2014. The research design involves various methods of participation, observation and facilitation. In order to understand the complex interactions involved as participant observer, I utilized a mixed method approach to conduct and interpret this research. “No single method can grasp all the subtle variation in ongoing human experience. Consequently qualitative researchers deploy a wide range of interconnected interpretive methods, always seeking better ways to make more understandable the worlds of experience they have studied.”¹⁰ This research covers a broad range of topics, examines a variety of literature and other secondary data sources, and includes observations and analysis from many personal experiences including: visiting farms, attending community events and public meetings, participating in CSAs, teaching children in school gardens, farm fieldtrips and summer camps, leading community cooking classes, and working at local businesses and restaurants.

Personal interactions and interviews with local food system participants were also a principle part of my participant observation approach. I interviewed farmers, chefs, business owners, food educators, farm project organizers and other community members. Participants were identified through my work and relationships in the community; they

¹⁰ Denzin, N., & Lincoln, Y. (2005). Introduction: The discipline and practice of qualitative research. *The sage handbook of qualitative research, 3rd edition*, 1-32. Thousand Oaks, CA: Sage Publication, p. 21.

were adult volunteers who were actively involved with local food systems projects. I conducted flexibly structured interviews using both predetermined and emergent questions. The informants offered multiple perspectives on many aspects of the food system, helping me to understand how the various participants experience and inform the evolution of local food solutions. Their stories make up the bulk of this project.

The primary method used in my research was participant observation, an approach that requires the researcher to assume a participatory role within the situation of interest. As a volunteer, intern, educator, employee, activist and community member, I became “fully immersed in the setting and gained full-member status” in local food system projects.¹¹ As an active participant and member of the local food community, my research took the form of a collaborative learning experience, where the knowledge being created was a dynamic and self-reflective process informed by creativity and action. It is a particularly compelling approach because it legitimizes the collective experience and has the capacity to nurture ways of knowing that are rooted in the spirit. “Humans are co-creators of ‘their own reality through participation: through their experience, their imagination, intuition, and their thinking and action.’”¹² This research originated in the lived, shared experience of community and place, and the documentation of these experiences has the capacity to challenge the dominant story of economic and environmental exploitation.

¹¹ Singleton, R.A. Jr., & Straits, B.C. (1999). *Approaches to social research*. (5th ed.). New York: Oxford University Press, p. 328.

¹² Fischer, F. (2000). *Citizens, experts, and the environment: The politics of local knowledge*. Durham, NC: Duke University Press, p.175.

Grounded theory also informed my research methodology. Grounded theory is a flexible, self-reflective strategy of inquiry that helps to inform and guide analysis and facilitate the theorizing process. “Grounded theory details the process and context—and goes into the social world and setting far beyond one investigative story. Grounded theory provides tools to study how processes become institutionalized practices.”¹³ In this approach, data collection and analysis are constantly informing and directing each other, grounding the general theory of a process of action in the experiences and realities of the participants. Grounded theory helped direct my analysis by reflecting on the context and relationships inherent in the research process. Ultimately, it helped illuminate the broader context and dynamics of food system work, while guiding the research questions.

This study is based on the collective production of knowledge through experience. This requires me, the researcher, to be part of both the experience and the production of knowledge. My role is both researcher and research subject. It is an approach to knowledge construction that requires direct participation in and intimacy with that which it intends to know. It acknowledges that we cannot remain separate from our subject and hope to understand it. In order to understand it, we must intimately connect with it, even become part of it. Leela Fernandes’ concept of transformative knowledge practices exemplifies this complex position. She describes the researcher’s act of witnessing as an “active and potentially transformative practice, through a move that reconnects the notion

¹³ Charmaz, K. (2005). Grounded theory in the 21st century: Applications for social justice studies. In N. Denzin & Y. Lincoln (eds.) *The sage handbook of qualitative research, 3rd Edition*, 507-535. Thousand Oaks: Sage Publication, p. 529.

of witness to its sacred meaning.”¹⁴ Witnessing implicates the researcher in the research situation and requires him/her to be present and active in a relationship of sharing and pursuing knowledge. This is the essence of my methodological approach and research position: humble participation and sensitive observation. I approached this project with a willingness to learn, change and be transformed by the knowledge that is being produced.

The epistemological framework for this project is primarily constructivist. This tradition is concerned with the ways in which individuals and groups create meaning from their subjective experiences and participate in the creation and validation of their perceived social reality. “The basic generation of meaning is always social, arising in and out of interaction with a human community.”¹⁵ In this context, knowledge and truth are subjective realities; knowledge creation is a dynamic process; and truth is constructed and reproduced by the shared understanding and interpretation of an experience. This project situates knowledge in a context of community connectivity, and, by its own nature, has the potential to shift the meaning of shared values and lead to cultural transformation.

Denzin and Lincoln discuss the way that a researcher’s paradigm guides the research action. One’s beliefs and feelings about the world and how it can and should be understood will necessarily shape the research methods and ultimately the conclusions. “The researcher is bound within a net of epistemological and ontological premises

¹⁴ Fernandez, L. (2003). *Knowledge transforming feminist practice: Non-Violence, social justice and the possibilities of a spiritualized feminism*. San Francisco, CA: Aunt Lute Books, p.91.

¹⁵ Creswell, J. (2003b). A framework for design. *Research design: Qualitative, quantitative, and mixed methods approaches*, 3-23. Thousand Oaks: Sage Publications, p. 9.

which—regardless of ultimate truth or reality—become partially self-validating.”¹⁶ The research problem is framed, then, from and within a paradigm and has the potential to create a particular reality depending on the questions that are asked and the ways the answers are interpreted. “Strategies of inquiry put paradigms of interpretation into motion”¹⁷ and ultimately anchor the paradigm in specific methodologies. So, the paradigm and the methodologies are working to constantly inform the research question and the interpretation of the information gathered.

In the context of these ideas, it is interesting to reflect on my own working paradigms and notice how my choices in epistemologies reveal the way I understand the world and how I think I might affect it. I am drawn to epistemological traditions that acknowledge the multiplicity of experience and rely on intimacy and connectivity to assert knowledge claims, while at the same time admitting that knowledge is contextual and subjective. I am interested in research methods that promote relationships and are self-reflective and constantly in motion. My research questions and the various research methods I employed have informed and transformed each other. These insights offer valuable lessons about the process of researching, learning, and affecting change in the world, and I am once again humbled in my pursuits and their subtle yearnings to draw nearer to the mysterious and boundless nature of universal knowledge. I believe that “the universal nature of knowledge rests on the infinite depth of wisdom; it represents, so to

¹⁶ Denzin, N., & Lincoln, Y. (2005), p. 22.

¹⁷ Ibid, p. 25.

“speak, the wisdom of the universe.”¹⁸ I take great comfort in that mystery—the idea that our greatest efforts at producing knowledge are mere contributions to the accumulation of the wisdom of the universe. This study is designed to intensify that wisdom by engaging in and expressing new ways of thinking, learning, envisioning and inhabiting this world.

¹⁸ Fernandez, L. (2003), p.98.

CHAPTER ONE
MEETING A TERRIBLE DISTANCE:
GROWING A FOOD SOLUTION

The butterflies began to die and then the lace wings and ladybirds. The ponds filled with toxic fertilizers and the frogs fell suddenly silent, their melodies choked between monocultures and maximum uniformity. Their legs fell off and were exported with frozen cattle embryos to the fields of Africa to save the starving masses with a plant that destroys its own seed. Here, scientists are farmers are consumers are children are butterflies are dead. The merchants of death take many names—"discoveries" disguised in international trade treaties; "inventions" camouflaging corporate profit. The plant is property is only a pill, while people everywhere go hungry and no one anywhere is healthy. The sacred contamination: in the earth, in the water, in the air—a pollen floating on the wind seeking permanent genetic pollution, seeking efficiencies and economies of scale. And what of the potatoes, the sorghum, and millet? Will they become as the Aztec's amaranth? Ramdana, the seed sent by god, gone from this earth forever. So that that they, like us, can never return.¹⁹

In the last two centuries, the process of industrialization has resulted in social, economic, and cultural transformations unprecedented in human history. Nowhere are these changes as pronounced as in the current food system. This chapter explores how the industrialization of agriculture has at once: created a widening distance between food production and the people who consume food, become a profit maximizing corporate venture, become a system that is toxic to the planet—the land, water, animals, and plants in the direct production system, become a system that produces toxic food and leads to severe human health problems, and resulted in the loss of food production culture and communities, further distancing people from their food. It is the narrative of our abusive food system, an intensive study of the destructive and alienating effects of industrial

¹⁹ Italicized sections without bibliographical notations are excerpts from the journal of Dawn Walker.

agriculture. It provides the context for the remaining chapters of this work, framing the problem, so that we can meet it with intelligence, courage, and creativity.

The story of our relationship with food is perhaps the most perceptible narrative of human evolution on this planet. We eat the earth. We have always eaten the earth. Food ties all people to the land for their health and survival, making the food system—the system of food production, processing, distribution, and consumption—the arena where the most concrete human-nature interactions occur. For as long as humans have existed on this planet, we have depended on the land for our daily sustenance. For 400,000 years prior to agriculture, hunters and gatherers interacted closely with the earth, collecting wild edibles and hunting game animals.²⁰ Then, as small groups of people began to settle and cultivate the land, agriculture and agricultural societies were born.²¹ In these early societies, which thrived for nearly 12,000 years, human survival was intimately connected to the land; the agrarian lifestyle united the food and the fields. Now, though agriculture represents the modern consumer's primary source of food, there is so little physical interaction with the land that eating the earth has become an elusive concept. Indeed, a concept that I have needed to demonstrate to many third-graders as we plant seeds and cultivate soil in their school garden: all food comes from the earth.

²⁰ Roberts, P. (2008). *The end of food*. New York: Houghton Mifflin, p.5.

²¹ Ibid., pp 9-10, "By between 10,000 B.C. and 6000 B.C., small groups were growing wheat in Asia and the Middle East, corn in Mesoamerica, and rice in Asia. By 6000 B.C., humans had domesticated sheep, goats, pigs, and cattle. . . By 5000 B.C., agriculture had reached every continent except Australia."

Distance

Shifts in agricultural practices in the last century have resulted in significant ecological, economic, and social transformations. These shifts began to take shape during the industrial revolution and were propelled by the global food demands of World War I and World War II. Ironically called the “Green Revolution,” the result was a transition from small, diversified, subsistence-oriented food production—a system “where tight-knit farming communities and largely local markets were the norm”²²—to large, specialized production dedicated to the international food economy or other systems of market exchange. In California, agriculture was developed along the agribusiness model from the outset, and the majority of farmers “produced for export, not for local needs.”²³ The emphasis on increased yields for distant markets, rather than feeding local communities, led to larger farm sizes and increased agricultural inputs, including water, fertilizers, pesticides, and mechanized equipment. People, animals, and soil were replaced by chemicals and machines. Food changed from necessity to commodity, and food production became more influenced by profit than sustenance.²⁴

The tangle of the modern food system in the market economy, the emphasis on food production for the market rather than for the people who need it to survive, illustrates a deep societal disconnection from food, the land on which it is grown, and

²² Mamen, K., Gorelick, S., Noberg-Hodge, H., & Deumling, D. (2004). *Ripe for change: Rethinking California's food economy*. Berkeley, CA: International Society for Ecology and Literature, p. 6.

²³ *Ibid.*, p. 6.

²⁴ *Ibid.*, p. 14. Mamen et. al. explain this trend toward larger farms and more concentrated corporate ownership. “In many cases, these farms are controlled by vertically integrated agribusinesses that dominate other parts of the food chain as well.”

each other. Brewster Kneen describes this process as “distancing.” The term is used to describe not only the spatial distancing of people from their food supply, but also the economic distancing of food producers from consumers, the nutritional distancing of food from its original state through processing, packaging, and distribution, and the social distancing of people from one another.²⁵ The global food system obscures the relationships between the production and consumption of food and the human and natural resources inherent in those relationships. It separates people from the knowledge of how their food is produced, processed, and transported, and ultimately causes a profound sense of alienation and disconnection in people from their food, the land, and each other.

“We are embedded in a global food system structured around a market economy which is geared toward the proliferation of commodities and the destruction of the local. We are faced with transnational agribusinesses whose desire to extend and consolidate their global reach implies the homogenization of our food, our communities, and our landscapes. We live in a world where we are ever more distant from each other and from the land, and so we are increasingly less responsible to each other and the land.”²⁶

In the current market economy, food has become fetishized. It is processed, packaged, and transported in such a way that it becomes merely an object on the shelf at the supermarket or a package passed through a drive-thru window. Consumers are so entirely isolated from the processes by which it came to be there that food has lost all connection to land and the people involved in producing it. Wendell Berry describes this as a practice of isolation and disconnection from the earth: “In affluent societies, food is taken for granted, and farming is an unknown, a form of lost knowledge, a gap in the collective

²⁵ Kneen, B. (1989). *From land to mouth: Understanding the food system*. Toronto: NC. Press Limited.

²⁶ Kloppenburg, J., Jr., Hendrickson, J., & Stevenson, G.W. (1996). Coming into the foodshed. *Agriculture and Human Values*, 13(3), 33-42, p. 38.

memory signifying disassociation and alienation from nature, from the land.”²⁷ As consumers, we are trained not to associate our food consumption behaviors with the realities of food production processes; we have forgotten that we are eating the earth and many of us don’t want to remember.

Industrial agriculture promised abundance, enough food to feed the growing global population, but delivered instead such great distances between people and their food that modern society has become plagued by hunger, malnourishment, and disease. Despite the increased yields and food surpluses of the industrial agricultural system, 809 million people go hungry each day, one in eight, including 16 million people in affluent countries.²⁸ At the same time, there is a widespread epidemic of obesity and disease caused by nutritional deficiencies and chemical toxicity in food.²⁹ How does a food system so seemingly robust and productive fail to meet the needs of so many consumers? When food is treated as a commodity, it is grown to feed the global market, not the people. The purpose of agriculture is no longer to feed the hungry. It is to feed the profits of the multinational corporations who own the land, the seeds, the chemicals, and now even the genetics of the few plant varieties left in production. The great innovations of the modern food system are not intended to benefit the farmer or consumer; they don’t value food security or nutrition; they are a means to strengthen and extend corporate

²⁷ Vos, T. (2000). Visions of the middle landscape: Organic farming and the politics of nature. *Agriculture and Human Values*, 17, 245-256, p. 246

²⁸ Food and Agriculture of the United Nation, International Fund for Agricultural Development, & World Food Programme. (2014). *The state of food insecurity in the world 2014: Strengthening the enabling environment for food security and nutrition*. Rome, FAO.

²⁹ Hesterman, O.B. (2011). *Fair food: Growing a healthy, sustainable food system for all*. New York: Perseus Books Group, p. 24-25; Roberts, P. (2008).

control of the food economy and maximize agribusiness profits. Neoliberal structural adjustment programs imposed by the International Monetary Fund (IMF) and the World Bank epitomize the global impacts of corporate agribusiness domination, as they force many countries to grow food for export, trading local food self-reliance and biodiversity for a place in the global market.³⁰ The result is that millions of people go hungry as the world continues to invest its agricultural resources in food production for animals, or fuel, or whoever will pay the highest price on the market.

I try hard not to think about it every single time I see my food, but there is almost always a brief moment when I look at the bowl or the plate that holds my next meal and I assess its origins. If I haven't grown and prepared it myself, I think about where it came from, how far, and what happened to the earth and the animals so that it could get to me. I consider whether I can trust the source. I wonder whether it has poisoned the soil and insects on its way to me, or if it is poison itself, disguised as food.

A game I play with students to help them understand concepts of food and natural resource production and distribution is called “Where Does My Lunch Come From?” The game traces the long journey of each item in a student’s lunch from farm to fork. By studying their lunches, the students learn that bread and cookies come from plant materials grown in the Midwest; paper bags come from trees grown in the Northwest; December strawberries come from Mexico; lunch meat and cheese comes from animals in industrial scale feeding operations; and plastic comes from the oil sucked from deep within the earth probably somewhere in the Middle East. They learn that oxygen and sunlight are unlimited and renewable, while oil, soil and water are only available in finite

³⁰ Harvey, D. (1996). *Justice, nature, and the geography of difference*. Oxford: Blackwell.; Roberts, P. (2008).

amounts. It will take the earth millions of years to replace many of the things we use each day. They learn about labor and transportation—the process of making food and how it gets to them. They learn that each of the ingredients in their meal and all of the packaging connects them to many other ecosystems.

It is an incredible learning experience to travel the distance of our food and to remember where it comes from. The ham comes from a pig on a farm; the napkin comes from a tree in a forest; the water comes from centuries of accumulated rainwater in a limited underground aquifer; the plastic bag comes from billions of years of stored light energy; and all of it comes to the supermarket in large trucks that need lots of that energy in the form of gasoline. Gradually, the little lights come on. The children begin to flicker with understanding: milk doesn't come from the carton and chickens don't come from chicken nuggets. Perhaps it seems a childish game, but unfortunately most adults couldn't tell you where their lunch came from. The basic concepts of agricultural food production have been so obscured by our modern food system, that most consumers do not make the conscious connection that all food comes from the earth; that life is nourished and sustained by soil, light, water, and air; that food is our most intimate connection to the land. We pay little attention to the difference between renewable and nonrenewable resources, and live as though we can eat oil and divert rivers forever. Perhaps we have forgotten that the health and survival of our families depends on the health and survival of the planet. For most of us, there is no longer any certainty that the food we eat is safe or healthy.

If, as a society, we could honestly trace our lunch back to its origins, and stay awhile in that field that grew the grains for our sandwich, we would see so clearly the devastating effects of our industrial scale food system that we would most likely choose to skip lunch. We would see vast landscapes of homogeneous crops growing in depleted soils and saturated with chemical fertilizers and pesticides. No longer biologically complex environments, our farmlands are now fields upon fields of cash crops genetically engineered to withstand the pesticides and herbicides sprayed on them from above. In that field, the things that are missing would become ever more apparent. What we would not see and hear are the sounds of wildlife or people. There would be no laughter or swearing or buzzing, no vibrating of the busy lives of birds, bugs, flowers, and foxes, only the occasional roar of the combine or drone of the crop-duster. The destructive drama of industrial agriculture has been unfolding for decades. We are now living through the last chapter of the Green Revolution, where the consequences of a short-sighted design are revealing themselves in the earth and in our bodies. We are being forced to acknowledge the externalities of our food system and pay the price of our indiscretions.

Like it or not, food binds human societies to the earth, creating a space where nature and culture converge. Because the food system is embedded so deeply in the natural world, a society's relationship with their food can be understood as a reflection of their relationship with the earth. "It is through food that humanity's most intimate and essential connections to the earth and to other creatures are expressed and

consummated.”³¹ The evolution of our food system over the past few centuries reveals profound changes in the way human societies interact with nature. The modern food system tells a story of ever-increasing distance, both physical and spiritual, between a species and their planet. Such distance condones destruction, and from that distance we acquiesce to the poisoning of the planet, the animals, and the people.

Poisoning of the Planet

Although plant growth is a complex biological process, there are really only a few basic ingredients required to grow a seed into food. On a bright day in May, I stand with a group of children chanting: “Sun, soil, water, and air/Everything I eat/And everything I wear/Everything comes from/Sun, soil, water, and air.” It’s a sweet little song with a simple message, but it is a message that evades the logic of industrial farming operations. If agribusiness had such a song it would probably intone something like: “Chemicals, irrigation, machines, and oil/Everything you eat/You will have to boil.” In its dependence on chemical inputs, industrial agriculture, by design, systematically destroys two of the most important resources we have for food production: soil and water.

The soil covering the earth has taken millions of years to form. It is the accumulation of countless decaying bodies of plants, insects, and animals; it is the center where life gives way to death, and in so doing, creates the conditions to support new life. Fertile soil is comprised of a complex arrangement of nutrients and microorganisms. It is itself a living organism that requires nourishment, the carbon-rich organic matter made

³¹ Kloppenborg, J., et al. (1996), p. 40.

up of decaying plants and animals, and the mycorrhizal fungi and enzymes that break down organic nitrogen.³² It is also a resource that requires reverence, for it is finite and fragile, and necessary for the growth of almost all plants. “Soil is formed at a rate of only 1 cm every 100 to 400 years, and it takes 3,000 to 12,000 years to build enough soil to form productive land. This means that soil is a nonrenewable resource and once destroyed is gone forever.”³³

The sacred cycle of soil regeneration has been severed by industrial agriculture practices. Ancient practices of fertilizing farmlands with animal manure and using cover crops that are grown to be returned to the soil, providing nutrient-rich organic matter, have been replaced by the continual application of synthetic fertilizers. Modern farming emulates a factory, isolating the components of a natural system, and replacing the cycle of life with synthetic substitutes. So instead of nitrogen-fixing cover crops, fields are covered in synthetic urea. Industrial farming has substituted factory-made chemical fertilizers for the organic matter necessary to keep plants in place, absorb water, and provide the complex nutrients necessary for soil and plant health. After half a century of treating most of our cropland like a soil science experiment, it is on the verge of being destroyed forever. Severe soil erosion, the displacement of soil particles by wind and water, has become a tragic reality in many of the most productive agricultural areas in the

³² Luoma, J. R. (1999). *The hidden forest: The biography of an ecosystem*. Corvallis, OR: Oregon State University Press. “The fungi and bacteria appear in the root zone of the soil, exuding de facto glues that bind tiny grains of soil into larger, more porous aggregated clumps. This in turn builds a looser soil, less like dense clay and more like the soil one might find in a prime farm field, with far better retention and movement of air and, especially, water through the soil.”p.124.

³³ National Department of Agriculture. (2014). *Soil erosion*. <http://www.nda.agric.za/docs/erosion/erosion.htm>., accessed Nov 5, 2014.

country. “The average erosion rate on U.S. cropland is about four tons per acre per year, which exceeds the average rate of soil formation by ten times in the best scenario.”³⁴

What took the earth thousands of years to create is disappearing at an astonishing rate.

Soil erosion is not the only reason that much of the farmland is turning into desert. The salinization of irrigated land has also become a major threat to the precious soil. Salinization is the accumulation of salt in soil. Although salt occurs naturally in soil, the devastating levels of salinity have been introduced by large concentrations of salt present in fertilizers and the concentration of native salts through irrigation and evaporation. Over-irrigation and poor drainage increase leakage to the groundwater system, causing the water table to rise, concentrating native salts and mobilizing additional salt that has accumulated in the soil layers. The increasing accumulation of salt in the soil reduces the ability of plants to take up water and absorb nutrients, making land less fertile, and eventually too toxic to grow anything. According to the California Department of Food and Agriculture, “About 4.5 million acres of irrigated cropland in California (more than half the total) are affected to some degree by soil salinization,” and over 100,000 acres of productive cropland has been retired because it can no longer support even salt-tolerant crops.³⁵ If you travel on Interstate 5 through the San Joaquin Valley, you become witness

³⁴ Pimentel, D. & Pimentel, M. (2008). *Food, Energy, and Society*, 3rd ed. New York: CRC Press, p.206.

³⁵ California Department of Food and Agriculture. (July 2009). University of California Agricultural Issues Center. www.cdfa.ca.gov, accessed July 7, 2014.

to the desolation of what was once one of California's most fertile farm regions.³⁶ There you can see the vague shapes of fields now outlined in a salty residue. Deep white cracks in the barren landscape are all that remain of a once thriving and productive ecosystem.

