

Defining Local, Defining Fruit:  
Understanding Place and Identity Through Dragon Fruit and Tomatoes

An honors thesis for the Department of Anthropology.

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## Abstract

This thesis asks how human and non-human species—in this case, two kinds of fruit—intersect in politics, economics, formations of categories, and conceptions of scales and identities. I draw on theory about consumer and material culture, place-making, and interspecies relationships to produce an in-depth reading of tomatoes and dragon fruit that reveals their deep interconnections with the human world. I describe my theoretical framework and methods in the first chapter of the thesis. I also discuss how my own exploration of these fruits involved border crossings and transformations of fruits and the ideas associated with them.

These two specific fruit, both native to Central and South America, are useful to investigate the mediation of identities, scales, and contexts because they are simultaneously globalized and localized in notable ways. Chapter Two traces the history of tomatoes through colonization and industrial capitalism, showing how this fruit played a central part in the development of industrialized food processing and fast food marketing and how it has become “American.” The chapter also explores how tomatoes have found a place in contemporary alternatives to the dominant food system, including their role in local food activism and farmworkers’ rights campaigns.

In a similar feat of flexibility, the dragon fruit has successfully established itself as “Vietnamese,” as I show in Chapter Three. Although brought to Vietnam by French colonizers, it has become a mode of Vietnamese empowerment and assertion of national identity in the face of foreign domination, notably in relation to Chinese hegemony and global capitalism. Dragon fruit in Vietnam are full of histories of colonialist domination, but are mobilized as tools for Vietnamese empowerment and entry into the global market.

In my final chapter, I describe my experience marching with the Coalition of Immokalee Workers for better working conditions for migrant farmworkers in Florida. This concluding chapter demonstrates the messy, contradictory, and polyvocal ideas that fruit carries and communicates and how my ideas and my self are implicated in this messiness. As these fruit both cross and shape boundaries and borders, people use them to understand and mediate changing spaces, places, economies, and identities, including our own.

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## Introduction: Food on the Move

“Food is always on the move, and always has been,” write the authors of *Consuming Geographies* (Bell and Valentine 1997:192). But what is food *doing* while it is on the move?

While travelling between people, places, spaces, and times, food picks up, carries around, and relays meaning for anyone involved in its motions. Food is malleable, and can take on and communicate different meanings in different scales and contexts, like those of the local, regional, national, global, ethnic, economic, and so on. As it travels, food not only gets tied up in but also helps to shape ideas about scales and contexts. In doing so, food can help people understand their place in large, complicated global forces.

Of these scales and contexts, today’s food system is most frequently referred to as a globalized and capitalist. While food is on the move at all scales, global movements are perhaps the most dramatic, but they do not necessarily cancel out or eliminate other scales or the movements at those scales. In fact, globally circulating foods actually have a part in helping articulate particular local, regional, national, and other identities.

As we create and work with ideas about scales and contexts through food, we position them into artificial dichotomies, such as the concept of the global-versus-local. But if food has always been on the move, then food that is considered “local,” for example, at one point had to *become* “local.” As John Tierney writes in the New York Times, “The foods we consider local are results of a globalization process that has been in full swing for more than five centuries, ever since Columbus landed in the New World” (Tierney 2011). Food becomes “local,” or even “ethnic” or “national,” through various means and for various reasons. Among these reasons is an attempt to understand and locate our selves in place, time, identity, economies, and more. In

becoming whatever designation—global, local, ethnic, and so forth—food helps us conceptually shape what those designations are, not only for the food but also for our own selves.

As we move, shape, and refigure food, it does the same to our bodies, ideas, politics, economies, et cetera. Such a realization is at the basis of an interspecies approach, in which the distinctions between human and other are revealed to be over-simplifications of vast, interconnected, interwoven, mutually influencing, interspecies relationships. Once these complicated interactions are recognized as such, an interspecies approach allows us to examine these complicated relationships in ways that move past divisions between, for example, human and plant, industrial and small-scale, and global and local. We can reimagine the relationships between the scales and contexts through which our food flows. If we consider how people work with food to create these designations, we quickly realize that seemingly distinct scales are not separated from one other. In reality, each scale and designation is implicated in all the others.

Having grown up with an American food system very much based on global and industrial scales, as indicated by the ubiquity of processed goods, fast food restaurants, and supermarkets, many in my generation are asking questions about this food system. I and many others are curious, interested, concerned, worried, and, at times, fearful of how our own personal health, the health of our families, community, environment, the strength of our economies and our democracies, and the well-being of our nation and world is tied up in a largely corporate, industrial food system. Amidst dialogue and discourse surrounding some of the negative discourse about the system we are all very much a part of, there are many people envisioning and working toward what they consider to be a better food system. As one of those people, I want to understand the deeper implications of human/food relationships to be able to more intentionally guide the forward direction of our food system. Food and the food system do not just affect our

health. They also affect how we understand our place, our identity, and our selves. This paper is one step in investigating this complicated and highly involved relationship.