We would be fortunate if all our problems were as visible as fields of salt and broken earth. Instead, some of the biggest threats to the environment tend to be imperceptible, concealed, or too small to see. It would be helpful if we could see the Ogallala Aquifer of the Western Plains, for example, visualize an ancient body of water that spans eight states and holds enough water to cover all 50 states one and a half feet deep, being depleted at a rate equivalent "to the annual flow of eighteen Colorado Rivers."³⁷ More than 90 percent of the water drawn from the Ogallala Aquifer is used for agriculture, supplying one in five irrigated acres in this country. At this rate, the useful life expectancy of this massive water reserve is estimated between fifteen and fifty years.³⁸ On every continent, agriculture is depleting water from aquifers and rivers much faster than they can recharge. Everywhere, water tables are falling at incredible rates, and in China, where water use now exceeds the sustainable flow by more than six hundred million tons a year, the ground is sinking.³⁹ "The earth subsides into sinkholes in dozens of places every year now, and fissures yards wide suddenly appear like earthquake

³⁶ Reisner, M. (1993). *Cadillac desert: The American west and its disappearing water, revised edition*. New York: Penguin Books. Reisner describes the salt on the thousands of acres that have gone out of production in the San Joaquin Valley "like a dusting of snow." He continues: "The Westlands' drainwater, temporarily stored in a huge sump which was christened a wildlife preserve, has been killing thousands of migrating waterfowl; the water contains not just salts but selenium, pesticides, and God knows what else."

³⁷ Hesterman, O.B. (2011), pp. 24-25.

³⁸ Ibid.

³⁹ Roberts, P. (2008), p. 229.

faults.”⁴⁰ When these issues do become visible, when rivers began to dry up and sprout with toxic algae blooms, becoming unsafe to touch and uninhabitable for life, when the last drop of water is sucked from an ancient aquifer and the ground we stand on begins to sink, our food system will have already destroyed our planet.

Even the most hidden threats will, at a large enough scale, reveal themselves. According to a 2003 report by the United Nations Environmental Program, there are nearly one hundred and fifty dead zones worldwide.⁴¹ Dead zones (or hypoxic zones) are areas where nutrient pollutants, primarily nitrogen and phosphorus, have stimulated the growth of toxic algae, which, when they die consumes all the oxygen from the water, killing marine life and other plant life, leaving a biological desert. One of the largest dead zones on the planet begins at the mouth of the Mississippi River and covers 6,000-8,000 square miles of the Gulf of Mexico.⁴² Aerial images of this zone make visible what is seemingly too small to see. If nothing else, we can see with our own eyes, the water is poisoned, and the degree of poisoning ebbs and flows with the farming season. Industrial agriculture’s excessive use of nitrogen fertilizer is the primary cause of the dead zones, but there are many other poisons in the water. Synthetic nitrogen fertilizers and nitrogen-rich animal manure from confined animal feeding operations⁴³ accumulate in soil and once exposed to water and oxygen, are converted to nitrates, which flow quickly into

⁴⁰ McKibben, B. (2007). *Deep economy: The wealth of communities and the durable future*. New York: Henry Holt & Company, p. 186.

⁴¹ Roberts, P. (2008).

⁴² Rabalais, N.N. & Turner, R.E. (2013). *Hypoxia in the northern gulf of Mexico: Description, causes and change*. New York: Wiley.

⁴³ Wiebe, K. & Gollehon, N. (2006). *Agricultural resources and environmental indicators*. Washington DC: U.S. Department of Agriculture, Economic Research Service.

surface and groundwater. There are, naturally, a number of human health risks related to nitrogen contamination in water, including miscarriages and cancer.⁴⁴

And still, this is not industrial agriculture's greatest contribution to the poisoning of the planet. The chemicals used as herbicides, to kill weeds, and pesticides, to kill insects, are far more toxic than fertilizers, and like fertilizers, they accumulate in soil and easily find their way into the water supply. "Atrazine, one of the most widely used herbicides in the United States, is linked to heart and lung congestion, muscle spasms, degeneration of the retina, and cancer (not to mention the wholesale extinction of amphibians), and yet, despite long efforts by federal and state regulators, it remains the second most frequently detected herbicide in drinking water wells."⁴⁵ Even more toxic are the neurotoxic properties of organophosphate chemicals, used in most insecticides and fungicides. These are the same chemicals developed for chemical warfare and used in Nazi gas chambers. "We are eating the leftovers of the Second World War," says Vandana Shiva, "The chemicals of warfare have been deployed as pesticides and herbicides."⁴⁶ The neural-disruptive effects of organophosphates are not limited to pests. The chemicals pass easily through animals and human skin and mucous membranes, causing severe illnesses and death. We have created a monster, a system in which "farmers in the U.S. spend \$28 billion on agricultural chemicals and apply them to more

⁴⁴ Hesterman, O.B. (2011).

⁴⁵ Roberts, P. (2008), p. 217; Hayes, T. (2014). <http://www.atrazinelovers.com/t2d.html>, accessed Nov. 25, 2014. According to the research finding of Tyrone Hayes, atrazine has been found to be a severe endocrine disruptor that causes mammary and prostate cancer in laboratory rodents and is a potential cause of reproductive cancers in humans.

⁴⁶ Shiva, V. (October, 2004). *A tribute to the earth's caretakers*. Speech at Terra Madre, www.terramadre2004.org/eng/discorsi/pdf/Vandana_Shiva_ENG.pdf, accessed Jan. 18, 2013.

than 225 million acres of land.”⁴⁷ Most high-yield crops cannot survive without routine applications of poisonous chemicals,⁴⁸ but those same chemicals that grow our food, poison our soil and water.

Then there is the monster’s little baby: transgenic technologies (aka GMOs—genetically modified organisms). As with all new life, a baby brings hope for the future. Transgenic technologies manipulate the genes of plants and other organisms creating new species of plants with “superpowers” such as longer shelf-life, dramatically increased yields, herbicide resistance, salt or drought tolerance, or nitrogen efficiency. One such power engineered by Monsanto, the leader in transgenic technology, is the terminator gene. They created a plant that cannot create viable seeds, essentially biologically engineering infertility in a plant. They also created Bt crops, plants that are resistant to herbicides, particularly RoundUp, of which, Monsanto is the sole manufacturer. The plants are designed to withstand the toxic chemicals so that a farmer can spray a field, and everything but the crop will die (everything!). First introduced to the market in 1997, transgenic foods, especially corn, soy, and cotton have come to dominate the agriculture landscape of this country. Now, more than 80% of all food processed in the United States contains genetically-modified soy and corn products, crops grown without proper advance testing of short- or long-term impacts on human health and ecosystems.⁴⁹ There have

⁴⁷ U.S. Department of Agricultural Statistics Services. (2009). *2007 Census of agriculture: United States summary of state data*. Washington D.C., p. 49.

⁴⁸ Hesterman, O.B. (2011); Roberts, P. (2008).

⁴⁹ Roberts, P. (2008), p. 255.

been no long-term studies by the industry to test for possible allergies, toxins, new diseases, or nutritional problems associated with the technology.⁵⁰ The risks are extreme: the potential for GM food to cause resistance to antibiotics, threats to biodiversity and genetic variation in plants and their increased susceptibility to disease, the harmful effects of GM toxins on beneficial insects, and the steadily decreasing nutritional value of food.⁵¹

The most troubling part of this scenario is that the long-term risks have the potential to devastate our ability to sustain ourselves. Decades from now if genetic pollution, failed crops, allergic reactions to food, strange human mutations, and new diseases are finally acknowledged as “biotechnology accidents,” it may be too late to reverse their effects.⁵² Studies have shown that transgenic contamination between plants does occur, and engineered DNA has been found in non-transgenic crops.⁵³ GM varieties have the ability to cross-pollinate with wild and organic crops. Such genetic contamination has the potential to harm the natural reproduction of non-GMO crops, threatening the very existence of our food. Because industrial agriculture values conformity over diversity, even before the monster’s baby was born, we were seeing the dramatic loss of genetic diversity in our food system. Many

⁵⁰ Dona, A. & Arvanitoyanni, I.S. (2009). Health risks of genetically modified food. *Critical Reviews in Food Science and Nutrition*, (49:2), 164-175. Animal toxicity studies of GM foods have shown toxic effects such as hepatic, pancreatic, renal, and reproductive disorders. The study indicates potential allergenicity and antibiotic resistance and acknowledges that many years of research with animal and clinical trials are required to assess the possible health effects on human beings.

⁵¹ Ibid.; Craig, W., Tenfer, M., Degrassi, G., & Ripandelli, D. (December, 2008). An overview of general features of risk assessments of genetically modified crops. *Euphytica*, (164:3), 853-880.

⁵² Ibid.

⁵³ Katz, S.E. (2006). *The revolution will not be microwaved*. White River Junction, VM: Chelsea Green Publishing, pp 50-51.

varieties of rice, flax, wheat, fruits, and vegetables have become extinct, vanished from the earth, and vanished from the collective memory.⁵⁴ Now, the few crops that still exist are at risk of being genetically compromised by transgenic technologies. It's a frightening fight, and the planet is losing.

Poisoning of the Animals

The animals left the land. Some of them suffered. But most of them disappeared the way the flax and sorghum disappeared. Slowly, so you might not even notice, but then suddenly they were gone. As if they were never here at all. Some were chased into giant barns, forced to stand in their own shit all day and fed pesticide-laced grains until they became hamburger. The wild ones went deeper into the forest. Until someone came to cut it down. To plant more cash, then pour poison over it and sell it to the factory to make into cookies.

Industrial agriculture's obsessive use of chemical pesticides and herbicides affects not only the quality of soil, water and food; it has also profoundly shifted the balance of nature. Most chemicals used in fungicides and pesticides are indiscriminant. They kill everything, not just pests that damage crops. The beneficial insects, those that prey on pests and pollinate plants, such as bees, as well as the countless organisms that live in the soil and are responsible for plant survival, they are all dying. Since 2006, over 10 million beehives in the U.S. have been wiped out. Honey bee populations have plummeted as much as 70 percent, a problem biologists have termed Colony Collapse Disorder

⁵⁴Mushita, A. & Thompson, C.B. (2007). *Biopiracy of biodiversity*. Trenton, NJ: Africa World Press.; Nabhan, G. P. (2008). *Where our food comes from: Retracing the Vavilov through the centers of diversity in his quest to end famine*. Washington, D.C.: Island Press.

(CCD).⁵⁵ Pollen samples have identified the contamination of at least 21 agricultural chemicals in the hives, including eight that increase the risk of infection by a parasite called *Nosema ceranae*, thought to be a primary cause of CCD.⁵⁶ There are over 90 different farm-grown foods, including many nuts and fruits that cannot be produced without bees and other pollinators. Bee populations are now so low, that it takes 60% of the country's surviving colonies to pollinate one California crop, almonds.⁵⁷ The food system has become so out of balance with the cycle of nature, it is beginning to self-destruct.

The bees, and butterflies, and earthworms are not the only victims of the modern food system. All of the animals on the planet have become vulnerable under the resource- and chemical-intensive agribusiness regime. We keep a “safe” distance from our food, a distance that allows us to disregard the ecological consequences of our actions. We feel a connection with the packages at the supermarket, but not the ecosystems devastated by the production of those convenient packages. Marshes are drained and forests cut down or burned every day to clear space for more farmlands. Canyons and grasslands become solid waste landfills, and swamps and rivers are the receptacles of chemical poisons. In the Amazon, a biodiversity rich region where some of the rarest plants and animals reside, wetlands and rainforests are being destroyed so rapidly that we cannot even count how many species have been lost. “Since 1980, according to the World Wildlife Fund,

⁵⁵ United States Department of Agriculture. (2014a). Honey bees and colony collapse disorder. *Agricultural Research Service*. <http://www.ars.usda.gov/News/docs.htm?docid=15572>, accessed July 12, 2014.

⁵⁶ Mullin, C.A., Frazier, M., Frazier, J.L., Ashcraft, S., Simonds, R., et al. (2010). High levels of miticides and agrochemicals in North American apiaries: Implications for honey bee health. *PLoS ONE* 5(3): e9754.

⁵⁷ USDA. (2014a).

more than 1.1 million square miles of forest—an area larger than India—has been cleared, much of it to make way for pasturelands and croplands, especially soybeans, corn, and palm oil plantations.”⁵⁸ Habitat and wildlife destruction is rampant, and the rate of species extinction is ten to a hundred times higher than thirty years ago. The animal kingdom is in peril. The presence of toxic chemicals in the soil and water has infiltrated the food web, resulting in impaired reproduction, decreased resistance to disease, anemia, cancerous tissue growth, neurological damage, and birth defects to some degree in almost all wildlife.⁵⁹ We have released thousands of synthetic chemicals into the environment and altered the distribution of many naturally occurring substances, and now the animals are diseased and dying. With bold ignorance, we have created a system capable of destroying the delicate biological cycles evolved by organisms over thousands of years.

In context, the food system’s effect on the health of insects and wildlife could be considered an externality. But the relationship between industrial agriculture and farm animals, the animals we use and eat, is intentional and unambiguous. The systematic torturing and killing of farm animals is an exact reflection of the exploitation, domination, and destruction inherent in the food system. Until recently, food animal production was integrated with crop production in a way that benefited both industries. But, like most agribusiness ventures, livestock production has undergone a transformation, concentrating the profit and power of the industry in just a few big

⁵⁸ Roberts, P. (2008), p. 235.

⁵⁹ U.S. Environmental Protection Agency. (2009). *Persistent organic pollutants: A global issue, a global response*. <http://www2.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response>, accessed Nov. 12, 2014.

businesses. Four companies—Tyson, Cargill, Swift, and National Beef Packing Company—control 80 percent of the beef market, while half of all chicken and 60 percent of all pork products are also under the control of just four companies.⁶⁰

Traditional livestock operations were dispersed, allowing animals space to forage, and in proximity to farmland so that the feed could be procured locally and the waste could be reintegrated into the soil. In the hands of just a few large companies, the meat industry shifted to large operations called Concentrated Animal Feeding Operations (CAFOs), concentrating thousands, sometimes millions, of animals in small spaces where they are fed high-protein grains instead of grasses.⁶¹ More than half of all commercial chickens, pigs, and cows live captive and crowded in huge confined pens, crammed together in their own waste, barely able to move. Most of these animals will never see sunlight. Some of them will never touch the ground. Meat animals are bred to become fat quickly and are given protein-rich food (including bonemeal, and the blood and waste of other animals), and regularly given antibiotics to promote growth.⁶² The result barely resembles an animal. “Some birds are so meaty, they can’t walk or even stand after they’re about five weeks old. One study by the University of Bristol found that one in four commercial broilers suffers crippling leg problems, and many die prematurely from

⁶⁰Roberts, P. (2008), p. 74.

⁶¹ Imhoff, D. (2010). *The CAFO reader: The tragedy of industrial animal factories*. Los Angeles and Berkeley, CA: Foundation for Deep Ecology & University of California Press.

⁶² Ibid.

cardiac arrest and congestive heart failure as their hearts struggle to feed the massive breast muscles.”⁶³

CAFOs are geographically concentrated in several regions of the country. Usually isolated in rural areas, the CAFOs are too far from the crops to return the animal waste to the soil, so the waste accumulates in enormous quantities, producing hazardous soil, water and air pollutants. CAFO’s literally produce mountains of waste—more than 300 million tons per year, or twice the amount produced by the entire human population of the United States.⁶⁴ Many CAFO’s use giant holding tanks, or lagoons, to store the waste, which often fail or leak or are compromised by severe weather, leaching into rivers, groundwater, and soil. The concentrated nitrogen, phosphorus, antibiotics, and pharmaceuticals in the manure contribute to water and soil contamination, dead zones, and human diseases.⁶⁵ Industrial scale meat and dairy operations are also the biggest agricultural contributor to greenhouse gas emissions. The emissions arising from these industries include ammonia, methane, and nitrous oxide, greenhouse gases which are significantly more damaging than carbon dioxide as far as climate change is concerned.⁶⁶

Thousands of confined animals wading in their own feces produce the perfect conditions for massive outbreaks of close-quarter diseases, so the animals are treated with more antibiotics (usually in their food). When new strains of disease immerge that are

⁶³ Roberts, P. (2008), p. 76.

⁶⁴ U.S. Environmental Protection Agency. (2003). National pollutant discharge elimination system permit regulation and effluent limitation guidelines and standards for concentrated animal feeding operations (CAFOs). *Federal Register* 68(29):7176-7274.

⁶⁵ Imhoff, D. (2010).

⁶⁶ *Ibid.*; U.S. Environmental Protection Agency. (2003).

resistant to those antibiotics, which they always do,⁶⁷ new antibiotics have to be created. The excessive use of antibiotics by livestock producers, which now accounts half of all the antibiotics used worldwide,⁶⁸ contributes to the development of antibiotic-resistant pathogens, making many food-borne pathogens immune to traditional human antibiotics. Essentially, the overuse of antibiotics in animals creates a situation where antibiotics become ineffective for treating many life-threatening infections in humans. And the cycle continues, as many of the illnesses that we would need effective antibiotics to fight, including airborne pathogens and antibiotic-resistant bacteria found in water, originate in CAFOs. New strains of *E. coli* and salmonella coming from contaminated CAFO animals, for example, are immune to traditional antibiotics, and are becoming increasingly more difficult to treat in humans.⁶⁹

Poisoning of the People

The process of biomagnification explains the increasing concentration of a toxin in the tissues of an organism at successively higher levels in the food chain.⁷⁰ The organisms at the top of the food chain generally suffer greater harm from a persistent toxin or pollutant than those at lower levels. Biomagnification is perhaps the greatest irony of our food system because we are on top. We are the ones who eat the pigs and

⁶⁷ Gilchrist, M.J., et al. (February, 2007). The potential role of concentrated animal operations in infectious disease epidemics and antibiotic resistance. *Environmental Health Perspective*. 115(2): 313–316.

⁶⁸ Roberts, P. (2008), p. 185.

⁶⁹ Gilchrist, M.J., et al. (2007).

⁷⁰ U.S. Geological Survey. <http://toxics.usgs.gov/definitions/biomagnification.html>, accessed Nov. 24, 2014.

cows and chickens and plants. We are the winners! We poison the soil and water that poisons the plants that poison the animals that poison us.

Industrial agriculture has created the perfect incubator for disease. Food-borne illnesses are a potent example of how disease is a direct consequence of our food system. They leave a bloody trail through our history, showing us the mess we've made. Is it no wonder that *E. coli* is rampant in a population of cows that are fed antibiotic corn and stand around in manure all their lives? It would surprise me if a chicken that was fed the bones and blood of cows and stacked in tiny cages could come out salmonella-free. And it's definitely not a wonder that in 2009, pigs from two continents, a bird, and a human could collectively form an influenza virus that infected over 60 million people and killed over 18,000 people.⁷¹ If you can picture pigs in CAFOs, crowded and covered in feces and pumped full of antibiotics, the swine flu, or H1N1, seems a natural evolution of such conditions. If the animals we eat are sick, we will also become sick. In 2004, it was the avian influenza, a virus that mutated from poultry in similar living conditions. In 2004, there was also a serious outbreak of Creutzfeldt-Jakob disease (vCJD), the human variant of mad cow disease.⁷² Given the ever-expanding scale of farming and the practice of concentrating unprecedented populations of animals in close proximity, we can be assured that there are very few safeguards for food-borne illnesses. When you are eating

⁷¹ Centers for Disease Control and Prevention. (2009).

http://www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm, accessed Nov. 4, 2014.

⁷² Nikiforuk, A. (2008). *Pandemonium: Bird flu, mad cow disease and other biological plagues of the 21st century*. London: Penguin Global.; Gilchrist., M.J., et al. (2007).

a hamburger that has over 500 different cows in it, it is statistically likely that there will be pathogens present.

As we grapple with growing incidences of cancer, reproductive disorders, developmental deformities, degenerative neurological disorders, and other diseases, it seems sensible to look to our animal counterparts and remember we are at the top. If insects and wildlife are suffering from the same symptoms, we can assume that chronic pesticide exposure is probably affecting us in similar ways. It is after all, in our fields and our rivers and wells, and covering all our “conventional” food. We can look to farmworkers who are in direct proximity to fields where pesticides have been applied, and notice the increased death rates and health problems of that population and their offspring.⁷³ Certainly, we can look at the uniformly high rates of cancer in farmers across America and figure out that prolonged chemical exposure will cause disease.⁷⁴ We are indeed at the top, floating in a cesspool of chemical poisons, eating and drinking our own toxic technologies.

The diet-related illnesses, or rather the nutrient-deficiency diseases, are a bit trickier. People everywhere are hungry and malnourished. The food that most people have access to or can afford to buy is grown and processed in such a way that it is either toxic or has little nutritional value. Supermarket isles tell the story of our health. Each shelf is stocked with the secret ingredients of disease: genetically modified and highly

⁷³ Mamen, K., et.al. (2004), pp 34-35. “According to a UN study, 20,000 to 40,000 farmworkers die each year from pesticide exposure.”

⁷⁴ Ibid., p. 36. “[P]esticides can severely damage the nervous system, and even low-level exposure can affect fetal and childhood development. Not surprisingly, the pesticides to which they are exposed leave California’s farmworkers with a 59 to 70 percent greater likelihood of developing cancer.”

processed oils, high fructose corn syrup, and soy lecithin. Instinctively we know that in order to survive, we must nourish our bodies, yet the majority of the food that we produce and consume does not provide the essential nutrients required to maintain health. “Four of the top ten causes of death today are chronic diseases with well-established links to diet: coronary heart disease, diabetes, stroke, and cancer.”⁷⁵ The modern diet of highly-processed and calorie-rich foods provides a constant supply of sugars, fats, chemical and energetic toxins, diseasing our bodies and dampening our spirits. It is no surprise that obesity and diabetes have become serious health concerns in our country. A CDC study found that 34 percent of U.S. adults age twenty and older are obese.⁷⁶ Diabetes is closely related to obesity, and is now one of the most chronic diseases among U.S. children. The body is wise. It knows which nutrients it needs and seeks them out. If the diet is deficient or depleted in some essential way, the body will never give up sending signals, eventually becoming severely distressed or diseased.

Our food system has not only diseased our bodies, it has diseased our social structure and our interpersonal relationships as well. “One of the most visible and violent consequences of the industrialization of the food system in North America has been its effect on rural communities, including both infrastructure and population.”⁷⁷ The exodus of farmers from the land, the consolidation of farms, and the destruction of rural communities has had devastating social consequences. As the people who loved the land

⁷⁵ Pollan, M. (2008). *In defense of food: An eater's manifesto*. The Penguin Press: London, p. 10.

⁷⁶ Centers for Disease Control and Prevention. (2007). <http://www.cdc.gov/nchs/hdi.htm>, accessed Sept. 4, 2014.

⁷⁷ Kneen, B. (1989), p. 121

left the land, the process of farming for family and community was erased from our collective experience. There are nearly 5 million fewer farms in the U.S. than there were in the 1930's, and the majority of them are large, corporate-owned farms dedicated to specialized food production.⁷⁸ One diesel-powered combine and a truckload of chemicals took the place of entire rural communities, destroying the viability of rural economies across the country, and leaving only memories surrounded by monocultures. "While individual farm bankruptcy is bad, the failure of a community is even more devastating since it eliminates the context within which personal grief can be borne and shared and within which a different life can be nurtured. But even without putting it in these extreme terms, the isolation imposed on farming people by the current industrial, capital intensive system makes it both unattractive and dehumanizing."⁷⁹ We have become, as a society, isolated from the food production process and each other. Now, we have little knowledge of, or control over, our food.

Our Only Choice

The destructive and alienating effects of industrial agriculture and the global food market are multifaceted: we are physically and spiritually removed from the food production system and the land; the chemicals and pollutants of the system are toxic for nature, destroying habitats, soil, and water, and poisoning the animals and plants in the direct production system; the food produced that we now eat is toxic and leads to severe human health problems; and our food production culture and communities are in decay.

⁷⁸ Ibid.; Mamen, K. et. al. (2004).

⁷⁹ Kneen, B. (1989), p. 121

If we want healthy bodies in the future, the healthy food to nourish them, and the soil and water to produce it, we must actively dismantle and restructure our abusive food system. We must reclaim the space between our food and our families, and reawaken a sense of responsibility and compassion toward our food, our planet, and each other. We must fully inhabit that space and become engaged citizens. Because in that space the land where we live will become the food that we eat, we must once again make visible the processes of food production and rediscover our connection with community and nature. Buckminster Fuller said, “You never change things by fighting the existing reality. To change things, build a new model that makes the existing model obsolete.”⁸⁰ There is no fighting Monsanto or McDonalds. We are too busy struggling to assert our rights to a safe, culturally appropriate, and nutritionally sound diet. We are too hungry to fight. We have no choice but to live our solutions.

The following chapters tell the stories of a new model: community food solutions. These are projects born out of cooperative relationships, made up of people consciously participating in community creativity and self-reliance. They are stories of place-specific solutions, meeting that terrible distance with proximity. They illustrate how a community can build the networks necessary to create and sustain a decentralized, place-specific food system that supports, nourishes, and protects our families. A food system that makes poisonous food will eventually collapse, and when it does, we will already be eating the future.

⁸⁰Zung, T.T.K. (2001). *Buckminster Fuller, anthology for the new millennium*. New York: St. Martins Press, p. 291.

CHAPTER TWO
SITES OF RECONNECTION:
EXPLORING COMMUNITY FOOD SYSTEMS PROJECTS

It is time to act in defense of our families and our planet. It is time to stop swallowing, mouthful by mouthful, the dangerous realities of the global food system: agrochemicals and antibiotics in the shape of crackers and hamburgers. This does not have to be our story. There is still time to awaken our senses to the new story, one where the grains that we grow are diverse and nutritious and used to feed the hungry people, not the cars, not the cows; one where children eat fruits and vegetables free of toxic chemical residues; a new story where the earth and its inhabitants are valued, nurtured and treated with respect.

We are so far away from where the food came from. Our relationship with food has been so grotesquely obscured that we now value the supermarket and drive-thru more than the farmer and soil. The global industrialized food system disconnects us from our food, alienates us from the land, and isolates us from each other. In his book, *Deep Economy*, Bill McKibben explores alternative economic models that might help us resist the frightening inertia of humanity's current path toward "ecological peril" and "psychological malaise."⁸¹ He makes the case that the highly consumptive behaviors and material obsessions of capitalism, especially in America, have "turned us ever more into individuals and ever less into members of community, isolating us in a way that runs contrary to our most basic instincts."⁸² Health and happiness are quickly declining in America and, replacing them, is a surging sickness of mass depression, anxiety,

⁸¹ McKibben, B. (2007), p. 226. McKibben's book is dedicated to "the big somethings" that will divert the powerful force of our societal inertia toward the destruction of communities and the environment. It presents models for local economies that "can set us on a new, more promising course."

⁸² *Ibid.*, p. 37.

insecurity, and inequality. Like diabetes, he says, depression is “surging because of some dramatic change in human circumstances in recent decades. It is not hard to conclude that that change might be the erosion in community, in contact, in connection.”⁸³ McKibben calls it “hyper-individualism:” the condition that has isolated us so entirely from each other that we have compromised our dignity, identity, and general life satisfaction in the pursuit of material wealth. “We don’t *need* each other for anything anymore. If we have enough money, we’re insulated from depending on anyone around us—which is at least as much loss as gain.”⁸⁴ We have traded connections for commodities. Now the food is poison, and we are chemically preserved and artificially sweetened consumers in the global economy. As consumers, we get what they give us. As consumers, we are powerless, unhealthy, and unhappy.

In order to challenge the dominant food system, we will need to commit to happier and healthier lifestyles. We will have to try harder. We must take our power back, both as individual consumers and as communities. Wendell Berry proposes that “What we have before us, if we want our communities to survive, is the building of an adversary economy, a system of local or community economies within, and to protect against, the would-be global economy.”⁸⁵ As communities, we have countless opportunities to disengage from the global market and reengage in mutually-beneficial

⁸³ Ibid., p.111. McKibben provides studies that show that people lacking companionship and social networks have increased rates of sickness and death, suggesting that communities do make us healthier.

⁸⁴ Ibid., p.117. McKibben continues: “By some surveys, three quarters of Americans confess they don’t know their next door neighbors. That’s a novel condition for primates; it will take awhile to repair those networks.”

⁸⁵ Berry, W. (1996). Conserving communities. In W. Vitek & W. Jackson (Eds.), *Rooted in the land: Essays on community and place*. 76-84. New Haven, CT: Yale University, p. 83.

cooperative relationships that reconnect us with people and nutritious food. A transition from a globalized economy intent on growth and accumulation toward small, local food economies could lead us to a better future, one guided by the principle of happiness and crafted from an emphasis on community-centered behavior.

Kloppenburg and Lezberg propose the idea of “foodsheds” as one such model for a decentralized, place-specific, local food system. They describe foodsheds as “self-reliant, locally or regionally based food systems comprised of diversified farms using sustainable practices to provide fresher, more nutritious foodstuffs to small-scale processors and consumers to whom producers are linked by the bonds of community as well as economy.”⁸⁶ They suggest that social participation in a foodshed can help people understand the way the food system works and the role they play in perpetuating it, thus providing space for people to act responsibly and effectively for change.

As more and more people become aware of how dangerous our food has become, the seeds of an alternative food movement have begun to sprout. This movement is made up of small-scale food networks or community food system projects: farmers’ markets, community-supported agriculture farms (CSAs), and food justice projects such as Farm to School programs and food gleaning programs. Such projects are like heritage seed varieties: ancient,⁸⁷ delicious, and well-adapted to specific places, yet virtually forgotten and unfamiliar because they have gone unused for so long. These are not the

⁸⁶ Kloppenburg, J., Jr. & Lezberg, S. (2003). Getting it straight before we eat ourselves to death: From food system to foodshed in the 21st century. *Society and Natural Resources*, (9), 93-96, p. 94.

⁸⁷ “Ancient” because they remember community resources that have been forgotten in modern society.

convenience-oriented food solutions of our fast-paced, modern lifestyles. They are the intimate, place-specific solutions born out of the food needs of a community.

Community food system projects challenge the dominant global food system by valuing place-based systems over distancing, community self-reliance over dependency on the global food economy, biodiversity over monocultures, and cooperation over competition. We have begun to inhabit our foodsheds, and in them, we begin to heal. A shift to local food systems creates opportunities for people to reconnect with the food production process, the land, and the community, and can reawaken a sense of belonging and responsibility. Kloppenborg, et al., describe this awakening as “becoming native” to a place: “Recognition of one’s residence within a foodshed can confer a sense of connection and responsibility to a particular locality. The foodshed can provide a place for us to ground ourselves in the biological and social realities of living on the land and from the land in a place that we can call home, a place to which we are or can become native.”⁸⁸ As people begin to engage with the local food economy, the land on which they live and eat becomes a site for reconnection. The landscape itself is understood as an integral part of community, and this understanding changes the way humans view their relationship to it. Aldo Leopold describes this integration: “We abuse the land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”⁸⁹ In place-based food systems,

⁸⁸ Kloppenborg, J., Jr., Hendrickson, J., & Stevenson, G.W. (1996). Coming into the foodshed. *Agriculture and Human Values*, 13(3), 33-42, p. 33.

⁸⁹ Leopold, A. (1949). *A sand county almanac*. New York: Oxford University Press.

food is no longer a distant commodity without perceivable origins. It is a product of community and intimately linked to place and people. As we become participants and build community, we begin to realize that communities have infinite power because our wealth is each other; we are creative, hopeful beings in place with one another. One family at a time, we are beginning to recreate our story, a complicated story of reconciliation with nature, health, and community. Together, we are creating the food networks necessary for an alternative, sustainable model of food production—one founded on ecological principles, which reconnects people with each other and the earth.

Farmers' Markets

There is an intimacy and joy that grows out of participation in community food system projects. The individual consumer becomes actively engaged in building relationships of trust, reciprocity, mutual learning, and cooperation. Participation serves as a collective expression of “an unwillingness to embrace the individualism that often comes with modernity and a desire, instead, to build from solidarity with your neighbours”⁹⁰ Farmers' markets provide not only a site for connecting people with fresh, seasonal food, but an important place where people connect with each other on a regular basis in a spirit of gratitude and affection.

One day in late spring, as I wander through the Saturday farmers' market in the Arcata Plaza, I listen to and observe countless acts of kindness and cheerfulness. While little girls crowd around a wheelbarrow full of lilacs taking deep breaths and giggling, old

⁹⁰ McKibben, B. (2007), p. 214.

men speak to young men about the season's beginning. People carry boxes full of plant starts and bouquets of flowers. Music plays and people dance, juggle, and enjoy the day together in celebration. At one booth, I ask the farmer if his rainbow chard seeds are organic, and he responds by saying, "These are trust seeds, cultivated and saved with love for life." His answer delights me. Looking at his worn farmer's hands and his humble bundles of amaranth, I do trust that his seeds are seeds of love. In me, there is a deep recognition that the sharing of them is a gesture of hope and affection that connects us through the act of growing rainbow chard. In sharing that time and space with each other, food, and the plants that will one day become food or medicine, each person at the market is engaged in an act of mutual support and hopefulness, expressing a loyalty to community and place through an intimate connection with farmers and food.

The eight farmers' markets in Humboldt County are organized and operated by the Northcoast Grower's Association (NCGA), a non-profit organization that began in 1978 as a small group of family farmers. These markets now generate over \$2 million dollars a year, and collectively donate over 90,000 pounds of produce to food banks and other food security projects in California.⁹¹ This year the NCGA extended the market schedule to include the winter market, a Saturday market comprised of a small group of farmers who have fresh produce available throughout the winter months. Here, we simply call it "market." During the season of abundance (June-November), we have three

⁹¹Bramble, P. (2010). p.27.

opportunities to go to market each week, three different days that farmers gather to bring us fresh fruits, vegetables, eggs, poultry, meat, nuts, and honey.

Market is a place of privilege, where the abundance of community food resources is on animated display. But market is not just for the privileged. In partnership with Community Alliance with Family Farmers (CAFF), another local nonprofit committed to establishing local food networks, and Food for People, the local food bank, NCGA markets offer the Market Match Program. This program was designed to encourage the use of CalFresh (California's Food Stamp program) benefits at farmers' markets. Recipients of CalFresh can swipe their benefit card at the market info booth, and receive \$1 wooden tokens to spend directly with the farmers to purchase fresh food, or seeds and plant starts for food producing plants. If they spend \$10 or more, Market Match provides five additional tokens. This program, and other outreach efforts, increased CalFresh usage at farmers' markets by 313% in 2011.⁹² Efforts such as these simultaneously support low-income families' increased access to fresh, nutritious food, and the vitality of small family farmers and the local economy.

Market brings the faces back to the food and the food back to its origin. The farmers see the people they feed. The customers see the farmers who feed them. There is a remarkable exchange of energy, looking at one another, talking to one another, as the bunch of carrots or basket of strawberries pass from one set of hands to the other. "The market begins to build a different reality, one that uses less oil and is therefore less vulnerable to the end of cheap energy. But, more important, the new reality responds to

⁹² Food for People. <http://www.foodforpeople.org/humboldt-market-match>, accessed May 5, 2014.

all the parts of who we are, including the parts that crave connection. One-tenth of the energy; ten times the conversations—that’s an equation worth contemplating.”⁹³ Market is delicious. There might be dirt on the parsnips and insects may have chewed holes in the arugula, but it is a reminder of the larger networks we belong to. We are in service to each other, and it feels good to once again depend on those around us for something real.

Community Supported Agriculture (CSA)

CSA provides a similar site for direct participation in the local food system, one even more intimate. CSA is a food system model in which consumers pay farmers at the beginning of the growing season for a share of the farm’s produce, and the grower supplies a weekly share of fresh food throughout the growing season. The shareholders’ financial contributions to the farm provide the initial capital needed to operate the farm, and, in return, the shareholders receive a box of fresh, seasonal, local produce. The consumer and producer provide mutual support by sharing the risks and benefits of food production. There are over 1,000 CSAs across Canada and the U.S., and they “directly connect with 77,000 members and bring 36 million dollars of income directly to the farms.”⁹⁴ Shareholders usually come to the farm to pick up their weekly shares, and many also participate in farming activities such as harvesting or in CSA workshops dedicated to sharing information about farming techniques with the home gardener.

⁹³ McKibben, B. (2007), p. 128.

⁹⁴ Pretty, J. N. (2002). *Agri-culture: Reconnecting people, land and nature*. Sterling, PA: Earthscan Publications, p. 118.

On a magical day in mid-May, 2009, I attended a farm tour hosted by the Humboldt chapter of CAFF. It was a walking tour where we visited three CSA farms all in close proximity to each other in the Arcata Bottoms. As about 60 community members gathered at the first farm on the tour, Deep Seeded Community Farm, I could feel the collective intrigue and excitement intensify. This was Eddie Tanner's farm, and as we all stood together in his giant greenhouse where tomato blossoms climbed their ropes and plant starts of all variety grew eagerly toward transplant, he gestured toward the fields beyond where rows of green occupied the entire landscape. He explained how the leafy greens were on a two-week planting cycle, which he called succession planting. There were the flats of baby sprouts, and next to them, little plants and bigger plants, in their successive progression. At the time, his farm was new, barely a year old, but flourishing as if it had been there a decade. When someone asked whether the farm was certified organic, a furtive smile flashed across Eddie's face. He told us that while he uses only organic farming methods and materials, he sells 95% of his produce directly to the community. His customers come to the farm or farmers' market; they look each other in the eyes; they talk about whatever they want to. A community-based farm doesn't require third-party certification because the relationships are transparent and direct.⁹⁵

The sun shone bright and warm on our large group as we walked the dirt path on the edge of a field toward the next farm on the tour. Tule Fog Farm, owned by Shail Pecrouse and Sean Armstrong, was not a typical veggie farm. It was an animal farm,

⁹⁵ Since 2009, Eddie has become a very successful farmer and businessman in Humboldt. Deep Seeded Community Farm now provides 300 CSA shares, supplies local restaurants and retail outlets, and hosts Farm to School fieldtrips for local children.

teeming with chickens, turkeys, ducks, goats and pigs, all milling about joyfully in their large electrified-fence enclosures. Shail taught us about the grazing model they use to raise animals called intensive rotation. The fences, she explained, limit the space on which the animals can graze, ensuring the diversity and health of grass species. The fences are moved daily to protect the grasses from exhaustion, giving the animals new grasses every day and allowing the soil to be fertilized by their waste. The farm is run by Shail and a group of interns that contribute to about 40% of the farm work. They are young farmers, trying to raise food in a way that respects the earth and the animals. The farm started as Wild Chick Farm, selling poultry and eggs, but when the organic feed started being shipped in from China and Brazil in 2007, they “slaughtered the flock rather than buy rainforest-farmed-feed for their “local” chickens.” They excitedly tell us about the New Zealand Kune Kune pigs that can subsist entirely on grass. When they say they will be travelling to New Zealand to get some, I imagine them wrestling and hogtying the Kune Kune, and bringing them back to eat Humboldt grass and live amongst goats and chickens and ducks. Now, Tule Fog is a thriving meat-producing farm, complete with Kune Kune and Kiko goats from New Zealand, and Romney sheep, all well-suited to the climate and grass varieties of Humboldt. They provide “farm shares” for 29 members of their CSA, including a variety of grass-fed meat and goose eggs.

Our final stop was Shakefork Community Farm, founded and operated by Kevin Cunningham. Shakefork is a grain CSA raising wheat, oats, barley, rye, lentils, corn, flax and much more. At the time, Kevin was farming in a leased 15-acre lot in the Bottoms,

growing whole grains and distributing them primarily through a CSA. He talked to us about the extensive ground-prep required for dry farming, a method of growing non-irrigated crops of carefully selected heritage varieties that are well-suited to our particular climate. Drawn toward the seeds of the hard spring wheat, Kevin told us about his self-instructed journey to fill the gap in our local food economy, to bring the grains back to Humboldt. It began as a small oat patch at Warren Creek Farms, and after his time in the bottoms, Kevin and his wife, Melanie, finally settled on an 85-acre parcel in Carlotta. Their farm has expanded to include vegetables, grains, seed crops and animals, including their oxen team, Tex and Joseph, who respond to voice commands. Shakefork was established with the goals of “reconnecting with a simple agrarian lifestyle and providing Humboldt County most of the foods that are foundational in our diet.”⁹⁶ Kevin and Melanie are doing an amazing job of inhabiting the gap; they are reintroducing grains into Humboldt’s agricultural narrative, and milling us fresh flour.

At the end of the tour, I felt like I had just walked through a dream. There was something overtly idealistic about this scenario. All of these farmers were young and hopeful, and they were as equally committed to their community and the planet as they were to nutritious food. It felt like, in this small pocket of reality, we were finding our way. It felt like we had a chance.

⁹⁶ Cunningham, K., & Cunningham, M. <http://www.shakeforkcommunityfarm.com/>, accessed Oct. 13, 2014.

CSA links the consumer and farmer to one another through a particular piece of earth, and binds them, through food, in a relationship of sharing and responsibility.⁹⁷ CSA grows food for the community, and communities have diverse tastes and desires that result in increased crop diversity and a place-specific expression of culture. Humboldt is the home of 14 CSA farms and a community supported gluten-free bakery. Here, the intimate exchange between farmer and community happens in bag of freshly harvested barley with an attached recipe for toasted barley tea. The intimacy of CSA allows communities and farmers to disengage from the commodity and market relations on which the global food system is based, and reengage in the personal and mutually-beneficial relations of local cooperation and responsibility. “CSA represents a concrete example of the real possibility of establishing economic exchanges conditioned by such things as pleasure, friendship, aesthetics, affection, loyalty, justice and reciprocity in addition to the factors of cost and quality”⁹⁸ By linking the farmer and consumer in a bond of community, CSA is transforming the way food is produced and distributed. We have begun to create a new story, informed by an increasing consciousness about food systems and policies; it is a graceful and careful movement toward a sustainable future. An important part of that future is ensuring that all members of the community have access to nutritious food. Food justice projects, discussed in the next section, focus on programs that connect fresh food resources with low-income citizens.

⁹⁷ Pretty, J.N. (2002), p.119, described this relationship as “the linkage between farmers and consumer that guarantees the quality of food. This encourages social responsibility, increases the understanding of farming issues amongst consumers, and results in greater diversity in the farmed landscape.”

⁹⁸ Kloppenberg, J. et. al, (1996)., p. 39.

Food Justice

In the book of Exodus in the Old Testament, there is the story of manna, the food of salvation, which Yahweh provided for the Jews as they wandered in the desert for 40 years after their escape from slavery in Egypt. Each morning, a layer of dew would appear in their encampment, and beneath it, the manna. The Jews were instructed to gather it every morning, each person according to their need. If it was hoarded, the manna would become maggot-infested and spoil. I often think of manna as I walk down the florescent-lit aisles of a grocery store. While the supermarket is a proud display of abundance and accumulation, there is no manna at the market. The food has become nutritionally spoiled (metaphorically maggot-infested) by countless chemicals, processes, and transport. Even where food is physically available, it is not actually accessible to people who cannot afford to buy it. Food scarcity is an overwhelming reality in both developing countries and at the tables of millions of low-income families in affluent countries. Many communities do not even have a market. We do not eat from the morning dew, and many of us don't eat much at all.

The irony of the global food system is that while the world continues to produce a great surplus of food, the number of people living in poverty and plagued by hunger continues to rise.⁹⁹ In America, 35 million people a year suffer from hunger, including 13 million children. Despite the fact that California is the nation's most productive food-producing state, approximately 2.5 million California adults cannot afford to put adequate

⁹⁹ Cobb, T.D. (2011). *Reclaiming our food: How the grassroots food movement is changing the way we eat*. North Adams, MA: Storey Publishing.

food on their family's table.¹⁰⁰ Food justice advocates focus on the disparity between food production and food access. Gottlieb and Joshi (2010) define food justice as “ensuring that the benefits and risks of where, what, and how food is grown and produced, transported and distributed, and accessed and eaten are shared fairly.”¹⁰¹ They believe that the food justice framework has the capacity to reorient the food movement by prioritizing the need to address inequities in the current food system and making visible the opportunities for creating a more just, healthy, democratic, and community-based food system.

Food system projects that promote food justice are projects that allow all people healthy food choices. Until the marginalized members of our communities, the poor folks, have access to fresh, nutritious food, even the best-intentioned “alternative” food networks will remain embedded and complicit in an unjust food system. Truly meeting the food needs of the hungry requires innovative community approaches that connect poverty and social justice with food resources. Farm to School programs and farm gleaning programs are examples of such approaches; they are solutions that move us toward a just food system.

¹⁰⁰ University of California, Los Angeles. (2007). *Health policy research brief*. UCLA Center for Health Policy Research.

¹⁰¹ Gottlieb, R. & Joshi, A. (2010). *Food justice*. Cambridge, MA: The MIT Press, p. 6.

Farm to School

Community Alliance with Family Farmers (CAFF) is a California nonprofit that advocates for family farmers, sustainable agriculture, food access and education.¹⁰² In 2007-8, as a volunteer with the Humboldt chapter of CAFF, I assisted with school garden activities at several local elementary schools. One day, at Alice Birney Elementary in Eureka, I got to witness lunchtime. There were three separate 15-minute periods, punctuated by a ringing bell, where the children would march single-file to the cafeteria, eat their lunch, and leave, just in time for the next group of students to file in. After the last group left, I curiously wandered into the lunchroom to see what was on the menu. I was surprised to find no remnants of “hot” lunch; no trays of half-eaten sloppy joes or creamed corn that hadn’t been touched. Instead, there were four large trash cans full of plastic wrappers. Amongst the wrappers there were half-eaten sandwiches, what appeared to be apple slices, and some other things I couldn’t identify. All items were individually plastic wrapped, some had been discarded without having been opened. I learned that this school did not have a budget for a lunchroom staff, so breakfast and lunch was prepared offsite and delivered daily. Alice Birney is a public elementary school with many low-income, minority students. I was shocked to see how and what the children were given to eat. We worked in the garden teaching children to grow food, and in the classroom we did nutrition lessons intended to demonstrate the importance of fresh fruits and

¹⁰² Community Alliance for Family Farmers. <http://www.CAFF.org>, accessed March 12, 2014. The CAFF mission statement includes: CAFF strives to build on shared values around food and agriculture, and work together in practical, on-the-ground programs. These partnerships create locally based economic vitality, improved human and environmental health, and long-term sustainability of family farms.

vegetables, but nothing resembled fresh or food in the lunchroom. My heart broke a little at the delight on the children's faces when they would bite into a sugar snap pea, many for the first time in their lives, and they would ask for more, and they would eagerly eat them until the samples were gone.

The concept that food should be available to all children, regardless of their ability to pay, evolved parallel to the civil rights movement and is deeply embedded in issues of social and economic justice.¹⁰³ The National School Lunch Program was created in 1946 to improve the quality of life of poor children, and now serves breakfasts, lunches, and after-school snacks to millions of children who depend on their school cafeterias' services for their daily nutrition. Many of these children come to school hungry, and school meals will be their only source of food for the day.¹⁰⁴ Because over 80 percent of children living in poverty are eligible for free or reduced-price school meals, these programs have the potential to significantly reduce the hunger and undernourishment of millions of poor children.¹⁰⁵ That is, if the food were healthy or nutritious. Unfortunately, most lunch programs rely on subsidized commodity food programs. Commodity foods are often surplus foods, including damaged food, outdated perishables, and food that might otherwise have been disposed of as waste. Much of it is

¹⁰³ Gottlieb, R. & Joshi, A. (2010), p. 87-89, describe the history and politics of school lunch programs, which, they argue were overtly racist and classist, until the 1960's and 1970's when elimination of poverty and hunger became a core policy objective, and social justice advocates began to actively pursue legislation that focused on an adequate and healthy diet as a fundamental human right.

¹⁰⁴ Azuma, A., & Fisher, A. (2001). *Healthy farms, healthy kids: Evaluating the barriers and opportunities for farm-to-school programs*. Los Angeles: Community Food Security Coalition.

¹⁰⁵ Pretty, J.N. (2002), p. 123, "In low-income neighbourhoods, 25-40 percent of residents experience hunger, and some four in ten children live in poverty."

high in sugar, sodium, and saturated fats.¹⁰⁶ Fortunately, the commodities program has gotten better in recent years, and lunchroom staff has more options to request whole foods rather than processed foods. Eureka City Schools also made the decision to move to a central kitchen several years ago, and no longer uses a packaging machine to individually wrap lunch items, as I saw at Alice Birney Elementary. They now prepare the food from scratch in the central kitchen and deliver bulk meals to individual sites. “The kids like that better because it is easier to see and smell the food.”¹⁰⁷

Farm to School (FTS) pilot programs began to emerge around 1997, and by 2014 more than 4,000 programs had been established in all fifty states, serving more than 23 million children.¹⁰⁸ These programs focus on creating distribution networks between school nutrition programs and local farmers so that schools can purchase produce from local sources without increasing their standard food budget, bringing fresh fruits and vegetables to school cafeterias. Erin Derden-Little, Regional Food Systems Coordinator for Humboldt CAFF, describes her role as a “relationship broker,” building relationships and putting systems into place that benefit both the farmers and the institutions. It is an ever-evolving process of collaboration and communication, which requires much planning, managing timelines, and marketing. The results of such efforts are increased nutrition education, access to healthier food through the reduction of processing and transportation costs, and increased community alliances supporting the food needs of the community and the local food economy.

¹⁰⁶ Gottlieb, R. & Joshi, A. (2010), p. 94.

¹⁰⁷ Interview with Erin Derden-Little.

¹⁰⁸ Farm to School. *National farm to school statistics*. <http://www.farmentoschool.org>, accessed Sep. 3, 2014.

At present, the major player in the FTS network in Humboldt County is Humboldt State University's (HSU) dining hall. Since 2005, HSU has worked with CAFF to build relationships with local farmers, coordinating food needs and supplies, and negotiating prices. Now, during the growing season, 50-100% of the produce served in the dining hall is local and organic.¹⁰⁹ Other institutions that purchase local fruits and vegetables for their meal programs include Mad River Hospital, Humboldt Senior Resource Center, several local charter schools, Eureka City Schools, McKinleyville Union School District, Arcata Elementary School District, and Trinidad Elementary School District. While FTS programs have emerged as a powerful food justice approach, capable of becoming one of the most significant food access strategies available to meet the needs of children living in poverty, the major barrier to implementation of FTS programs in most schools is funding. Erin describes food service as the most regulated part of the school system. Burdened by limited budgets, high turnovers in staff, and increased regulations, food service staff are not highly supported. One of CAFF's objectives is to better sustain food service staff with regional meetings, trainings, and general assistance and reinforcement.

When asked about the successes of FTS programs in Humboldt, Erin talks about how many local schools are serving local Fieldbrook Valley and Clendenen's Apples, and she tells me about Taco Tuesday. Last year, after rancher Clint Victorine offered to donate grass-fed Eel River organic beef to all the schools in the county, CAFF and the Humboldt County Office of Education teamed up to create Taco Tuesday, an event where

¹⁰⁹ Lawlor, D. (2009). From the farm to the dining hall. *Humboldt State University: Now*. <http://now.humboldt.edu/news/from-the-farm-to-the-dining-hall/>, accessed Aug. 23, 2014.

every school in the county serves tacos made with local beef on the same day. This year, the second annual event grew to include 28 different school districts, with the addition of Del Norte County schools and a second rancher, Matt Westbrook of Oat Hill Organic Beef. According to Erin, this year, 80 schools and over 8,000 students participated in the event. Events like these allow farmers, schools, and organizations to practice the different systems involved with local purchasing, such as communication, procurement, and distribution. Such partnerships are beginning to establish an infrastructure for local procurement, which can ultimately result in a steady income for growers and high quality food for institutional communities.

Food Gleaning Programs

The food system is wrought with inefficiencies, inequities and inconsistencies. Nowhere are the injustices of the food system more apparent than in the paradox of industrial agriculture: while we have created an agricultural machine that produces more than enough food to feed all the people on the planet, somewhere from 900 million to over 1 billion people—or 15 percent of the world’s population—are undernourished.¹¹⁰ Every day, hundreds of millions of people go hungry, and it is not because there isn’t enough food. According to the Environmental Protection Agency, food waste—uneaten food and food preparation scraps—accounts for 14 percent of the municipal solid waste

¹¹⁰ Cobb, T.D. (2011), p. 293. In the United States there are 400 million hungry people, including more than 13 million children.

stream and totals more than 34 million tons per year.¹¹¹ Overproduction breeds wastefulness. The food finds its way to the landfills, rather than the plates of the millions of hungry people. Some food scholars that criticize food assistance programs for their emphasis on preventing the waste of food rather than feeding the hungry, and reasonably argue that the quality and nutritional value of “surplus, distressed and unsaleable food” does little to serve low-income communities.¹¹² There are, however, many emerging strategies that help ensure the poor have access to fresher, higher-quality food. Most of these strategies involve creating local food networks and gaining access to local food resources.

Humboldt County’s official food bank, Food for People (FFP), has been a leader in creating food distribution solutions that link the needy with healthy food. Food for People (FFP) focuses on providing access to “good, quality, nutritious” food and also provides community education and advocacy.¹¹³ “Food for People distributed 2.1 million pounds of food last year, and its services reach more than 12,000 individuals in Humboldt County monthly through 14 different programs.”¹¹⁴ FFP’s community food programs include: food distribution for 15 food pantries including the Choice Pantry that allows people to “shop” in the storehouse and choose the food they want and need; a senior

¹¹¹ U.S. Environmental Protection Agency. (2010). *Basic information about food waste*. <http://www.epa.gov/osw/conservation/materials/organics/food/index.htm>, accessed June 12, 2014.

¹¹² Winne, M. (2008) *Closing the food gap: Resetting the table in the land of plenty*. Boston: Beacon Press. Winne argues that “the institution of food banking evolved as one of codependency between food donor and food recipient” and detracts energy from ending hunger and poverty, p. 70.

¹¹³ Food for People. <http://www.foodforpeople.org/about>, accessed July 5, 2014.

¹¹⁴ Waxman, D. (2014). Hunger action month: 30 ways in 30 days to learn and do something about hunger. *Times Standard*. September 9, 2014. http://www.times-standard.com/News/ci_26500719/Hunger-Action-Month:-30-ways-in-30-days-to-learn-and-do-something-about-hunger, accessed Oct 13, 2014.

hunger relief program and home delivery service serving the elderly; children's programs offering after-school snacks, backpacks for kids, and a summer lunch program providing food for low-income children during the weekends and summer months; the People's Choice market, a free farmers' market-style distribution model supplied with locally grown and freshly gleaned produce; the Mobile Produce Pantry, a refrigerated truck that delivers fresh fruits and vegetables to specific locations where low-income families struggle with access; the Market Match Program, previously described, allows people to use EBT benefits at farmers' markets; the Nutrition Education Program that provides recipes and cooking classes to help people prepare nutritious meals; and food drives and food gleaning programs that connect the hungry with fresh local produce.¹¹⁵

The food gleaning program is an especially intimate expression of joining local food resources with community food needs. Gleaning programs are supported by volunteers who harvest surplus produce from farms, farmers' markets, orchards, and backyard gardens. Many of the donors are participants in the Plant a Row for the Hungry campaign, which encourages community members to plant extra food to donate to their neighbors in need. Last year the FFP Gleaning Program harvested over 73,000 pounds of fresh local fruits, vegetables, and meat from 53 local farms, orchards, and ranchers.¹¹⁶ This is food that is considered unsalable, which means it's a little less than perfect, produce that would have gone to waste that is salvaged and distributed through the FFP's other programs. In their focus on providing access to fresh, nutritious foods, the FFP

¹¹⁵ Food for People. <http://www.foodforpeople.org/programs>, accessed July 5, 2014.

¹¹⁶ Food for People. <http://www.foodforpeople.org/programs/gleaning-program>., accessed July 5, 2014.

programs are actively shifting the politics of food relief programs and addressing the inequalities in food distribution systems.

Growing a Future

Spring came again after a winter of sunshine, radioactive rain and plastic snow. The nettles and violets grew anyway. The chickweed and lemon balm are crouching crowded in the shady corner of the greenhouse, planning the revolution. I hear them conspiring quietly in the dawn “Move with caution but don’t be scairt. We are all in this together.”

This chapter is about healing the deep wounds that the industrial food system has left on our planet and our communities. The community food projects discussed here demonstrate an emerging infrastructure that is based on coalitions in community-based agricultural systems and are dedicated to supporting the food needs of local populations, as well as the emotional and physical needs of a community, and the ecological needs of the planet. It tells the story of the benefits of local food: to the people who consume it, the people who provide it, and the community as a whole. These projects emphasize community relationships, and their success relies on participation, cooperation, and trust. Such projects not only result in less resource consumption and less ecological damage, they also engage individuals in mutually-supportive community activities. By developing cooperative relationships, local economies ground our purpose in place, shifting our sense of identity away from the isolation of “hyper-individualism” and toward a

conscious participation in community creativity. They have the potential to “re-embed individuals in some context where our impulses make more sense and do less damage.”¹¹⁷

We must continue to organize our social and productive capacities around creating an alternative food regime. We must continue to reconnect to our food, the land, and each other. These relationships are the foundation of a food culture dedicated to biodiversity, sustainable agricultural practices, and social justice. Our task is to encourage these relationships, to become participants in community, to increase knowledge of and participation in local food systems, to promote civic engagement, to cultivate our soil and fertilize our future.

¹¹⁷ McKibben, B. (2007), p. 122.

CHAPTER THREE
 CULTIVATING A QUIET CONSCIOUSNESS:
 EDUCATION AS SOCIAL TRANSFORMATION

“There is an inexpressible feeling of foundation that comes from staying directly connected to the earth, a humility that comes from directly touching whatever we are experiencing. This direct connection helps bring things alive; it is refreshing. In this way, the energy of the world floods through whatever moment we dare to enter fully.”¹¹⁸

My greatest pleasures and most meaningful experiences in food systems research have been with children. They have been my teachers, showing me what it truly means to learn: to fully enter a moment, to experience an understanding, to absorb the energy and consciousness of the world by simply being in it. The children *are* the “inexpressible feeling of foundation.”¹¹⁹ This chapter focuses on the garden as a critical site for education, a place where children reconnect with food, land, and community. It explores how experiential, place-based learning provides children opportunities to creatively engage with the local food system, allowing them to interact directly with the earth and community in positive ways. These are models that encourage knowledge of and participation in local food systems, practices that engage the creative and critical aspects of a young person’s mind. Whether in the garden, the classroom, on the farm, or at the market, they leave a physical, psychological and social imprint on their participants. This is a chapter of laughter, song, play and storytelling: different ways of knowing. It is about the cultivation of a

¹¹⁸ Nepo, M. (2000). *The book of awakening*. San Francisco: Conari Press, p. 247-248.

¹¹⁹ Ibid.

new consciousness: growing active, informed and creative members of a food secure society.

Social philosopher Wendell Berry identifies education as a site for cultivating civic engagement and offers insights into nurturing the processes of participation and inclusion. Berry argues that there exists an intimate relationship between the land, community, and personhood, and that the realization of one's full humanity is contingent upon being deeply rooted to a particular place and sharing that place with others. He insists that corporate liberalism, in its emphasis on competitive social relationships and the assumption of isolated selves, undermines the formation of a consciousness committed to the establishment of genuine community and separates individuals from nature, which in turn legitimates the exploitation of nature.¹²⁰ Berry implicates the educational system in the propagation of these ideas, and says that "the purpose of education [in the United States] has been to prepare people to 'take their places' in an industrial society."¹²¹ As an alternative, Berry calls for a place-based pedagogy, grounded in local knowledge and intimately involved with the community and the land.

Advocates of place-based education argue that in our current educational system there exists a disconnection between what is learned in school and the actual lived experience of the student. This gap tends to direct children's attention away from their own circumstances and ways of knowing and requires them instead to "internalize and

¹²⁰ Snauwaert, D. T. (1990). Wendell Berry, liberalism, and democratic theory: Implications for the rural school. *Peabody Journal of Education*, 67, 118-130.

¹²¹ Berry, W. (1990). *What are people for?* San Francisco: North Point Press, p. 25.

master knowledge created by others.”¹²² “In place of actual experience with the phenomenal world, educators are handed, and largely accept, the mandates of a standardized, “placeless” curriculum and settle for the abstractions and simulations of classroom learning.”¹²³ By grounding the learning experience in activities related to their own social realities, in a specific geographical location, and the collective life of the community, place-based education allows students to become the creators of knowledge rather than the consumers of knowledge.¹²⁴ Educational activities are rescued from a world of abstract knowledge creation and consumption, and resituated in local community processes, encouraging participation in civic and cultural life. By “resituating learning in the context of communities” students become embedded in economic and social relations that help them understand their capacity to shape their own lives.¹²⁵

Examples of such place-based educational strategies include school gardens and farm and farmers’ markets tours for children. The purpose of these activities is to increase nutrition, environmental, and social education through “learning by doing.” They allow children to intimately experience where their food comes from and the biological and human processes involved in producing it. They also provide children with an opportunity to communicate with the land and adults in positive and creative ways,

¹²² Smith, G. A. (2002). Place-Based education: Learning to be where we are. *Phi Delta Kappan*, 83(8), 584-594, p. 585.

¹²³ Gruenwald, D. A. (2003). The best of both worlds: A critical pedagogy of place. *Harvard Educational Review*, 72(4), 515-541, p 518.

¹²⁴ Smith, G.A. (2002), p. 593.

¹²⁵ Ibid., p. 594.

gaining an understanding of the land and its care, as well as the social, spiritual, physical and psychological rewards of working with others.¹²⁶ Through conversations, lessons, and games, the children learn about sustainable food practices, issues of food production and distribution, and the social history of farming. At the same time, this creative engagement with their own food system, allows them to develop the skills, confidence and enthusiasm to grow, prepare and eat fresh fruits and vegetables.

Farm to School

“Most parents live in hope that their children will have long, healthy, happy lives. So the news that today’s children face the prospect of a shorter life expectancy and lower quality of health than their parents, due to the long-term health impacts of childhood obesity and diabetes, can be shocking, and is galvanizing parents, teachers, and health providers into action.”¹²⁷

As discussed in the previous chapter, Farm to School (FTS) programs have been established nationwide with the dual intentions of improving student nutrition by providing healthy food for school meals, and offering children opportunities for agriculture, health and nutrition education. Food-based curricula in the classroom and experiential learning opportunities such as school gardens, farm tours and visits to farmers markets increases young people’s knowledge of nutrition and allows them an opportunity to experience a deeper understanding of natural systems by cultivating, harvesting and eating fresh fruits and vegetables.

¹²⁶ Gottlieb, R. (2001). *Environmentalism unbound: Exploring new pathways for change*. Cambridge, MA: The MIT Press.

¹²⁷ U.S. Department of Health and Human Services. (2005). *Obesity threatens to cut U.S. life expectancy, new analysis suggests*. March 16, 2005, <http://www.nih.gov/news/pr/mar2005/nia-16.htm>. In Cobb, T.D. (2011), p. 145.

The FTS programs in Humboldt are made up of many community partnerships, networks and resources, including educators, nonprofits, farms, and volunteers. Most FTS activities are directed by the non-profit Community Alliance with Family Farmers (CAFF). CAFF provides classroom nutrition activities and farm field trips to over 800 elementary school students a year (80% coming from low-income schools)¹²⁸ and collaborates with the Humboldt County Office of Education to support their Harvest of the Month program by adding a local agriculture focus to their classroom materials. CAFF's on-farm educational activities are made possible through partnerships with Redwood Roots Farm, the Arcata Educational Farm (now known as Bayside Park Farm), Shakefork Community Farm, Fieldbrook Valley Apple Farms and Deep Seeded Community Farm. These farms host CAFF's farm fieldtrips for youth and/or training programs for garden-based educators.

In 2007, I participated in CAFF's Farm to School Docent program, led by Erin Derden-Little, that offered training as a garden educator. The training, and many of the farm fieldtrips, took place at Redwood Roots Farm (RRF) in Jacoby Creek. RRF is not only a CSA farm that has provided fresh food to local residents for 15 years, it is also a community resource, a center for youth and adult garden-based education. The farm has its own education program and children's garden. It is committed to cultivating stronger connections between people, their food, and the natural environment. It was here that I learned the songs, games, and educational activities that I would sing and play with children visiting the farm on school fieldtrips. I began to see the farm as a classroom,

¹²⁸Community Alliance for Family Farmers. <http://www.CAFF.org>, accessed March 12, 2014.

learning to facilitate nutrition, ecology and biology lessons within the environment of nutrition, ecology and biology. The farm has its own language, tells its own story, so my role was simple: to draw attention to the lessons of the land. I learned to talk about water, soil, sun and air in a language a six or nine year-old would enjoy and understand.

Educating children about where their food comes is not so hard when their hands are buried in the earth pulling up carrots. It is not so hard to convince them to eat the carrots once our hands and carrots are washed clean in the outdoor kitchen. The connections between food, agriculture and the environment were implicit in the activities and the children were easily engaged.

A typical farm fieldtrip consisted of 30-40 students and eight docents. We would begin by gathering in a circle in a clearing in the flower garden, talking about the rules of the farm, and doing the plant part hokey-pokey, to get the wiggles out. “You put your root in; you put your root out; you put your root in and you shake it all about.” We would proceed to shake all our plant parts: our stem, our leaves, our flowers and seeds, until we were shaking our whole plant in a wild display of garden wiggles. The students were then divided into four groups that would cycle through 4 garden activities facilitated by two docents per activity.

One activity is about the soil. We pass around a soccer ball, baseball and golf ball to understand the different sizes of soil particles, and fill jars with soil and water, shake them vigorously, and let them settle into sand, clay and silt. We play in the compost pile adding the green stuff for nitrogen and the brown stuff for carbon, find decomposers and

feed the worms in the worm bin, sift the composted soil and fondle the humus to see what plants need to grow, and talk about how long it must take for the little creatures to create enough soil for a farm like this one—thousands of years.

Another activity is all about insects. First, we spend some time talking about what makes an insect: their exoskeleton, their body parts, their six legs, that they live on both land and water, their antennae that help them touch, hear, smell and taste, their eggs and metamorphosis, and that some fly and some do not. We talk about other bugs that are not insects and why. After all the talk, the children are given nets and introduced to the bug hotel, where they can temporarily store the insects they find so everyone can look at them. Then they run around the farm chasing flying insects and creep around on their knees looking for crawling ones. Then we talk about what the insects do on the farm, how they make soil and pollinate the plants, and how we call some of them pests because they damage or eat our food.

The third activity is a gardening activity. It usually involves planting seeds, transplanting plants, and harvesting and eating something from the farm. The children almost always get to taste something: an edible flower, a spinach leaf, a carrot or strawberry. They also get to make a newspaper pot and transplant a flower or food plant to take home with them and plant in their yard or house. They know it needs soil, water, sun and air to grow, and they are given the chance to take it home and nurture its growth.

The final activity, and my personal favourite, is the nature walk, a fieldtrip inside a fieldtrip. We walk past the chickens and hedgerows and talk about what they do for the

farm. Then we head down the path that takes us to Jacoby Creek. On the way we look for wild edible plants and signs of animals. The lens widens as we walk and talk about how everything is connected. The plants need the insects and animals; the animals need the plants and insects; the insects and the plants and the animals need the water and soil; and in order to make our food, we need them all. When we get to the creek, we spend time exploring the banks, searching for a small rock that will tell us a story, something that fits in our hand. When the children have gathered their rocks, we sit in a circle, getting to know the rock: its colors, its smell, whether it is sharp or smooth, heavy or light. We also take time to listen to the rock tell us the story of its journey to this place and its life as a rock. Then we collect the rocks, ask the children to close their eyes, and put the rocks randomly in the children's right hands. We ask them to find their rocks without looking, passing them in the circle until everyone has been reunited with "their" rock. On the walk back, we walk in a line, trying to be completely silent like the animals, and whenever someone makes a sound, they have to go to the back of the line. I always enjoy this part the best because even as the squealing and laughter has been momentarily quieted, there is a palpable joy in the silence, a presence of spirit as the children pretend to be wild animals in the forest, a brief chance to process the deep connection we have discovered on our walk.

When given the chance, children tell the best stories. When given a context, the stories become even better. There is a farm fieldtrip activity for small children called the Penny Hike. The children are each given a penny and asked to lie down with their bellies

on the ground. They are told that this is the world of the small insects, the worms and the ladybugs. They are asked to see the world as these small creatures would see it, and collect treasures on their pennies. At the end, the children share their pennies with each other, comparing universes of tiny stones and flowers and bugs. Wendell Berry argues that education has a responsibility to cultivate judgment, which is a function of critical intelligence and imagination, based upon "feeling and appearance, intuition and experience."¹²⁹ Judgment is the capacity for relational, comparative knowing, and "truth," which is the product of judgment, "rises out of the comparison of one thing with another, out of the study of the relations and influences between one thing and another and between one thing and many others."¹³⁰ Whether in the world of a worm, the body of a wild animal creeping through the forest, or the story of the stone, allowing children space to engage in imaginative action helps cultivate faculties of judgement, a practice of genuine consciousness, the intuitive and experiential apprehension of an interdependent world. The imagination is a critical part of this apprehension, as it serves as an act of creation, an act of visualizing alternatives and possibilities, providing the necessary preparation for self-determination and democratic citizenship.¹³¹

As a volunteer for CAFF in 2008-9, I also assisted with children's fieldtrips to Farmers' Markets, school gardens and classroom nutrition lessons. Through these experiences, I was able to observe the unique role of food and place in the creation and sharing of knowledge. In the school gardens, children were given the information, skills

¹²⁹Berry, W. (1987). *Home economics*. San Francisco: North Point Press, p. 90.

¹³⁰ Ibid. p. 91.

¹³¹ Ibid.

and assistance they needed to grow food, but the task was in their little hands. They were given the opportunity to see how the plants wilted without water and how a distressed plant showed signs of deficiencies and attracted pests. In the classroom, we would talk about where our food comes from and the children would realize that pepperoni does not come from WinCo (a big Grocery store in Eureka); it comes from a cow on a farm. My favorite experience in the classroom was when the farmers would come to visit. They would tell stories of farming and bring food samples from the farm for the children to munch on while listening. The children were fascinated with the farmers and would ask them questions like “Don’t you get dirty?” or “How many people can you feed?” The dialogue between the farmer and the children personalized the experience of food, putting a (usually smiling) face to the process of producing and distributing food for community. Farmers’ market fieldtrips offer an even more intimate dialogue, exposing children to many farmers and a variety of different food. The fieldtrips began with a scavenger hunt that had nutrition-related clues, introducing the students to obscure fruits and vegetables that grow in their community. The children were also given a few market dollars with which they could buy whatever fruits or vegetables they like. They were encouraged to look at everything before they made their decisions and talk to the farmers about what their market dollars could buy. Some children surprised me with their decisions, choosing broccoli or radishes rather than fruits or berries, but all of the children ate the food they bought and seemed happy with their food choices.

Farm to School educational programs of this sort influence young people on many levels: increasing their knowledge and awareness about food sources, nutrition, eating behaviors and lifestyles. Because they are active participants in the biological and social processes of food production and distribution in their own communities, eating locally sourced products becomes part of the framework that turns kids onto healthier food options. A connection with local also deepens student's appreciation for food and agriculture,¹³² transforming students from passive consumers to informed eaters who make good nutritional and stewardship choices through food.

Story of the Seed

Life begins so small that sometimes it is difficult even to see it. In a tiny seed, the whole of life lies dormant, waiting for the perfect moment of becoming. It is not life itself, but the possibility of life that makes the seed so sacred. It is hope for the future, for another season of survival.

As long as humans have cultivated food, they have nurtured the evolution of plant varieties. Through experimentation, cross-pollination, and seed selection, they have adapted their food resources to meet the environmental and nutritional needs of specific places and cultures. Seed has been saved and shared. It has traveled and been transformed. Today, our relationship with seed is much like our relationship with food—distant and commoditized. Rather than valuing plant varieties for their vigor, taste, color, texture, nutritional value or adaptation to local conditions, the seeds of modern agriculture are manufactured and saved for their yield, their shelf-

¹³² Cobb, T.D. (2011), p. 148.

life, their ability to travel. The seed is no longer about delicious or nutritious; it is about how much and how far.

The amazing irony of the seed is that while it holds all the possibilities of life, if it is not grown, it will lose its power to live. Most seeds, if left dormant, will lose their viability in less than five years.¹³³ If they are not allowed to grow, the seeds will die. Countless seeds have already died; unused and unloved, they have disappeared from the planet entirely. Once, humans grew over 3,000 plant varieties for food.¹³⁴ In 2004, the director of the United Nations Food and Agriculture Organization (FAO) warned: “Today only 150 plant species are cultivated, 12 of which provide approximately 75 percent of our food and four of which produces over half of the food we eat. This involution has increased the vulnerability of agriculture and has impoverished the human diet.”¹³⁵ The ancient seeds continue to vanish, and the further we get from our connection with them, the more vulnerable and malnourished we become.

The wide variety of ancient seeds that once nourished the people of this planet is quickly being replaced with the modern seeds of large agribusiness. Now, most crops grown in the U.S. come from genetically modified seed, seed that is engineered, patented and owned by large corporations who also produce the fertilizers and pesticides needed to grow those crops. The inevitable loss and

¹³³ Mushita, A. & Thompson, C.B. (2007). Five years average; 25 years in cold storage is about maximum.

¹³⁴ University of Illinois at Chicago. *Conservation biology: Biodiversity of useful plants*. <https://www.uic.edu/classes/bios/bios101/usefulplants.PDF>, accessed Nov. 23, 2014.

¹³⁵ Choi, C. (2004). Crop biodiversity treaty OK'd. *The Scientist* 5(1) (April 14) <http://www.biomedcentral.com/news/20040414/03>, accessed April 2, 2013.

eventual destruction of so many irreplaceable species overwhelms my sensitivities. Seeds are the sacred blessing that allows humans (and all creatures) to live. They should inspire humility and respect, and we should feel a duty to protect them, as we do our children, because their fates are most certainly intertwined.

On a windy afternoon in late March, I helped a group of fifth-graders plant heirloom peas in their school garden plot. When one of them asked what an heirloom was, I explained that it is a plant that has been grown for a really long time—at least 50 years, and unlike many hybrid plant varieties, heirlooms have the ability to reproduce themselves. I explain that peas are self-pollinating plants and the flowers are complete—the pollen and stigma are in the same flower and they need only to open to create a seed. Then we talk about open-pollination and cross-pollination, plants that need other plants to form seeds and pollinators and wind to move the pollen from one plant to another. I found a few dried pods of an arugula plant and asked the kids to shake them and to break them open and look inside. I explained that we will let the pea pods ripen on the plant until they are dry and starting to turn brown, then we will take them inside to dry them completely, label them, and keep them in a cool dry place until next year, when it's time to plant more peas. Some of the children stuffed arugula pods into their pockets to plant in their yards.

It seems unlikely that they would understand the importance of their actions, even if I could explain to them how threatened some plant varieties are. It also seems unnecessarily frightening to explain to a ten-year-old the current crisis of agricultural

biodiversity, the privatization of plants for profit or the dangers of GMO crops. It is enough to put a tiny pile of seeds in their hands and show them how they can grow peas, and later instead of eating all of them, we will leave just a few for seed collecting. I am surprised at how safe the seeds seem in their little hands. It is as if they belong there, cradled with such care and reverence. And when they poke tiny holes with their fingers and carefully put one seed in each little hole, the seeds are remembered. They become again the essence of the common genetic heritage of all humankind.

If seeds are our hope for the future, then our children are our most sacred seeds, and in them, the possibilities for life are endless. These seeds might be dormant for quite awhile, waiting for the right conditions to begin becoming: the exact right temperature, just enough moisture, or some special combination of soil nutrients. Perhaps those conditions will never occur, and our children will die seeds still hiding in their shells. But more likely, there will be a moment when the seed cracks open and the light comes pouring in, changing everything to green. Most likely there will be that slow-motion instant when a tiny stem pushes the earth away, and a sprout emerges still clinging to its seed. After that, it is impossible to predict what will happen next. The story of growing begins.

Digging Deeper

In the summer of 2009, I was blessed with the opportunity to teach a summer program for kids at Redwood Roots Farm (RRF). The day camp was called “Farmtastic

Science” and was offered through the HSU Natural History Museum. With the help of my friend and fellow garden educator, Natalie Faris, I developed a garden-based curriculum that would span five six-hour days. During that week, we got to play with, teach, and learn from 11 five-to-seven-year-olds. Lucky for all of us, it was the first summer of the Kid’s Garden at RRF, a garden designed by Erin Derden-Little specifically to provide small groups of students with a fun, interactive learning environment. The garden was planted with themed perennial beds, rows of strawberries and edible flowers, and included a worm and aerobic compost system, a cold frame, and the children’s favorite part: the sunflower circle, a circle of towering sunflowers (twice as tall as the students) with a clearing in the middle for the kids to gather secretly inside. The farm and Kid’s Garden served as an outdoor classroom where the kids could experience, nurture, and enjoy the process of food cultivation and preparation.

The camp gave the kids an opportunity to really connect with the farm and explore the garden ecosystem and Jacoby Creek through hands-on gardening projects, food preparation, garden-based crafts, and many garden games. Each day at camp was devoted to a different aspect of agriculture. We spent the first day getting to know the farm and kid’s garden, the farmer and her tractor, the chickens and the flowers. We toured the farm and played the naming game, pointing to things and asking the children “what would you call that?” Whatever they answered became the name of that thing; the language belonged to them and made for amusing conversations. We spent an entire day discovering plants in the garden, exploring plant parts and life cycles. We planted seeds

and starts into the beds we had prepared in the kid's garden. We transplanted little sunflower starts into newspaper pots to bring home. We made plant presses and collected leaves and flowers to dry and preserve. One day was devoted entirely to insects, spiders, worms and forest animals. We spent the day finding out why they were there and what they did for the farm. We searched for them, held them, became them, drew them and told stories about them. We spent another day playing in the dirt, building compost piles and preparing garden beds with finished compost. We made seed balls with humus and clay and seeds. (In more mature environments we call them seed bombs and imagine populating the barren places—empty lots, grass lawns, gravelled roadside ditches—with wildflowers, edible salad greens and medicinal herbs.) The kids enjoyed making seed balls and were excited to plant them in their yards and neighbourhoods. Our hands got very dirty that day and we learned that dirt is beautiful. The last day of camp, we spent most of the day playing games in the garden, eating, singing songs, and telling stories. Every child picked a character on the farm and made a puppet. Then we made up many stories with our puppets and performed a puppet show for the farmer and the farm interns.¹³⁶

Each day two or three students were given the chance to enter the chicken coop and gather eggs. Each day we took a hike to the creek or to the edge of the farm. We spent time listening to the sounds of our environment and felt ourselves as part of it. Every day we prepared a snack with food we gathered from the farm. We walked around and picked spinach leaves and pea pods, pulled up carrots and collected edible flowers and herbs. We

¹³⁶ See Appendix for “Farmtastic Science” curriculum

prepared our snacks and herbal teas in the outdoor kitchen, and we ate and drank eagerly and joyfully. Each day we practiced our senses: we smelled and tasted, looked and listened, and we touched things, many things. Each day we sang songs and played games where we were something other than ourselves: an animal, an insect, some part of the biosphere. We ended each day by gathering in the sunflower circle and making stories. Someone would begin the story and then each child would add to it. The stories were funny and imaginative. They almost always included details of the day's experiences. On our insect day, there were many insects in the story. On our garden day, the story was full of death and rebirth. As an adult, I had a hard time physically entering the sunflower circle. It was made for the children and they belonged there. While I felt awkward, they felt safe, as if it were a shelter of some kind, a hideout. The circle was peaceful and the storytelling was a perfect way to decompress from the day's activities and process and share the information we had gathered throughout the day. The children looked forward to our collective storytelling, and in the shelter there was no bickering or judgement between them. Just as they were learning to trust the earth, they were learning to trust and accept each other. During that week, I discovered many things about the processes of teaching and learning. Allowing the students creative space to guide their own learning experiences directed them toward their own ways of knowing. I learned that an educator cannot teach connection, the learner must be given the opportunity to experience it, and once they do, it resonates deeply.

Depending on the methods of knowledge creation, education can represent an important site for either the reproduction of hegemonic discourse or the expansion of cultural values and ideas. Wendell Berry's emphasis on grounding the educational process in the collective life of the community within a specific geographical location is predicated on the idea that authentic knowledge must be connected to experience. He argues that when ideas are disconnected from experience there is no basis upon which the student can critically evaluate them, and that this disconnection serves to make the mind dull and obedient rather than active, informed, and creative.¹³⁷ Educational practices that are dislocated in this way contribute to an ideological hegemony, or what Berry calls "mind domination." Berry accuses the media, public schools, and other social institutions of being the packagers of "ready-made thoughts," which serve to manufacture consent and reproduce the values of the dominant culture.¹³⁸

This idea is akin to Antonio Gramsci's notion of *common sense*: "the conception of the world which is uncritically absorbed by the various social and cultural environments in which the moral individuality of the average man is developed."¹³⁹ This is the unreflective consciousness of the individual, "a conception which, even in the brain of one individual, is fragmentary, incoherent and inconsequential, in conformity with the social and cultural position of those masses whose philosophy it is."¹⁴⁰ This unconscious

¹³⁷ Snauwaert, D. T. (1990).

¹³⁸ Berry, W. (1984). Whose Head is the Farmer Using? In W. Jackson, W. Berry, & B. Colman (Eds.), *Meeting the expectations of the land: Essays in sustainable agriculture and stewardship*. San Francisco: North Point Press.

¹³⁹ Gramsci, A. (1971). *Selections from the prison notebooks*. London: Lawrence and Wishart, p. 419.

¹⁴⁰ *Ibid.*, p. 419.

consciousness is embedded in economic and social relations and serves to legitimize the dominant ideology. Berry suggests that such hegemonic practices keep us from participating in “shared, creative engagement with the earth in communion with others, which in turn debilitates our mental and spiritual condition; it robs us of genuine personhood.”¹⁴¹ Educational practices that are grounded in the land and community offer opportunities to experience the world in creative, unmediated ways, so that knowledge becomes the product of an expanded consciousness based on imagination and experience rather than a hegemonic reproduction of ultimate reality. Such practices also provide an important site for reconnection with others and the cultivation of civic engagement, one where “the wall between the school and community becomes much more permeable and is crossed with frequency.”¹⁴²

Toward a New Common Sense—Adult Education

*This little piece of earth is the teacher of a secret recipe:
the complex ingredients of happiness.
Buttercup, blackberry, willow and nettle.
Tradition, intention, intuition and patience.
Speak to us little lives. Whisper your divinations.
Speak to us. We are listening.*

The face of farming is slowly changing in Humboldt County. There is currently a surge of young people taking up the task of farming food. It seems that a food-conscious community grows food-conscious people, eager to express their commitment to a food-

¹⁴¹ Snauwaert, D. T. (1990), p. 121.

¹⁴² Smith, G.A. (2002), p. 593.

conscious society. Over the past decade, I have witnessed the emergence of many small farms created and managed by very young adults, small acreages with hopeful names like “Laughing Mother Farm,” and “New Moon Organics.” I believe this is an expression of a deep ideological shift in our culture, a sign that this community is succeeding in encouraging young people to become active, informed, and creative members of their society, especially in relation to food and lifestyle choices.¹⁴³

While the UC Cooperative Extension offers agriculture and horticulture workshops and a 4-H program, there are very few state-funded agricultural education programs in Humboldt County. For adults looking for experience in small-scale farming, College of the Redwoods (CR) offers a certificate program in agricultural production which includes an internship at the CR farm in Shively. HSU also offers courses in sustainable agriculture and alternative energies, but the courses are theoretical, the learning, philosophical. To learn practical farming skills, most young people must look beyond the institution; they must learn from their community. Fortunately, it is a community with many opportunities for food education; it is a community of many mentors. In addition to its educational program for children, RRF offers an internship program for people looking for experience in the field. Deep Seeded Community Farm and Bayside Park Farm offer similar internship programs. Interns must commit to a season of farming (approximately three months) and they receive training in all aspects of

¹⁴³ U.S. Department of Agriculture. (2012). 2012 Census of Agriculture reveals new trends in farming. *Agricultural Census*. http://www.agcensus.usda.gov/Newsroom/2014/05_02_2014.php, accessed Nov. 23, 2014. According to the USDA Agricultural Census, the number of young people farming throughout the U.S. is on the rise.

small-scale, organic agriculture. As many of the new farmers have participated in these programs, these farms serve as an incubator for farmers.

Here, I would like to turn to the story of Jayme Buckley, a close friend of mine, and a hard working farmer and “food scholar” in the Humboldt community. Jayme is the farm manager at Bayside Park Farm, a three-acre farm owned by the city of Arcata and dedicated to providing a space for the development of practical skills in organic and sustainable agriculture. The farm has a CSA, farm stand, and sells produce and flowers at the farmers’ market. It is run entirely by three paid crew members, interns and volunteers. Beyond the growing of food, the farm offers interns experience in goat husbandry and beekeeping. Before taking up her post as farm manager, Jayme worked for six years at RRF as an intern and part of the farm crew. She credits her time there and her work with Janet Czarnecki, the owner of RRF, for teaching her to learn to give to others, the ultimate reward of hard work. Jayme says there is a deep cultural side to the experience of farming and Janet took her under her wing, provided her with an induction into the farming society and taught her how to set other people up to take the lead. She calls this an “intentional passing down of knowledge” and says that the students that intern on the farm are hungry for information. The farm education model does more than develop farming skills; it is “creating space for others to make connection.” Farming is a challenging career; it is hard work wrought with endless trials, but in a community full of mentors, “we teach each other.” It is with deep love and profound compassion that farmers like Janet and Jayme hold space for adult learners to experience the joy of

farming, to learn the magic through their own experience of place. It is in place that we learn lifestyle, becoming an impulse rather than a choice. By now we have been so deeply immersed in the joy of being part of a conscious community, that we have become place. “Our cells have been replaced with place. It is in us now.”

Insofar as they embody forms of social and ecological interaction that challenge the dominant economic, political, and cultural systems, these educational models serve to produce counter-hegemonic ideas and values. Such alternative models rely on place-based knowledge and skills and the social processes of learning and sharing knowledge through food and place. When our own “ways of knowing” are given precedence in learning, the inequalities and injuries of the global food system and current educational system are exposed. When nurtured, this experiential knowledge forms a new ideology based on harmonious socio-ecological relations of production and consumption. “This alternative epistemology ultimately points to a different way of life. A different vision of society-in-nature, reinhabiting the middle landscape.”¹⁴⁴

¹⁴⁴ Vos, T. (2000), p. 252.

CHAPTER FOUR
NOURISHING THE NEIGHBORHOOD:
LINKING FOOD PROCESSING, SERVICES, DISTRIBUTION
AND LOCAL CONSUMPTION

The hands that shape and bake the bread, the hands that milk the goat and press the cheese, the hands that pick the grapes and cork the wine, the hands that chop the cabbage and tenderly harvest spring herbs for our evening meal—there is love in those hands, in those gestures. The love is what makes it alchemy.

Food has incredible energy. Each time we eat, we are ingesting the accumulation of all the energy it required to bring that food to our plates. It is quite a complicated accumulation—sun, water, soil, oil, machines, people. Perhaps in our modern culture, we are not always aware that we are participating in this sacred ritual of eating energy. But we have all had moments, I am sure, where we can actually taste the love in the food. We can feel it, in real-time, nourish us. In a culture where food choices are generally motivated by convenience, it is easy to forget the energetic investment in our food. Food that is processed, packaged, and pulverized has no origins. We eat it like we don't know it, like we don't even want to know it. Eating becomes a ritual of subsistence, not pleasure, an act of survival, not celebration.

This is the part of the story that recalls the magic in food preparation and the pleasure of eating. It remembers the human energy and alchemic processes involved in making local food accessible and delicious for local people. It is about the people who grow, transport, produce, prepare and serve the food. These are the advocates and activists of seasonal and nutritional foods who help us eat in place. They remind us we

have a place. They make the food powerful by actively and intentionally nurturing relationships between the growers of the food and the eaters. This is also the part of the story that remembers the health-promoting foods and food traditions that will nourish our families and communities: the deliciousness and pleasure of sharing good food with one another.

Preparing the Soil

The Tofu Shop has been a part of the Humboldt community for over thirty years. In that time, the owner, Matthew, has been building a business to support and nourish the people of this community. He believes in tofu as a healthy and sustainable alternative to meat consumption. He believes in healthy people, strong communities, and a better future. When he began his business, he lived in the back of a tiny shop in Arcata where he made small batches of raw tofu, creamy tofu spreads, and tofu pies. In the deli storefront, he sold blocks of tofu in plastic bags and dragon burgers (the tofu burger Big Mac), and during the holidays, tofu turkeys. On a squeaky bike with a dysfunctional trailer and ice chest, he delivered bulk tofu to local businesses. The people were grateful. They ate it up. A few years later, the Tofu Shop got bigger and moved to FoodWorks, the community kitchens in the industrial area on West End Road, between the metal yard and the lumber mill. When he finally had enough capital and credit, Matthew bought his own shop next door. That's where I worked from 2004-2009, making mounds of tofu, day after day, for the hungry people from Southern Oregon to Southern California.

It is a small-scale factory. For the visitor, it is a place of awe and admiration. The shiny stainless steel equipment whines and rattles as hundreds of pounds of soybeans are soaked, ground, boiled, coagulated, pressed, and cut into block after block of tofu. The clouds of steam give the workers a mysterious appearance. They seem strangely happy in their rubber aprons and boots as they press buttons, lift buckets, scoop giant ladles of curds, and spray the noisy machines with large hoses. On the opposite side of the wall lives the other world of the factory: the deli. Here the tofu is made into fancy tofu products: veggie burgers, tofu sausages, sloppy joes, and eggless salad. There are ovens, mixers and a giant smokehouse. There are kettles, vac-packers, and shelves full of colorful labels and spices.

This is where the tofu minions make the magic happen. There are about twenty employees in all, and they call this special place the Fu Factory. Matthew treats them well: flexible hours, regular raises, rafting trips, t-shirts, free tofu. They are mostly students, and despite their constant complaining, they are mostly grateful. There is something entirely honest and good-intentioned about the Fu Factory. Over 99% of the waste is diverted—either recycled or reused. The okara (soy pulp) is given to local farmers to feed chickens and cows and the paper backing of the sticker labels are used (instead of Styrofoam popcorn) to pack boxes. The equipment is designed to conserve energy and the employees are trained to conserve water. But perhaps most importantly, there is a commitment to organic ingredients. The fair-trade cocoa and organic spices that

line the shelves are a promise of sorts, to the people and the planet, this small factory's efforts to work toward health and sustainability.

Agriculture has changed a lot in thirty years, and the Tofu Shop has been witness to, and victim of, the strange cycles of an erratic food system. In one decade an organic movement blossomed and organic soybeans were abundant. And in the next, GMO crops dominated the domestic foodscape and the price of organic soybeans soared. Although the first GMO soybean seed did not become widely available to producers until 1997, by 2002, 75% of U.S. soybeans were GMO varieties, and today it is more than 90%.¹⁴⁵ Zero to 90% in 15 years. Then in 2007, US farmers planted record acres of corn to meet the demand for ethanol, and both organic and nonorganic soybean production plummeted. In early 2008, the price of domestic organic soybeans suddenly rose \$3,000 for a single shipment. The Tofu Shop, operating on a very small profit margin, could no longer afford to buy them.

Soybeans have special needs when grown on large acreages, and especially when using organic methods. Weed control is a serious problem for soybean growers, and organic production methods on large acreages require much more human energy than growing herbicide-resistant GMO soybeans that are the only plants to survive after the single-pass spray of corporate-owned herbicides. Environmentally and nutritionally, the process seems suspicious. But economically, once translated into a language of profit and

¹⁴⁵ U. S. Department of Agriculture. (2014b). *Recent trends in GE adoption*. Agriculture research service. <http://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx#.VEaZqGddW8A>, accessed Nov. 20, 2014.

efficiencies of scale, the shift to GMOs makes perfect sense. Only in such a language would we call our crops commodities rather than food. These are not soybeans grown to feed people. These are soybeans grown for the highest profit, without a specific consumer or purpose even. Some will become food for people, some will feed animals, and some will be converted to fuel. From such a perspective, the nutritional content, as well as the content of toxic carcinogens, is irrelevant.

Despite its commitment to localism, the Tofu Shop was no exception to the rules of the global market. As organic soybeans were crowded out of the U.S. market by GMOs and corn production for biofuels and animal feed, the Tofu Shop was forced to find another supplier. In the spring of 2008, it received its first shipment of organic soybeans from China. They arrived in a giant shipping container in the port of Oakland and were held there for several days for verification. Paperwork was checked and rechecked, calls were made and answered, emails sent and faxes signed, but not one of the 50-pound bags was opened. We waited for a week for the container to arrive on a semi, and as the last bag of domestic beans were used, we feared that the local tofu supply might dry up.¹⁴⁶ The day finally arrived and the container was unloaded with a forklift, filling up the Tofu Shop warehouse with thousands of bags of organic soybeans from China. There was a sense of relief. The business would not fail. Everyone would keep their jobs. We could go on making tofu for the people. But the beans were smaller than we were used to, and the consistency of the tofu wasn't right. After weeks of experimenting with longer soaks and finer grinds and pressing weights, it was almost

¹⁴⁶ The thought that crossed my mind was that we might want to save that last bag for seed, just in case.

right again. The tofu didn't fall apart. We could almost forget where they came from, except that "CHINA" was stamped on every bag.

One night I stood in the warehouse, staring up at the giant stacks of soybeans bags, and I imagined the thousands of miles they had traveled, the CO₂ that had been produced, and the sinking water tables of remote Chinese provinces. I felt suddenly implicated in a story of deception, a story complicated by distance and disguises. We were participating in the global market. We, like many US food manufacturers, were supporting the organic food industry in China, which has exploded in the last decade in order to meet the import demands of the global population. But by purchasing inexpensive beans from China, we are allowing China to undercut domestic prices, and so contributing to the gradual disappearance of the organic soybean farmers in our country. It all seemed so tragic and unnecessary. As I looked up at those stacks of soybeans, I felt the weight of our food choices. Thoughts of fraud and feelings of anxiety began to stir in me, and questions: Are we fooling ourselves? Are we fooling each other? Will we ever recover from such distance?

The global food economy is powered by brokers not farmers, managed by governments not growers, and in service to corporations not consumers. Food is grown, processed, packaged, labeled, and then shipped here and there, around the world and back again in other forms with new shapes and different labels. Ever more distance and ever less accountability. China is another planet away. In China there are 21 separate agencies that claim the right to certify food as organic. These private corporations are overseen by

the National Organic Program (NOP), which has never sent an auditor to China to make even one site visit. Paperwork audits, signatures, and official stamps are all part of the certification process. Testing the food for pesticides, heavy metals, and GMO contamination is not. Translating the USDA organic rules into the farmer's native language is also not part of the process.¹⁴⁷ But accompanied by the appropriate paperwork, most imports will pass easily through the Food and Drug Administration's failing system that inspects only two percent of food imports.¹⁴⁸ In the end, there is just a paper trail and a large warehouse full of bags of soybeans labeled "organic." In the global food economy, food safety is not about trusting your farmer. It is about trusting your label.

In November, 2008, almost 300 tons of soy-meal from China, used to feed organic poultry in western France, was recalled after testing positive for melamine levels 50 times over the recommended limit. Melamine is the chemical at the center of many recent contaminated food scandals in China. It is an industrial chemical used for making plastics and glues, which happens to have a high protein content. It was found in pet food in 2007 after thousands of pets died from renal failure. It was found again in 2008, when six babies died of kidney failure and tens of thousands fell ill from contaminated infant formula. It was found in drywall, and dumplings, in eggs, and children's face paint. It was found in organic soymeal delivered to 127 organic farms as organic poultry feed—all

¹⁴⁷ Alcohol and Tobacco Tax and Trade Bureau. (2014). U.S. Department of Treasury. International Affairs Division. <http://www.ttb.gov/itd/china.shtml>, accessed Sept. 14, 2014.

¹⁴⁸ Mamen, K., et. al. (2004), p. 33.

presumably with the appropriate label and paperwork.¹⁴⁹

By simply looking at a soybean, you could never tell whether the soil and water it was grown in was polluted with heavy metals; you could never determine whether it was fertilized by human waste; you would never know whether toxic pesticides and herbicides were used to grow it; and you could never be sure whether it was a genetic fraud. It is simply a bean in a bag of many beans. When one day a little Chinese soybean sprouted in the dirty bleach mop at the Fu Factory, we wished we had a secret laboratory in the basement. We wanted to do elaborate experiments on that sprout to make sure it wasn't trying to kill us. Instead, we rescued it and put it in soil in a small pot. It lived in the window of the break room looking out at a large vacant lot behind the factory. So far from home, it wanted to live, and so we helped it along.

Adding Amendments

A short time later Matthew found an affordable organic soybean grown closer to home, and he switched to a Canadian supplier. A few years ago, he found a family brokerage in Iowa that specializes in organic and non-GMO soybeans, beans that cost him an additional \$34,500 per year. Matthew's experience of navigating the global soybean market left a permanent imprint on his business, one that shifted the way we now eat and think about food in this community. It offered a lesson: while we may not be in a

¹⁴⁹ The Cornucopia Institute. (2009). *Behind the bean: The heroes and charlatans of the natural and organic soy foods industry*. http://www.cornucopia.org/soysurvey/OrganicSoyReport/behindthebean_color_final.pdf, accessed August 13, 2014.

position to turn our backs on the global food economy, we are always in a position to embrace the local food economy. In response to the tremendous distance that had developed between the soybean farmer and tofu maker, Mathew turned his attention to locally grown foods and started a project with a genuine intention of service: in service to local people, in service to place, and in service to the seasons. It is a project to build bridges between the farmers and the eating folks: kraut.

The first few test batches were made in half-gallon glass jars. We called them Regular Red, Spicy Green, Da Supa Spicy Green & Gold, and Purple Panacea. There were many local beets involved, both red and gold. There were also local carrots, turnips, garlic, peppers, radishes, onions, and fresh herbs. The most important ingredient was the cabbage—big fat heads of local green and red cabbage. The cabbage and veggies were cleaned and finely chopped. A little salt was added to activate the fermentation process, and then the tofu masher (a giant-size potato masher) was employed to press the concoction, coaxing it to release its juices. Cabbages, like other plants growing on or in the ground, have an abundance of lactobacilli. During the process of lacto-fermentation, starches and sugars in vegetables are converted into lactic acid, acting as a natural preservative that inhibits pathogenic bacteria. The living lactobacilli in fermented foods enhance digestibility and increase vitamin content. They also produce many helpful enzymes, antibiotics, and anti-carcinogens. The test batches turned out to be not only delicious but beautiful. Da Supa Spicy Green & Gold was a little too spicy for most of the Tofu Shop taste-testing crowd, but it was my personal favorite. The hot habaneros from

Hoopa complimented the tanginess of the kraut and the sweetness of the golden beets in the most incredible blend of yum. I ate that whole jar myself.

The kraut was only the beginning, the firstborn of the local line. The Tofu Shop quickly developed the Blue Lake Dill pickle, and has plans to produce an entire product line of locally-grown fermented and pickled condiments and chutneys. Using the great abundance of food in our area to the advantage of the people who live here requires a conscious dedication to the seasons and the farmers. Sourcing local ingredients takes much more effort than choosing a vegetable from a list, making a phone call, and having it delivered in a refrigerated truck the next day. There is a lot of planning involved, and talking and observing. The seasons dictate the production plan. We have to be patient and thoughtful, take notes and talk to farmers, compiling lists of ingredients and developing relationships with the people who grow them.

After two seasons of growing soybeans in my garden and harvesting at most 100 beans per plant, I feel grateful that there is a Midwest, a place with appropriate growing conditions for the favorite friend of American vegetarianism. I imagine if I planted my entire garden to soybeans, I could grow about thirty blocks of tofu. So I feel blessed that there are other people to grow my beans for me. Ideally, though, I would rather not be tied to the global distribution system for foods that have visible local alternatives. I don't want to eat the beans from the Midwest or a remote province in China. I want to eat Paul Giuntoli's beans from right down the road. They just happen to be red beans and navy beans and hard black beans, not soybeans. While it is unlikely that soybeans will ever

grow well in this climate, there is a good possibility that other things will grow up to take their place. The black bean barley burger, for example, seems like a good candidate—grown, prepared and eaten in place, and much tastier than tofu.

Ultimately, turning local is an act of defense. It is a small business defending itself against an unrelenting and erratic global food economy. It is a farmer defending the planet against the devastating practices of industrial agribusiness. It is consumers defending themselves against the toxic additives in processed food. It is a community defending itself against starvation, economic exploitation, and social disintegration. The kraut is only a by-product of a commitment to, and respect for, each other. The fact that the by-product contains anticancer compounds, strengthens the immune system, and nourishes the digestive system at a time when viruses, pathogenic yeasts, and bacterial diseases are escalating, is perhaps just another act of defense.

Sowing Seeds

“Rediscovering, reviving, and reinterpreting traditional food production methods reinvigorates local food systems and helps diverse cultures survive the insidious erasure caused by the global thrust for homogenization.”¹⁵⁰

The Slow Food movement (SF) was born as a defense against the globalization of fast food.¹⁵¹ The philosophy of SF is the antithesis of fast food. The movement seeks to catalyze a broad cultural shift away from the destructive effects of the industrial food system and a fast life, toward the regenerative cultural, ecological, social, and economic

¹⁵⁰ Katz, S.E. (2006), p. 153.

¹⁵¹ Slow Foods International. <http://www.slowfood.com/international/7/history>, accessed Sept. 22, 2014. Slow Food was created in Italy after a demonstration on the intended site of a McDonald's at the Spanish Steps in Rome.

benefits of a sustainable food system, regional food traditions, the pleasures of the table, and a slower and more harmonious rhythm of life.¹⁵² The founders believe that the industrialization of food is destroying many food varieties and flavors, as well as many ancient cultural traditions and food production skills, which has resulted in the standardization of taste, knowledge, and culture. SF is dedicated to food that is good, clean and fair.¹⁵³ The movement seeks to be accessible and democratic, promoting community-based economies, local foods, and diverse cultural practices. SF advocates for the right to pleasure: to be pleased by the preparation, eating, and sharing of food.

One goal of SF is to build “food communities,” the relationships between what it calls food “producers” and “co-producers.” Shifting the terminology from “consumer” to “co-producer” links the farmer and the eater, and makes the passive role of consumer into a more active one of participant-eater. “*Consuming* is the final act of the production process; it should be seen as such, and not as extraneous to the process. The old consumer must therefore begin to feel in some way part of the production process—getting to know it, influencing it with his preferences, supporting it if it is in difficulty, rejecting it if it is wrong or unsustainable.”¹⁵⁴ Co-producers are encouraged to ask themselves whether a particular food is healthy and safe, to get to know their local farmers and food makers,

¹⁵² Petri, C. (2005).

¹⁵³ Ibid., “Good” implies respect for the earth and its different cultures and requires: “first, that a product can be linked with a certain naturalness which respects the product’s original characteristics as much as possible; secondly, that it produces recognizable (and pleasant) sensations which enable one to judge it at a particular moment, in a particular place, and within a particular culture.” p.96; “Clean” implies respect for the environment and ecosystem, “it does not pollute, it does nothing to put the earth in a condition of ecological deficit” p. 128; “Fair” is concerned with social justice for the food producing communities and is described as: “Justice for the people who work the soil, respect for those who still love it and treat it with respect, as a source of life.” p. 135.

¹⁵⁴ Ibid., p. 165.

and support those efforts that encourage good, clean, and fair food. In this way, eaters are made “aware of the ways in which consumption can be an affirmation of their own status as subjects, of their community relationships, and of their cultural contexts.”¹⁵⁵

Revival of food production knowledge and activities are central to the goals of SF. The skills needed for community-based production of many foods has become rare, and requires remembering—learning and teaching. Many children “no longer eat at home; their parents do not cook at all, and the family does not come together for meals. Food is bought either in the form of prepared meals from the supermarket or at the local fast food restaurant.”¹⁵⁶ Activities that give people the opportunity to process and prepare food themselves create an awareness of local food, forming the cultural context that serves as the foundation of local food cultures. The cooking workshops at the Arcata and Eureka Co-ops are an example of such an exchange. Both locations have a “community kitchen” where local chefs and knowledgeable community members teach food preparation and cooking classes. The classes focus on particular cuisines or themes, ranging from apple and pear pressing, home brewing, and hard cider making, to gourmet meal preparation, to making fire cider: a traditional cold remedy of apple cider vinegar infused with cayenne, garlic, ginger, horseradish, and fresh turmeric used to boost the immune, digestive, and respiratory systems. There is also the master food preserver training, a course designed as a series of workshops and hands-on activities that teach food preservation skills.

¹⁵⁵ Kloppenburg, J., Lezberg, S., De Master, K., Stevenson, G.W., & Hendrickson, J. (2000). Tasting food, tasting sustainability: Defining the attributes of an alternative food system with competent, ordinary people. *Human Organization*: Summer 2000; 59:2, p. 184.

¹⁵⁶ Petrini, (2005), p. 47.

I've had the pleasure of instructing many of these classes, primarily in the gluten-free, vegan, and raw cuisines. At the beginning of the first class I taught at the Eureka Co-op, I was terrified. It felt like I was on a television cooking program. The camera pointed at my hands displayed every move I made (5x-larger-than-life) on two large television screens, while 12 eager faces stared at me and my giant televised hands (on the screens). But sometime during that first class, a wave of community washed over me, and I was no longer intimidated. I realized in that moment that the people in the room with me were actually *with* me, sharing this experience of making and learning food together. Many of the people who attended my classes were attracted to a particular cuisine because they had allergies, or sensitivities, or special needs of some sort. Many of them were fighting or recovering from illnesses. While we made delicious food together, I was able to provide important information about nutrition and health. While we prepared and sampled recipes together, I was able to express my passion: food is medicine. Often times, if I didn't have the answer to a question, someone else in the room did. My favorite part of every class was when we got to eat. After spending 30 minutes preparing a dish and detailing the nutritional value of the ingredients, everyone tried it at once. The pleasure of eating always overshadowed the nutritional benefits. It was hard to imagine that something so good for you could taste so delicious.

September is national "Local Food Month," and in Humboldt County it is a time when the abundance of our local food resources is celebrated and made visible by multiple actors in the community. There are community events, potlucks and shared

meals, and workshops and lectures that reflect expressions of the human community in which people “spiritually feed each other and affirm the gifts of life flowing from both human communities and the rhythms of the earth.”¹⁵⁷ It is a month to honor the food that is grown here through the celebration of eating it. One of the special events of the month is called “Restaurant Week,” where participating local restaurants commit to providing a meal that is entirely locally-sourced. It is meant to encourage both business and pleasure, connecting the eater to seasonal local food, and making visible restaurants’ capacity to make use of local food resources. It provides an opportunity for businesses and chefs to embrace their important role in the transmission of the “noble and scientific knowledge” of nutrition, identity, and culture—good food. According to Petrini, cooks are the sacred link that make visible and delicious community food systems, and it is their role in community to share their knowledge. “Let them say it loud and clear then: let them indicate the provenance of their products in their menus, let them recommend the best agricultural and artisanal goods. Let them make their own quest for excellence the driving force behind sustainable development at all levels, including the home.”¹⁵⁸ For those businesses that do not regularly source local food, Restaurant Week creates new opportunities to engage with local products and develop relationships with local farmers and food producers. It reminds them of their role in community as the bearers of cultural continuity and creativity.

¹⁵⁷ Kloppenburg, J., et.al. (2000), p 183.

¹⁵⁸ Petrini, C. (2005), p 122.

Sprout and Sprout Some More

The Beachcomber Café is a small restaurant located across from the elementary school in Trinidad, one of Humboldt's tiny coastal fishing towns supported by tourists attracted to big trees and beautiful beaches. I've worked there for nine years now. The café serves organic, fair-trade, locally-roasted coffee, hand-mixed organic tea blends, and incredibly delicious food. There are soups made with local veggies and salads made with local greens, sandwiches called the Snooty Hippy and the Condescending Vegan that feature homemade hummus and nutty tapenade; there are roasted seasonal veggies and hot sauce made with local peppers. It's privileged. We're privileged. The local dairy delivers organic milk every Monday. The cheese and wine are local. The bread and bagels are made fresh by local bakers. Wild mushrooms, huckleberries, and local honey are delivered to the back door. By the end of some Saturdays, after a few farmers have delivered produce, the hall behind the kitchen resembles a farmers' market. When the vegetables are in abundance, they are processed and preserved—frozen and canned—for use in the winter when they are not so abundant. Culinary herbs and edible flowers grow in a mad party on the patio outside, and find themselves adorning soups and homemade granola. So much privilege. Breakfast in Trinidad is piping hot, super-conscious coffee and warm scones or coffeecake made with local strawberries and blackberries.

We are blessed. The women who own the café love the planet and believe in our future. (They also, thank goodness, believe in espresso-lavender brownies.) They are courageous ladies who are not afraid to ration the napkins or dismiss the straw and paper

cup entirely. If you want to take your beverage away, you will need a real cup. Your options are to find a cup in your car, borrow a loaner mug that you are asked to return someday, or buy a brand new pint-sized mason jar for \$1, which will then become a part of your life forever. The other option, and the one most encouraged, is to just stay, relax, read the paper and drink your coffee in comfort. Sometimes all anyone needs is a little encouragement, a little reminder. The loaner cups, while they go on many adventures to the sea and into the trees, almost always come home. People are intrigued, irritated and sometimes inspired by the policy, but necessarily obliged to consider the paper cup: the tree it came from and its landfill destiny.

The café is run by a team of sweet and sassy ladies, who call it the “Monastery of Monotony.” It is a sacred place, held with intention and consciously connected with the people and the environment. It is one of the Great Good Places that hosts the “regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work.”¹⁵⁹ It is a sanctuary, a center for community connections, and the heart of the community’s social vitality. It is where the CEO of Green Diamond, and the tree-sitters occupying their forest, sit in the same room to drink coffee and eat, where surfers get their maté and talk about the waves, where bikers and kayakers meet on Sundays, where mothers and children come after playgroup, and where the seventh-

¹⁵⁹ Oldenburg, R. (1991). *The great good place*. New York: Paragon House, p. 16. Oldenburg writes: “The problem of place in America manifests itself in a sorely deficient informal public life. The structure of shared experience beyond that offered by family, job, and passive consumerism is small and dwindling. The essential group experience is being replaced by the exaggerated self-consciousness of individuals. American life-styles, for all the material acquisitions and the seeking after comforts and pleasures, are plagued by boredom, loneliness, alienation, and a high price tag.” p. 13.

graders converge to eat cookies and “hang out” after school. It is a genuinely positive and hopeful place, inhabited by local art and local music, and filled with gossip, politics and laughter. It is a place where people can simply enjoy the good food, the company, and conversation around them.

One winter the Beachcomber opened for dinners on Sunday and Monday nights, the two nights when practically no one else in town served dinner. It was partly to fill a niche and partly to fill a need. Rocky, the chef, is a local food genius with a giant herb garden. She is a lippy lady with a colorful apron, a big plastic flower in her hair, and a bottle of sweet white wine nearby. She is bossy and sometimes she yells and says crude things, but she is funny and sexy and makes the most incredible meals. For dinner there was always a meat option or a veggie option, and some delicious appetizers. The menu changed each week depending on Rocky’s mood and the availability of local food. Sometimes she served lamb, sometimes beef or crab or homemade ravioli, but it was always encrusted or marinated or drizzled with some sort of secret sauce. Rocky’s sauce, whether it was wild winter pesto or homemade curry, always revealed the subtleties of sensuality and pleasure in the making and eating of food.

It was here, in the Beachcomber kitchen, under Rocky’s saucy influence, that I truly embraced the local. I have been a vegetarian for over twenty years. On only a few occasions have I eaten proximal flesh, meaning I have some sort of relationship with the animal I’m eating: a friend caught a salmon from the river or killed a favorite goose. For me to consume animal foods, proximity is essential. The closeness offers me some

assurance that it is fair and safe. I was working the dinner shift, serving wine and wooing the customers with Black Magic cake, when Nick, a local customer and fish hunter, came in with a giant abalone, plucked fresh from the salty rocks that day. I had never seen one before. It looked like a giant grayish sea slug. He explained that you had to cut it into thin slices and pound them until they became soft enough to eat. I sliced, Nick pounded, and Rocky did the rest. She fried the tender strips in oil with a little bit of spice. Then we all ate it together in a ravenous ritual of gratefulness. It was delicious. It probably helped that I hadn't seen the abalone pried from its shell and that it didn't have a face.¹⁶⁰ But I loved it. It felt good in my body. It felt appropriate and nourishing.

It feels good to be nourished by your food, both physically and energetically, and to share with others in the pleasure of eating it. The experience of eating in place is sacred. "To acknowledge the sacred dimension in food is to acknowledge the symbolic and spiritual values that food and food-based relationships should convey."¹⁶¹ The sacredness comes from sharing in the energetic exchange of the land that provides the food and the people who devote their energy to the finding, growing, and preparing of that food. The energetic investments of local foods are less diluted, more potent, and eating is a part of the exchange. We eat zucchini fritters in June and roasted pepper risotto in August. We eat fish from nearby rivers and fruits from a family's field. We eat eggs fresh from the chicken's butt disguised as angel's food and smothered with local strawberries and fresh whipped cream. The food does have a face, many faces, familiar

¹⁶⁰ The "face" of an abalone, as I would later learn, consists of a beak, eyes and tentacles.

¹⁶¹ Kloppenburg, J., et.al. (2000), p 183.

faces: the faces of the fields and the farmers, the faces of fishers and foragers, Rocky's saucy face, all smiling with pleasure and gratitude. In the process of eating, we are reminded how generous the earth is, what it offers and when, and how delicious it can be. When we eat together, we are in service to each other. From, and in, this place, our communal resources are gathered together with our communal energies. Together they make up the sauce that, once drizzled over the experience of eating, subtly changes the way everything in life tastes.

Pulling Weeds

“We must do our best to ensure that we are aware of the methods of processing, and we must demand the necessary information. Let the consumer who is tempted by a very low price ask what makes that price possible. How many public subsidies were given to make the product so cheap? How much damage was done to the environment and to biodiversity by the intensive agriculture that produced it for the food industry? How much pollution did those who produced it generate through their production methods and through the use of artificial agents in a process that ought to be always in harmony with nature?”¹⁶²

Though the food is abundant and delicious in Humboldt County, I can count on one hand how many restaurants I trust to serve food that is appropriate and nourishing. There are very few businesses that are actively engaged in the local food system: sourcing available local food year-round or serving seasonal local produce and meat. It is, of course, much cheaper and faster to get a weekly delivery from Sysco.¹⁶³ Special events like Restaurant Week demonstrate that, as a community, we have a far greater capacity to

¹⁶² Petrini, C. (2005), pp. 122-123.

¹⁶³ Sysco is a multinational food distribution company. Not good, clean, or fair. I have personally seen the Sysco truck delivering to numerous Humboldt restaurants.

grow our local food economy than we are currently exercising. During that week, the Beachcomber found it difficult to get extra salad and braising greens from the farmer who supplies the restaurant year-round. The farmer explained that he was having trouble keeping up with the “special orders” from other participating restaurants. Then the temporary greens famine ended as abruptly as Restaurant Week, when many restaurants went back to serving Costco or Sysco salads. The choices made by small processors play a crucial role in promoting sustainable agricultural practices and enhancing the economic sustainability of local producers. Perhaps if the local restaurants and processors were more committed to sourcing locally-grown food, or the consumer market for locally-produced foods was healthier, the local farmers would not have to ship their produce away for depleted wholesale prices.

As “co-producers,” each time we buy a product that does not respect the environment in its various phases of production; we are implicated in the destructive cycle of resource consumption and ecological damage. It is a complicated responsibility to assume, because, for the most part, we do not have the proper information to make an informed decision. Food labeling laws in the U.S. are unhelpful and deceptive. Our food comes from everywhere in every conceivable form, and the industry has made it nearly impossible to trace its origin. “The input and pharmaceutical industries have thwarted efforts to label food that contain transgenic ingredients—despite surveys showing that most America consumers favor such a requirement. Similarly, proposals to force food

companies to disclose their product's country of origin have been defeated repeatedly.”¹⁶⁴ Even the labels that do exist do not provide much information. The ever-increasing distance between farm and fork threatens the integrity of all food. Even labels like “organic” lose their meaning in a system that lacks accountability. There is little comfort in USDA organic standards that do not require labeling of country of origin or GM ingredients. For many people, organic means we are not feeding GMOs, pesticides, and chemical fertilizers to our children. Most assume organic means the earth has been supported rather than depleted in the process of making our food. But perception is powerful and subjective. Words are only words and what we make of them. And what you don't know might indeed hurt you.¹⁶⁵

If we want to make personally and socially responsible choices about what we eat, we need more complex and honest forms of information, instead of the barrage of misinformation that labels provide. There is a product on the local market called “Humboldt X,” the label for which provides no information about the origin of the ingredients or the location of production. It simply says: “Manufactured for Humboldt X, Humboldt CA.” Given that the ingredients include mango, banana, guava, and pineapple, it is likely they are not grown here,¹⁶⁶ and there is not a Humboldt X factory in Humboldt, so the company is not providing any local jobs. In fact, there is nothing about

¹⁶⁴ Roberts, P. (2008), p. 294.

¹⁶⁵” U.S. Environmental Protection Agency. (2014). *Pesticides and food: What organically grown means*. <http://www.epa.gov/pesticides/food/organics.htm>, accessed Nov. 26, 2014. The USDA defines "organically grown food as food grown and processed using no synthetic fertilizers or pesticides. Pesticides derived from natural sources (e.g., biological pesticides) may also be used in producing organically grown food.

¹⁶⁶ The label of Humboldt X also includes the words “All Natural,” a red flag of deceptive marketing.

this product, except its name and the addresses of the company's owners, that has any links, physically or economically, to the county. In a community where local means something to the consumer, it is a deceptive strategy to use local marketing to sell a product most likely full of agrochemicals from other countries. It is a predatory strategy that does not consider the wellbeing of the community: greed disguised as good work.

In order to preserve the integrity of our food, all links in the food chain must be made visible. Because those links are intentionally obscured by the food industry, we must work toward policies and relationships that make all the information about our food accessible. "This is, after all, the one point at which everyone can cast a vote, as it were, for their economy of choice, regardless of official trade policies and corporate desires. All we need is reliable and adequate information – in the context of public policy that places human welfare and ecological responsibility ahead of capital accumulation."¹⁶⁷ I believe that if we had the opportunity and all the information, we would do the right thing. We would choose to eat good, clean, and fair food. We would feed it to our children. Local food systems can help provide the community with the essential information needed to make informed food choices. The roles of the farmers, chefs, producers, and the whole community of eaters are made visible through local food networks, and a critical consciousness about the safety and health of our food will evolve from participation in these networks. We must ask each other questions about our food; through our patient and careful collaboration of values and desires, we will find and create the answers.

¹⁶⁷ Kneen, B. (2005)., p. 79.

Establishing Roots

“Balance, which implies equity, is a prerequisite to sustainability. In the case of a sustainable and just food system, the balance must exist between those who grow the food and those who prepare it, between those who distribute it and those who eat it. There must be some balance between the resources used to produce the food and the replenishing of those resources.”¹⁶⁸

On delivery days, Tuesdays and Fridays, one can witness five pickup trucks parked on the street at the Arcata Co-op’s receiving dock. All at once, boxes of fresh greens, potatoes, broccoli, and giant carrots are unloaded by the farmers: Johnny, Michael, Paul, and all the rest. Half an hour later, the same trucks will unload more boxes of produce at the dock of the Eureka Co-op. They can also be seen delivering to local restaurants, one by one, truck after truck. Most of these trucks travel along the same stretch of highway, anywhere from 20-60 miles into town, to deliver local vegetables to local businesses. Then they will come again for Saturday farmers’ market, and sometimes again for midweek markets. I call it the truck train, and while I’m exceedingly grateful for the availability of local produce, both in stores and restaurants, I often lament that there must be a better system for local distribution, one that does not demand so much gas and time from the farmer. There must be a balance we have not yet achieved.

The industrial food system is one of the biggest consumers of fossil fuels and one of the greatest producers of greenhouse gases.¹⁶⁹ Incredible amounts of oil and gas are used at every stage of food production: from the manufacturing of fertilizers and

¹⁶⁸ Ibid., p. 117.

¹⁶⁹ Church, N.J. (April, 2005). *Why our food is so dependent on oil*. Powerswitch: UK. <http://www.powerswitch.org.uk/portal/index.php?option=content&task=view&id=563>, accessed Oct. 3, 2014.

pesticides, planting, irrigation, and harvesting, to processing, packaging, and distribution. We eat oil, a lot of it. Food that comes from small, diversified farms requires much less oil because many of the farm inputs are produced on or near the farm, much of the planting and harvesting is done by people, not machines, and there is very little processing or packaging. There is still, however, the truck train, an extremely inefficient mode of food distribution, that can use as much, if not more, gas than the industrial-scale food distribution systems transporting food great global distances.¹⁷⁰

The epic fieldtrip of a loaf of bread offers an absurd story of the unnecessary waste of energy and resources in our modern food industry: first, we require machines to grow and harvest the wheat; then the wheat is shipped to a factory that cleans the seed; then the seed is shipped to the milling factory; then the flour is shipped to a bakery; and finally, it is shipped to the market as a loaf of bread. Such consolidation by the food industry has slowly dissolved local distribution networks, leaving communities without butchers and mills, without dairies and canneries, without the infrastructure necessary to process and distribute the food that is grown. Re-creating these networks will be the key to building sustainable community food systems.¹⁷¹

The Sacramento Community Food Hub is an example of a project engaged in rebuilding these vital community food networks. Funded by grants from the California Endowment and USDA Community Food Projects, the “Hub” coordinates produce

¹⁷⁰ Roberts, P. (2008), p. 285: “A semi driving several tons of produce 312 mile from a mega-farm in Salinas Valley to a Wal-Mart in Reno may seem an egregious waste of energy, but it actually burns less fuel than would the dozens of pickup trucks needed to haul the same quantity of produce to a farmer’s market in Reno just twenty miles away.”

¹⁷¹ Cobb, T.D. (2011).

aggregation and marketing, connecting local farmers to standard wholesale and distribution markets, including schools, hospitals, institutions, restaurants, and retail outlets.¹⁷² Participating farmers drop off produce at the Hub where it is cleaned, processed, labeled, and distributed to buyers. Additionally the Hub provides consulting services for farmers to help guide field management and harvesting practices, and to buyers to provide information about seasonal production and the availability of local foods. “While marketing local produce to retailers and institutions, Hub partners seek to build knowledge about reasons for purchasing local foods and the social, environmental and economic benefits it brings to the residents of the Sacramento area.”¹⁷³ Hub leaders are also seeking ways to offer subsidized prices to businesses in poor neighborhoods and to institutions that are serving low income populations. Local food distribution systems like the Hub are taking form throughout the county, providing successful models of “innovations and solutions within various processing- and distributing-related arenas such as product quality, seasonality, supply and demand, food origins, supply infrastructure, and capital and capacity development.”¹⁷⁴

When I see the farmers’ trucks lined up for delivery at the Co-op, I can’t help to think that the Co-op would be a perfect distribution center for a Hub-like project. After

¹⁷² Stubblefield, D., et. al. (2010).

¹⁷³ Ibid., p. 84.

¹⁷⁴ Ibid., p. 84. “For further examples of local food distribution systems The University of Wisconsin Madison generated a report entitled: *Scaling up: Meeting the demand for local food* detailing eleven case studies of local food entrepreneurs from across the county. The case studies highlight a diversity of local food distribution business models, lessons to learn from, and challenges within local food marketing.” Day-Farnsworth, L., et al. (2009). *Scaling up: Meeting the demand for local food*. UW-Extension Ag Innovation Center and UW-Madison Center for Integrated Agricultural Systems. (<http://www.cias.wisc.edu/farm-to-fork/scaling-up-meeting-the-demand-for-local-food/>).

all, it is “community-owned,” so in theory, our infrastructure already exists. If we hope to re-create the food distribution networks necessary for a sustainable local food system, we will need to gather all of our community resources and technologies together, as well as our intelligences and ideas. “Negotiating modernity requires creativity.”¹⁷⁵ Existing resources can be used to create networks and provide solutions to transportation and food distribution obstacles. These networks are emerging worldwide, demonstrating that it is within our power to meet each other, to link a community hungry for affordable, fresh, local food to the wellbeing of the farmers who grow it, and further reduce the carbon footprint of our food distribution system. Much more effort is required if we hope to nourish our families and communities. Fortunately, there are many of us to share the work.

Sharing the Harvest

“This situation demands much more than a simple change, of course: it demands a radical change in mentality, more complexity of thought, and more humility and a greater sense of responsibility toward nature.”¹⁷⁶

In a community of farmers and eaters, the potential food networks are vast. I have gone for weeks in the summer months, eating only the veggies my farmer friends had given or traded me. These networks, however, are nearly invisible if you are not a participant in the local food economy. You have to know the farmer to trade for food. You have to visit the farm to see that there are rows of split cabbages available for gleaning. At Redwood Roots Farm, Janet offers free green beans, basil, apples and

¹⁷⁵ McKibben, B. (2007), p. 218.

¹⁷⁶ Petrini, C. (2005), p. 27.

cucumbers, anything the farm has a surplus of, in exchange for dilly beans, pesto, applesauce and pickles, whatever is processed from the surplus. This exchange is informal, and you would only know about it if someone tells you, or you visit the farm or the farm's Facebook page. It is the responsibility of the eaters to make the role of consumer visible in the food system. In order to create the powerful relationships necessary for local food economies to thrive, we must break the spell of individualism that entrenches our culture. We must realize that our efforts are directly equivalent to our harvest. "By our choices as the final consumers in a long process that starts from the land, we influence production, the styles of management of the earth and the environment, as well as the future of farming communities."¹⁷⁷ Before we can affect change in our food choices, we have to participate in our food system; we have to show up.

In a place with so much good food, it is probably best we get eating it. This delicate balance between what we eat and what we grow, what we know and what we like, and what we like and what is good for us, will surely be rebalanced with better, fresher, and closer food choices. This is our tremendous opportunity, now, to create real and lasting change in the food system. It is our opportunity to return to health-promoting foods and food traditions that nourish our families and communities, physically, economically, and spiritually. It is our opportunity to remember the pleasure in eating, and to share that pleasure with one another. It is a chance to be happy, as we will surely find pleasure in the taste and quality of the local love.

¹⁷⁷ Ibid., p. 169.

EPILOGUE
COMPLETING THE CYCLE

“Food and its production must regain the central place that they deserve among human activities, and we must reexamine the criteria that guide our actions. The crucial point now is no longer, as it has been for all too long, the quantity of food that is produced, but its complex quality, a concept that ranges from the question of taste, to that of variety, from respect for the environment, the ecosystem, and the rhythms of nature to respect for human dignity. The aim is to make a significant improvement to everybody’s quality of life without having to submit, as we have done until now, to a model of development that is incompatible with the needs of the planet.”¹⁷⁸

We are living in a confused and frightening time in planetary history, a time when we don’t know if our food is safe to eat or our water safe to drink. We are being confronted with the immediate and dangerous realities of a global industrialized food system that is losing flexibility and resilience and moving steadily toward collapse.¹⁷⁹ In *The End of Food*, Paul Roberts imagines the “perfect storm” of food-related catastrophes triggered by any number of events including an outbreak of avian flu, a sharp spike in the price of oil, a series of extreme weather events, the emergence of a new plant disease, or the depletion of some critical aquifer—all very real (perhaps even imminent) possibilities that would devastate our ability to maintain food security.¹⁸⁰ To me, it feels as if we are inhabiting that prolonged moment after a wrecking ball has smashed into a structure, but before the structure has given way and crumpled to the ground into a mountain of rubble.

¹⁷⁸ Petrini, C. (2005), p. 23.

¹⁷⁹ Roberts, P. (2008), p.301. Roberts argues that we are on a trajectory that will “sooner or later push our food system, across some crucial and irrevocable threshold.” He continues, “[Our food system] is now so tightly integrated and interdependent, so reliant on the constant flows of material between regions and the ceaseless transactions among input industries, producers, and distributors, there is no longer the possibility of discreet failure: a collapse in one part of the system will have extraordinary ramifications for everyone else.”

¹⁸⁰ *Ibid.*, p. 300.

We cannot take it back, but neither can we stand around, holding our breath, waiting to be crushed by the debris. This is the moment to fortify ourselves and create solutions. This is the moment of revolution. This work documents a growing revolution in food consciousness, survival responses by communities to a destructive, inadequate, and intolerable global food system. And like every revolution, it is born out of a defense of what is most precious to us: our environment, our health, and our future.

A New Narrative

This work is an accumulation of stories: stories of histories, ideas, actions, and imaginings. At the center of these stories is food and the role it plays as humanity's most intimate connection to the earth. The first chapter examined how the modern food system has created an ever-increasing distance, both physical and spiritual, between people and the planet. The purpose of industrial agriculture is not to feed the people. It is to feed the profits of the multinational corporations who own the land, the seeds, the chemicals, and the genetics of the few plant varieties left in production. The history of industrial agriculture tells the story of violent exploitation of the earth: surface and groundwater pollution, salinization of irrigated land, soil erosion, the depletion of fossil fuels and fossil water resources, wetland and wildlife habitat destruction, and the dramatic loss of genetic diversity. The modern food system has erected a multitude of corporate structures and processes, by which profit can be made, that separate consumers from the source of their food—the farmer and the earth. A vast space has grown between humans and their

food, and out of that space has emerged a profound sense of alienation and disconnection from our planet, our health, and one another.

Still, we will go on eating the earth. The view from the top of the food chain is the most revealing of all. We have created a toxic food system that is poisoning the planet, the animals and insects, and ourselves. Our food is making us sick. Food-related illnesses are steadily increasing throughout the world. These include cancer, reproductive disorders, developmental deformities, degenerative neurological disorders, obesity and diabetes. For the first time in human history, the children have a shorter life-expectancy than their parents. Increased outbreaks of food-borne illnesses, allergies, food contamination and disease are all a function of a food system that is failing. The disease is not just in our bodies; it is in our social and interpersonal relationships as well. The exodus of farmers from the land, the consolidation of farms, and the destruction of rural communities are signals of the deep social consequences of the distance forged by the modern food system. It is from this frame of distance that the story of recovery and reconciliation begins.

With little knowledge of, or control over our food, we find ourselves in a vulnerable position in the complex web of survival. The distance has disempowered us. This, however, is a story of resistance: meeting the distance with proximity. It is a story about reclaiming the space between our food and our families, and through food, rediscovering our community and the environment. The remaining chapters document the emergence of community-based food systems in Humboldt County. They illustrate how a

community can build the networks necessary to create an economically and environmentally sustainable food system. They express the unique economic and social relationships that are born out of community consciousness and participation. They envisage alternative ways of interacting with nature and resist dominant ideologies and global structures by advancing these alternatives as realities.

Chapter Two told the story of growing an alternative food regime through local food economies. It documents the small-scale food networks or community food system projects that make up this alternative food regime: farmers' markets, community-supported agriculture farms (CSAs), farm-to-school programs, and food gleaning projects. These projects allow communities and farmers to disengage from the commodity and market relations on which the global food system is based, and reengage in the personal and mutually-beneficial relations of local cooperation and responsibility. These community food systems rely on relationships of trust, mutual learning, and cooperation. They are networks that make visible the processes of food production: the growing, the preparing, and the sharing. The land where we live becomes the food that we eat, grounding our purpose in place. These new cooperative relationships reconnect people with the earth, creating a sense of responsibility and compassion toward the food, the land, and one another. Community members are in service to each other. Projects that connect poverty and social justice with safe, healthy food resources illustrate this commitment. They demonstrate that conscious participation in community creativity has the potential to truly meet the food needs of the hungry.

The third chapter told the story of learning in place. It was made up of many stories of garden-based educational practices that encourage imaginative action and civic engagement. These are practices grounded in local knowledge and the collective life of the community, and joined to the land by the experience of learning in place. These are the stories of practicing cooperative social and environmental relationships, allowing students to actively participate in the biological and social processes of food production and distribution in their own communities, and experiencing biology, ecology and nutrition simultaneously. Such programs increase knowledge and awareness about food sources, nutrition, eating behaviours and lifestyles, and expose students to local knowledge practices that exhibit harmonious socio-ecological relations of production and consumption. These are practices that have the potential to transform students from passive consumers to informed eaters, activating a practical consciousness that saturates the whole process of living.

The fourth chapter told the story of eating in place. It is about recovering some degree of geographical diversity in food sources, based on region, food type, and season while trying to moderate the more egregious impacts of globalization. It tells the stories of local kitchens, restaurants, and food processing facilities, and shows the evolution of partnerships between local businesses and farmers, and the inevitable emergence of place-specific healthy food alternatives. This chapter also illustrates the challenges and complexities of keeping the food in place, including the building of food distribution networks between small and mid-sized farmers and local institutions and businesses,

efforts that tie together the needs of the producer and consumer. It tells the story of community cooking classes, sharing knowledge and place-based skills to increase the community's capacity and passion for eating. It shows how projects like this have the potential to increase the volume of local produce served to local communities—both in institutions and businesses—and enhance the economic sustainability of local producers.

These chapters are about actively reclaiming the space between the growing of our food and the health of our families and communities. It is a story of how people's values and perceptions, individually and collectively, can shift in quite mysterious and unpredictable ways towards an understanding of interconnectedness. This is a story of awakening the heart and mind to a reverence for life. It is a story to resist the hegemony of the dominant and destructive global food system by reimagining who we are by understanding where we are.

Acquiescence or Action

“We still (sometimes) remember that we cannot be free if our minds and voices are controlled by someone else. But we have neglected to understand that we cannot be free if our food and its sources are controlled by someone else. The condition of the passive consumer of food is not a democratic condition. One reason to eat responsibly is to live free.”¹⁸¹

What we do not resist, we allow. No response is passive agreement. If an action does nothing to change the balance of power, then it contributes to the system which currently benefits from that power. In the context of our food system, whatever we

¹⁸¹ Berry, W. (2002). The pleasures of eating. *The art of the commonplace: The agrarian essays*. Shoemaker & Hoarde: Washington D.C., p. 323.

choose to participate in, we are accepting and passively supporting. As participants in the global food economy, we are sustaining corporate power and systems that devastate our planet and poison our food. The question is: do we seek justice and community, or power and wealth?

In his discussion of the corporate colonization of rural America, John Ikerd urges communities to pursue a different strategy of sustainable economic development to protect the natural and human resources of rural areas from corporate exploitation. He calls on rural America “to declare their economic independence, and begin rebuilding their own communities from the inside out, and this time, to build them sustainably – economically, ecologically, and culturally.”¹⁸² The local food systems projects discussed in this work are each examples of communities disengaging from the global market and reengaging in mutually-beneficial cooperative relationships. These projects support the health and wellbeing of the community and planet by providing nutritious food and just, sustainable food solutions. In this way, a transition from a globalized economy intent on growth and accumulation toward small, local food economies is leading us to a better future, one guided by the principle of happiness and crafted from an emphasis on community-centered behavior. These local food economies can only be sustained through

¹⁸² Ikerd, J. (2003). *The colonization of rural America*. Presented at 2003 Sustainable Hog Farming Summit, sponsored by Global Resource Action Center for the Environment (GRACE) and Waterkeeper Alliance, Gettysburg, PA, June 6-7, 2003.
http://web.missouri.edu/ikerdj/papers/HogColonialism.htm#_ftn1, accessed Sept. 12, 2014.

committed local support; such support has begun to emerge in countless grassroots food movements throughout the country and world.¹⁸³

The projects discussed in this work do not overtly challenge the dominant food system, but rather resist its dominance through the transformative activities of daily-life practices. These are the often invisible and everyday struggles of people to assert their rights to a safe, culturally appropriate, and nutritionally sound diet. It is a resistance informed by the basic instinct for nourishment and the daily activity of eating. “Food presents people with hundreds of small opportunities to take increasingly important and real steps away from the global market economy and toward the moral economy.”¹⁸⁴ Each day, over and over again, we choose what to eat, what to feed our children, and how to engage in the process of eating. Through our actions and non-actions, for better or worse, we choose how to support a food system. Let us choose daily-life transformative actions that promote creative engagement with community traditions and resources, and have the potential to build solidarity, security and hope among people in this particular place.¹⁸⁵ Let us choose community and health. Let us choose to honor the creatures of the earth and each other. Let us choose to declare and make use of our power.

¹⁸³ For case studies of innovative community food solutions emerging in the U.S. see Cobb, T.D. (2011).

¹⁸⁴ Kloppenburg, J., et. al. (1996)., p. 38.

¹⁸⁵ McKibben, B. (2007), p. 217.

Living the Paradigm Shift

*“[Good work] is the belief that our only salvation individually and collectively lies in taking back the responsibility for finding and creating our own good work, the place where the spiritual and temporal, the theoretical and the concrete, mankind and nature, all converge; and for increasing our capacities so that we can and will do so.”*¹⁸⁶

In our daily acts of resistance lie the routes of transformation. Community food systems projects restructure the economy so that its purpose and function is to provide for the essential needs of all. These are systems that contribute to a larger cooperative and egalitarian movement, a “patient rebalancing of the scales.”¹⁸⁷ When we engage in these projects, we are simultaneously challenging the legitimacy of the global food system and legitimating alternative society-nature relationships, re-infusing life with meaning outside of commoditization. In choosing through practice to engage in a lifestyle of meaning, we are choosing to recreate and regenerate meaning in a larger context. Such subtle shifts in meaning have the potential to change who we are, and what we do in, and want from the world. In practice, local food systems shift our perception of who we are, creating new ideologies and values “and the laws and customs that will slowly evolve from them.”¹⁸⁸

It is naïve to believe that local food economies will save the world, but we can begin by saving our families. Local food economies provide the ideological foundation for a sustainable agricultural model that supports nutritious food and the health of communities. It is a fine place to begin, as it provides a model for larger food systems,

¹⁸⁶ Gillingham, P. (1979). The making of good work. In E.F. Schumacher (ed.), *Good work*. New York: Harper & Row Publishers.

¹⁸⁷ McKibben, B. (2007), p 120.

¹⁸⁸ *Ibid.*, p. 210.

regionalized food economies. Food systems that link regional producers to urban markets require much of the same infrastructure that local systems are practicing: creating regional demand, developing working distribution systems, and increasing land access. Urban food solutions are already underway, including “operations ranging from backyard and rooftop gardens to restaurant salad gardens to large community farms located in greenbelts and in reclaimed and industrial areas that produce orchard fruit, vegetables, honey, even livestock and farmed fish.”¹⁸⁹ The community food systems of small, rural areas, like Humboldt, can serve to inform the development of regional systems, both ideologically and in practice. Similar stories are being told throughout this country; many ideological perspectives are converging around the notion that we all have a right to access and eat food that truly nourishes our bodies and communities.¹⁹⁰ These stories provide models that exemplify and support good food practices and policies, and give us the opportunity to learn from the experiences of other local food movements.

While local food systems are thriving in Humboldt County, there remain many opportunities for further connections and success. Restaurants and small producers need to embrace their local food resources and develop relationships with farmers. As community members, we can further support Farm to School programs and food gleaning efforts. We can try harder to eat in season and develop personal relationships with the people that grow our food. We can encourage policies that give us the proper information to make informed food choices. The choices made by processors and consumers will play

¹⁸⁹ Roberts, P. (2008), p. 308.

¹⁹⁰ Cobb, T.D. (2011), p. 7.

a crucial role in promoting sustainable agricultural practices and enhancing the economic sustainability of local producers. Our challenge is to learn from our experiences and from the lessons of other communities so that we can further support our local food system and continue to increase the number of people who are getting an increasing proportion of their food through the local system.

The stories in this project contribute to a new cultural narrative, one that values cooperative relationships with the environment and each other. It belongs to us, but has abandoned the notion of isolated selves, and so it also belongs to everyone. Just as “[i]deals forged out of affirmative experience of solidarities in one place get generalized and universalized as a working model of a new form of society that will benefit all of humanity,”¹⁹¹ the stories in this project contribute to the creation of a cohesive narrative that help reshape our relationships and our realities. “We are not necessarily opting for “local” food to reduce food miles, fuel costs, and greenhouse gas emissions; what matters to us is that our food can be traced to human hands, hearts, and minds that brought it to us through intelligence, patience, and hard work.”¹⁹² We are engaged in creating a narrative of compassion, one that is concerned for the health of our families, communities, and the land. This is the beginning of a new cultural narrative, one of food sovereignty and community resilience, one that challenges corporate control of our food system; and it is beginning everywhere.

¹⁹¹ Harvey, D. (1996), p 32.

¹⁹² Cobb, T.D. (2011), p 6.

One Final Story

“When we start to lose the feeling of being alone and we are able to work in the name of our community of destiny, no business, no change, no machine will be able to stop our quest for happiness”¹⁹³

After three days of hard Humboldt rain, the sun shone fiercely on the last Tuesday farmers market in Arcata. Still, there was a biting chill and the somber feeling of something ending. Suddenly the summer was gone. The food had changed color and grown thicker skins. The last remaining fruits—the tomatoes, pumpkins, and peppers—were as sweet as they would ever get, and the vegetables—onions, burdock, sunchokes, and beets—had all gone underground. I was on my weekly fresh-as-it-gets vegetable mission for the Wednesday night raw food dinner at the Beachcomber Café in Trinidad. The dinner—consisting almost entirely of raw, local, seasonal food—began in July when the baskets at the market were brimming with early summer veggies. On this particular Tuesday, as I fondled the last of the heirloom tomatoes, I was overwhelmed by a feeling of anxiety. I did everything I could to put the idea of hard, tasteless winter tomatoes from Mexico out of my mind. And instead, I tried to be grateful for the tables full of squash and artichokes, and the farmers who worked all season to bring them there.

I grew up on a farm where we saved seeds, fertilized with composted manure and cover crops, and planted companion crops to maintain diversity and resist pests. I understand how unbelievably hard the farmers have to work to grow good food. By the time the food goes underground, both the farmer and the land are ready to rest. So as the

¹⁹³ Petrini, C. (2005), p. 207.

wheelbarrows of gorgeous peppers are wheeled away, the farmers' short season of rest turns into my long season of waiting for food to fill the wheelbarrows again. My family farmed out of necessity. The only way to feed five children was to grow, process, and preserve food. The fall was always a time of food abundance, and the approaching winter a great relief. The pantries were full of canned peaches and tomatoes, and the freezer was full of corn, peas, berries, bacon and steak. It was a sweet and sacred feeling: exhausted, safe and happy.

Now, as a single adult, I look to my pantry with the same sacred feeling. It is full of dried fruit, pickles, chutneys and sauerkraut; food grown in my community, by myself and my friends, and it makes me feel safe and happy. Whatever efforts we have made individually to prepare for this winter, it would serve us to remember that we are a part of many cooperative efforts, and collectively, we have the power to sustain and nourish our families and community. The evolution of our local food infrastructure depends on cooperation between food producers, processors, and consumers. Whether we buy directly from our farmers or support local businesses committed to sourcing from those farmers, we are connected to and responsible for the land that feeds us and the future of our food. Our choice to eat delicious food has the potential to advance the evolution of an entire culture toward a healthy, sustainable future.

REFERENCES

- Alcohol and Tobacco Tax and Trade Bureau. (2014). U.S. Department of Treasury. International Affairs Division. <http://www.ttb.gov/itd/china.shtml>, accessed Sept. 14, 2014.
- Azuma, A., & Fisher, A. (2001). *Healthy farms, healthy kids: Evaluating the barriers and opportunities for farm-to-school programs*. Los Angeles: Community Food Security Coalition.
- Berry, W. (1984). Whose head is the farmer using? In W. Jackson, W. Berry, & B. Colman (Eds.), *Meeting the expectations of the land: Essays in sustainable agriculture and stewardship*. San Francisco: North Point Press.
- Berry, W. (1987). *Home economics*. San Francisco: North Point Press
- Berry, W. (1990). *What are People For?* San Francisco: North Point Press.
- Berry, W. (1996). Conserving communities. In W. Vitek & W. Jackson (Eds.), *Rooted in the land: Essays on community and place*. (pp. 76-84). New Haven, CT: Yale University.
- Berry, W. (2002). The pleasures of eating. *The art of the commonplace: The agrarian essays*. Shoemaker & Hoarde: Washington D.C
- Bramble, P. (2009). *A survivor's guide to running farmers' markets: The North Coast Growers' Association experience, Humboldt County, California*. Master's Thesis, Department of Social Science, Environment and Community, Humboldt State University, Arcata, CA.
- Buckley, J. (2009). *Food, land, and community: A social movement in Humboldt County*. Master's Thesis. Department of Sociology, Humboldt State University, Arcata, CA.
- California Department of Food and Agriculture. (July 2009). University of California Agricultural Issues Center. www.cdfa.ca.gov, accessed July 7, 2014
- Centers for Disease Control and Prevention. (2007). <http://www.cdc.gov/nchs/hdi.htm>, accessed Sept 4, 2014.
- Centers for Disease Control and Prevention. (2009). http://www.cdc.gov/h1n1flu/estimates_2009_h1n1.htm, accessed Nov. 4, 2014

- Charmaz, K. (2005). Grounded theory in the 21st century: Applications for social justice Studies. In N. Denzin and Y. Lincoln (eds.) *The Sage Handbook of Qualitative Research, 3rd Edition*, 507-535. Thousand Oaks: Sage Publication.
- Choi, C. (2004). Crop biodiversity treaty OK'd. *The Scientist*. (5:1). (April 14) <http://www.biomedcentral.com/news/20040414/03>, accessed April 2, 2013.
- Church, N.J. (April, 2005). Why our food is so dependent on oil. Powerswitch: UK. <http://www.powerswitch.org.uk/portal/index.php?option=content&task=view&id=563>, accessed Oct. 3, 2014.
- Cobb, T.D. (2011). *Reclaiming our food: How the grassroots food movement is changing the way we eat*. North Adams, MA: Storey Publishing.
- Community Alliance for Family Farmers. (2014). <http://www.CAFF.org>, accessed March 12, 2014.
- Craig, W., Tenfer, M., Degrassi, G., & Ripandelli, D. (December, 2008). An overview of general features of risk assessments of genetically modified crops. *Euphytica*, (164:3), 853-880.
- Creswell, T. (2003a). *Place: A short introduction*. Wiley-Blackwell, Oxford.
- Creswell, J. (2003b). A framework for design. *Research design: Qualitative, quantitative, and mixed methods approaches*, 3-23. Thousand Oaks: Sage Publications.
- Cunningham, K., & Cunningham, M. <http://www.shakeforkcommunityfarm.com/>, accessed Oct. 14, 2014.
- Denzin, N., & Lincoln, Y. (2005). Introduction: The discipline and practice of qualitative research. N. Denzin and Y. Lincoln (eds.) *The sage handbook of qualitative research, 3rd Edition*, 1-32. Thousand Oaks: Sage Publication.
- Dona, A. & Arvanitoyanni, I.S. (2009). Health risks of genetically modified food. *Critical Reviews in Food Science and Nutrition*, (49:2), 164-175.
- Food and Agriculture of the United Nation, International Fund for Agricultural Development, & World Food Programme. (2014). *The state of food insecurity in the world 2014: Strengthening the enabling environment for food security and nutrition*. Rome, FAO.
- Farm to School. *National Farm to School Statistics*. <http://www.farmtoschool.org>, accessed Sept. 3, 2014.

- Fernandez, L. (2003). *Knowledge transforming feminist practice: Non-Violence, social justice and the possibilities of a spiritualized feminism*. San Francisco, CA: Aunt Lute Books.
- Fischer, F. (2000). *Citizens, experts, and the environment: The politics of local knowledge*. Durham: Duke University Press.
- Food for People. <http://www.foodforpeople.org/about>, accessed July 5, 2014.
- Food for People. <http://www.foodforpeople.org/humboldt-market-match>, accessed May 5, 2014.
- Food for People. <http://www.foodforpeople.org/programs>, accessed July 5, 2014.
- Food for People. <http://www.foodforpeople.org/programs/gleaning-program>., accessed July 5, 2014.
- Gilchrist., M.J., Greko, C., Wallinga, D.B., Brean, G.W., Riley, D.G., & Thorne, P.S. (February, 2007). The potential role of concentrated animal operations in infectious disease epidemics and antibiotic resistance. *Environmental Health Perspective*. 115(2): 313–316.
- Gillingham, P. (1979). The making of good work. In E.F. Schumacher (ed.), *Good work*. New York: Harper & Row Publishers.
- Gottlieb, R. (2001). *Environmentalism unbound: Exploring new pathways for change*. Cambridge, MA: The MIT Press.
- Gottlieb, R. & Joshi, A. (2010). *Food justice*. Cambridge, MA: The MIT Press.
- Gramsci, A. (1971). *Selections from the prison notebooks*. London: Lawrence and Wishart.
- Gruenwald, D. A. (2003). The best of both worlds: A critical pedagogy of place. *Harvard Educational Review*, 72(4), 515-541.
- Harvey, D. (1996). *Justice, nature, and the geography of difference*. Oxford: Blackwell.
- Hayes, T (2014). <http://www.atrazinelovers.com/t2d.html>, accessed Nov. 25, 2014.
- Hesterman, O.B. (2011). *Fair food: Growing a healthy, sustainable food system for all*. New York: Perseus Books Group.
- Ikerd, J. (2003). *The colonization of rural America*. Presented at 2003 Sustainable Hog Farming Summit, sponsored by Global Resource Action Center for the

- Environment (GRACE) and Waterkeeper Alliance, Gettysburg, PA, June 6-7, 2003. http://web.missouri.edu/ikerdj/papers/HogColonialism.htm#_ftn1, accessed Sept. 12, 2014.
- Imhoff, D. (2010). *The CAFO reader: The tragedy of industrial animal factories*. Foundation for Deep Ecology. Los Angeles and Berkeley, CA: University of California Press.
- Katz, S.E. (2006). *The revolution will not be microwaved*. White River Junction, VM: Chelsea Green Publishing.
- Kloppenburg, J., Jr., Hendrickson, J., & Stevenson, G.W. (1996). Coming into the foodshed. *Agriculture and Human Values*, 13(3), 33-42.
- Kloppenburg, J., Jr. & Lezberg, S. (2003). Getting it straight before we eat ourselves to death: From food system to foodshed in the 21st century. *Society and Natural Resources*, (9), 93-96.
- Kloppenburg, J., Jr., Lezberg, S., De Master, K., Stevenson, G.W., & Hendrickson, J. (2000). Tasting food, tasting sustainability: Defining the attributes of an alternative food system with competent, ordinary people. *Human Organization*: Summer 2000: 59, 2.
- Kneen, B. (1989). *From land to mouth: Understanding the food system*. Toronto: NC. Press Limited.
- Lawlor, D. (2009). From the Farm to the Dining Hall. *Humboldt State University: Now*. <http://now.humboldt.edu/news/from-the-farm-to-the-dining-hall/>, accessed Aug. 23, 2014.
- Leopold, A. (1949). *A sand county almanac*. New York: Oxford University Press.
- Locally Delicious. <http://www.locally-delicious.org/about-us>. Accessed August 18, 2014.
- Luoma, J. R. (1999). *The hidden forest: The biography of an ecosystem*. Corvallis, OR: Oregon State University Press
- Mamen, K., Gorelick, S., Norberg-Hodge, H., & Deumling, D. (2004). *Ripe for change: Rethinking California's food economy*. Berkeley, CA: International Society for Ecology and Literature.
- McKibben, B. (2007). *Deep economy: The wealth of communities and the durable future*. New York: Henry Holt & Company.

- Mullin, C.A., Frazier, M., Frazier, J.L., Ashcraft, S., Simonds, R., vanEngelsdorp, D., & Pettis, J.S. (2010). High levels of miticides and agrochemicals in North American apiaries: Implications for honey bee health." *PLoS ONE* 5(3): e9754.
- Mushita, A. & Thompson, C.B. (2007). *Biopiracy of biodiversity*. Trenton, NJ: Africa World Press.
- Nabhan, G. P. (2008). *Where our food comes from: Retracing the Vavilov through the centers of diversity in his quest to end famine*. Washington, D.C.: Island Press.
- National Department of Agriculture. (2014). *Erosion*.
<http://www.nda.agric.za/docs/erosion/erosion.htm>., Accessed Nov 5, 2014.
- Nepo, M. (2000). *The book of awakening*. San Francisco: Conari Press.
- Nikiforuk, A. (2008). *Pandemonium: Bird flu, mad cow disease and other biological plagues of the 21st century*. London: Penguin Global.
- Oldenburg, R. (1991). *The great good place*. New York: Paragon House.
- Petrini, C. (2005). *Slow food nation: Why our food should be good, clean, and fair*. New York: Rizzoli Ex Libras.
- Pimentel, D. & Pimentel, M. (2008). *Food, energy, and society*, 3rd ed. New York: CRC Press.
- Pollan, M. (2008). *In defense of food: An eater's manifesto*. London: Thee Penguin Press.
- Pretty, J. N. (2002). *Agri-culture: Reconnecting people, land and nature*. Sterling, PA: Earthscan Publications
- Rabalais, N.N., & Turner, R.E. (2013). *Hypoxia in the northern gulf of Mexico: Description, causes and change*. New York: Wiley.
- Reisner, M. (1993). *Cadillac desert: The American west and its disappearing water, revised edition*. New York: Penguin Books.
- Roberts, P. (2008). *The end of food*. New York: Houghton Mifflin
- Shiva, V. (October, 2004). *A tribute to the earth's caretakers*. Speech at Terra Madre, www.terramadre2004.org/eng/discorsi/pdf/Vandana_Shiva_ENG.pdf, accessed Jan. 18, 2013.
- Singleton, R.A. Jr., & Straits, B.C. (1999). *Approaches to social research*. (5th ed.). New York: Oxford University Press.

- Smith, G. A. (2002). Place-Based education: Learning to be where we are. *Phi Delta Kappan*, 83(8), 584-594.
- Snauwaert, D. T. (1990). Wendell Berry, liberalism, and democratic theory: Implications for the rural school. *Peabody Journal of Education*, 67, 118-130.
- Stubblefield, D., Steinberg, S.L., Ollar, A., Ybarra, A., & Stewart, C. (August, 2010). *Humboldt County community food assessment*. Humboldt State University: California Center for Rural Policy. <http://www2.humboldt.edu/ccrp/wp-content/uploads/2013/12/Food-Report-Final.pdf> , accessed November 14, 2014.
- Slow Food International. <http://www.slowfood.com/international/7/history>, accessed Sept. 22, 2014.
- The Cornucopia Institute (2009). *Behind the bean: The heroes and charlatans of the natural and organic soy foods industry*. http://www.cornucopia.org/soysurvey/OrganicSoyReport/behindthebean_color_final.pdf, accessed August 13, 2014.
- University of California, Los Angeles. (2007). *Health policy research brief*. UCLA Center for Health Policy Research.
- University of Illinois at Chicago. *Conservation Biology: Biodiversity of Useful Plants*. <https://www.uic.edu/classes/bios/bios101/usefulplants.PDF>, accessed Nov. 23, 2014.
- U.S. Department of Agricultural Statistics Services. (2009). *2007 Census of agriculture: United States summary of state data*. Washington D.C.
- U.S. Department of Agriculture. (2012). 2012 Census of agriculture reveals new trends in farming. *Agricultural Census*. http://www.agcensus.usda.gov/Newsroom/2014/05_02_2014.php, accessed Nov. 23, 2014.
- U. S. Department of Agriculture. (2014a). Honey bees and colony collapse disorder. *Agricultural Research Service*. <http://www.ars.usda.gov/News/docs.htm?docid=15572>, accessed July 12, 2014.
- U. S. Department of Agriculture. (2014b). Recent trends in GE adoption. *Agriculture Research Service*. <http://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx#.VEaZqGddW8A>, accessed Nov. 20, 2014.

- U.S. Department of Health and Human Services. (2005). *Obesity threatens to cut U.S. life expectancy, new analysis suggests*. March 16, 2005. <http://www.nih.gov/news/pr/mar2005/nia-16.htm>., accessed by Cobb, T.D. (2011).
- U.S. Environmental Protection Agency. (2003). National pollutant discharge elimination system permit regulation and effluent limitation guidelines and standards for concentrated animal feeding operations (CAFOs). *Federal Register* 68(29):7176-7274.
- U.S. Environmental Protection Agency. (2009). *Persistent organic pollutants: A global issue, a global response*. <http://www2.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response>, accessed Nov. 12, 2014.
- U.S. Environmental Protection Agency. (2010). *Basic information about food waste*. <http://www.epa.gov/osw/conserves/materials/organics/food/index.htm>., accessed June 12, 2014.
- U.S. Environmental Protection Agency. (2014). *Pesticides and food: What organically grown means*. <http://www.epa.gov/pesticides/food/organics.htm>, accessed Nov. 26, 2014
- U.S. Geological Survey. <http://toxics.usgs.gov/definitions/biomagnification.html>, accessed Nov. 24, 2014.
- Vos, T. (2000). Visions of the middle landscape: Organic farming and the politics of nature. *Agriculture and Human Values*, 17, 245-256.
- Waxman, D. (2014). Hunger action month: 30 ways in 30 days to learn and do something about hunger. *Times Standard*. September 9, 2014. http://www.times-standard.com/News/ci_26500719/Hunger-Action-Month:-30-ways-in-30-days-to-learn-and-do-something-about-hunger, Oct. 13, 2014.
- Wiebe, K. & Gollehon, N. (2006). *Agricultural resources and environmental indicators*. Washington DC: U.S. Department of Agriculture, Economic Research Service.
- Winne, M. (2008). *Closing the food gap: Resetting the table in the land of plenty*. Boston: Beacon Press.
- Zung, T.T.K. (2001). *Buckminster Fuller, anthology for the new millennium*. New York: St. Martins Press.

APPENDIX A—“FARMTASTIC” SCIENCE CAMP CURRICULUM

Monday—Introduction to Farm, Ecosystems, and Plant Needs

- Meet each other. Introductions. Acquaint students with farm rules. Go over goals and expectations. Ask what they want to learn about. Ice breaker game: name, plant or animal, and movement.
- Farm tour: Walk around the farm. Introduce to flower garden, fruit trees, the children’s garden, and the herb garden. Smell and taste herbs and flowers. Discuss where our food comes from and what a plant needs to grow. Song: Sun, soil, water, air. Everything we eat and wear.
- Construct farm journals. Use plant materials for coloring, decorating, writing names. Ask them to write or draw the things a plant needs to grow.
- Special spot activity. Let students explore farm to find a spot they really like. Have them describe the spot in their journal.
- Using the senses activity. What are the senses? How do they help us experience the world? Discuss how we have used our senses so far. What have we seen, touched, smelled, heard, tasted?
- Penny hike. How might a very small creature use its senses to experience the world? Students collect interesting things on a penny from the perspective of an insect or worm. Share penny stories with each other. Encourage them to draw or write in journal about their penny treasures and how it feels to be small.
- Snacks. Break. Use restrooms.
- Go on creek walk. Play “bump” on the way. At end of trail, do group nature poetry activity. Play “animal stealth” on the way back to farm
- Talk about farm/forest ecosystems. What is an ecosystem? How is the creek environment different than the farm environment? What did we “sense” in those places. Who lives there and what happens there? Draw or write in journals.
- Make farmer’s hats. Group storytelling.
- Wrap-up. Discuss what we liked best and what we want to do more of. Preview the week’s activities. End with plant hokey-pokey.

Tuesday—Plants: Parts, Functions, and Life Cycle

- Welcomes. Explain what we will be doing today. Six Plant Parts song. Name game: favorite plant to eat? Which part of the plant is it?
- Stem, Root, Leaf, Flower, Fruit, or Seed Activity. As a group identify a few examples of food in each group. Paste dried flowers in journals. Draw and label parts.
- Make plant presses. Collect plants and flowers for presses. Write names on presses and place them under something heavy. Explain we will need to wait a few days for the plants to dry so we can put them in our journals.

- Talk about the functions of different plant parts. Celery activity to demonstrate stem function.
- Snacks. Break. Use restrooms.
- Explore the herb garden. Explain the many uses of herbs—culinary, teas, medicine. Herb bouquet activity. Smell and feel the leaves. Which ones have smells that you like? Collect herbs. Make bouquets with twine and name tags. Explain that hanging upside down allows them to dry well.
- Make herbal tea.
- Plant seeds in children’s garden and talk about a plant’s life cycle. Identify plants in different phases.
- Get to know a plant activity. What stage of its life is it in? Does it have a story? What kind of seed did it come from? Write or draw in journals. Share what we have experienced or written.
- Dramatic play. Act out your special plant’s life cycle.
- Group storytelling.
- Drink herbal tea. Wrap-up. Preview tomorrow. Kids take home bouquets.

Wednesday—Insects, Farm and Forest Animals, Local Food

- Welcomes. Explain we will be exploring animals and insects on the farm. Sing insect song.
- Insects in the garden activity. Help students identify and differentiate between insects and other arthropods. Find insects in various stages of their lives.
- Discuss pests vs. beneficial insects. Insects and insectary plants activity. Identify plants that attract beneficial insects. Collect and observe insects: pests and beneficial. Write or draw in journals about favorite insects.
- Dramatic play. Have students act out the actions of their favorite insects.
- Snacks. Break. Use restrooms. Where did our snacks come from activity. Discuss natural resources, food miles, importance of local food
- Blindfolded taste test of local/nonlocal carrots. Discuss flavor and nutrition.
- Talk about farm animals. What do they contribute to the farm and our diets? Rules for animals—be gentle. Visit sheep and chickens. Food/textile focus.
- Stream exploration and woods walk. Look for tracks. Observe forest animals and birds. Predator/Prey game.
- Return to garden. Special spot activity. Write or draw in journals about the forest and animals.
- Group storytelling
- Wrap up. Review day’s activities. Preview tomorrow.

Thursday—Soil Science, Vermiculture, Composting, Water Cycle

- Welcomes. Squirmy wormy song. Discuss geology, rocks, land features and soil.

- Everything comes from the soil activity. Song: Sun, soil, water, air/ Everything we eat and everything we wear. Dirt for breakfast activity to demonstrate that healthy food comes from healthy soil.
- Soil dissection and soil milkshake activity. Wash hands.
- How is soil made? Building compost activity. Cut and paste compost critters into journals.
- I Can Compost Tag game.
- Snacks. Break. Use restrooms. Read compost story.
- Who lives in the soil? Building worm bins. Observe, measure, and touch red worms in the compost bin. Make clay worms. Wash hands. Journal entries.
- Discuss the water cycle and water conservation. Evaporation/condensation jar activity.
- Creek walk to look for water organisms. Have students observe decomposing materials and try to identify what living things they originated from. Once at creek look for insects, amphibians, and fish in water.
- Special rock activity. Share stories of rocks.
- Ecopots activity. Use worm castings and mix with soil. Plant starts of calendula for students to take home and put in yard. Talk about how calendula attracts beneficial insects.
- Group storytelling.
- Wrap up. What's next?

Friday—Harvesting, Seasonal eating. Saving seeds

- Circle up. Plant hokey pokey to get wiggling. Check out soil milkshakes. Review soil and water.
- Check plant presses for dried flowers and decorate journals with dried garden materials.
- In the classroom, discuss eating in season. What food is available when? When does it taste the best? Make a list on the board. Talk about farmers' markets, CSAs, home and school gardens. How are we lucky to live where the food grows? I am grateful game. Record gratitude responses in journals.
- Explain how the only thing more exciting than eating good food is harvesting good food to eat. Harvest walk for veggie rollups. Have kids collect spinach, flowers, and other plants to eat. Encourage being guided by the senses. Color, smell, taste.
- Wash hand and veggies and make veggie rollups. Eat a rainbow activity.
- Break. Restrooms. Free time with basketballs and hoola hoops.
- Talk about saving seeds. What seeds look like when they are ready to harvest and how best to store them. Have students harvest seeds from the farm.

- Make (flower & food) seed balls. Set them in the sun to dry. Students will take the seed balls home to plant them. With some water they will grow.
- Wash hands. Read harvest story.
- Farm scavenger hunt. Record findings in journal.
- Seed to seed puppet show. Kids choose their character and make/decorate their character puppet. Practice our puppet show: the story of growing and eating food. Perform puppet show for farmer and interns.
- Closing circle (in sunflower shelter). Talk about our experiences on the farm. Ask students what they learned and what they liked best. Eat raspberries. Song & good-byes.