What I am particularly interested in here is how, despite conceptual distinctions between scales, globally travelled fruits become conceptually local to an area, and what they do there. There is no technical definition of “local” as it is used to describe food. The definitions that do circulate are invented, dynamic, arbitrary ones, and I do not endeavor to necessarily or authoritatively define it myself in this paper; doing so would be contrary to my thesis. But this does not mean I am not interested in its definition. Rather, I explore how various people and peoples are defining and acting on “localness” in myriad ways in relation to the two global fruit at the center of this paper: tomatoes and dragon fruit.

These two specific fruit are useful to investigate the mediation of identities, scales, and contexts because they are simultaneously globalized and localized in notable ways. In this paradoxical feat, they are being used by people to understand and change their own place in space and time by drawing on the history of the fruit while ascribing their own histories onto them as well. In the process, both the tomato and the dragon fruit have made themselves “local” to an area other than their Central and South American homeland.

Tomatoes, for instance, have become American. Not only do they have a place in American cuisine as condiments and toppings on hotdogs, hamburgers, and sandwiches or in pasta sauces and chili bases, but they have also played a central part in the industrialization of the food system. Paradoxically, tomatoes have found a place in both American industry and alternatives to industry, including the local food movement and workers’ rights campaigns.

In a similar feat of flexibility, the dragon fruit has successfully established itself in Vietnam and as “Vietnamese.” Although brought over by colonial forces, it has become a mode

of Vietnamese empowerment and assertion of national identity in the face of foreign domination, notably in relation to Chinese hegemony and global capitalism. This paper explores how and why dragon fruit and tomatoes have come to embody these seemingly contradictory meanings, and what this means for our own relationships to these fruit.

This paper is composed of three main chapters. In the first chapter, I explain my methods and theoretical framework. I describe the reasoning behind my decisions to study tomatoes and dragon fruit and through what lenses I chose to do so. In this section I also explore how my own exploration of these fruits involved border crossings and transformations of fruits and the ideas associated with them. In the following chapter, I turn my focus to tomatoes, beginning with their history and tracing their journey through industrialization into today's alternatives to the current industrial food system. In the third chapter, I follow the dragon fruit, piecing together a history of the fruit's movements over time and conducting fieldwork in markets and farms to understand the fruit as "Vietnamese" in the context of relations with dominating countries and global capitalism. In my final chapter, I describe my experience marching with the Coalition of Immokalee Workers to demonstrate the messy, contradictory, and polyvocal ideas that fruit carries and communicates, how my ideas and my self are implicated in this messiness, and how food functions to locate us in economies, politics, place, time, identity, and so much more.



## Chapter 1: Theory and Methods: Framing, Following, and Figuring Out Fruit

### **Framing Fruit**

Anthropologists have always been interested in how humans interact with and relate to their environments. Lately, there has been an increased focus on moving away from an anthropocentric focus to reading more agency into other species. In his book, *The Botany of Desire*, Michael Pollan asks, “What existential difference is there between the human being’s role in [a garden] and the bumblebee’s?” (Pollan 2001:xiii). He challenges readers to reconsider the grammar of our relationship to plants, from one privileging human selection to one acknowledging coevolution. Anthropologist Anna Tsing writes, “Human exceptionalism blinds us,” and asks, “What if we imagined a human nature that shifted historically together with varied webs of interspecies dependence?” (Tsing 2010). She takes this idea and explores the interconnectedness of humans and mushrooms, describing mushrooms as companions, as enemies to monocultures, and as indicators of the human condition. Multispecies ethnography endeavors to do what Tsing (2010) does in “Unruly Edges,” which is to “explore how a multitude of organisms’ livelihoods shape and are shaped by political, economic, and cultural forces” (Kirksey and Helmreich 2010:544). As S. Eben Kirksey and Stefan Helmreich argue in “The Emergence of Multispecies Ethnography,” an anthropological approach to studying the relations between species—specifically for our purpose fruits and humans—is useful because “with animals, invasive plants, and microbes on the move, anthropological accounts ramify across places and spaces, entangling bodies, polities, and ecologies” (Kirksey and Helmreich 2010:555). This branching and connecting acknowledges the interconnectedness of lives and enables us to see how humans and other species—in this case, fruits—have shaped each other as well as economic and ecological systems.

A multispecies approach is the foundation of my theoretical framework and links well with thinking about how plants and food carry meaning, shape social boundaries, operate within economic exchanges, and interact with place. In addition to this approach, I am using a combination of various theories including Arjun Appadurai's (1986) "social life of things," George Marcus' (1995) concept of "following the thing," Mary Douglas' (1996) consumption theories, Sidney Mintz's (1985) work on the social history of sugar, and David Bell and Gill Valentine's (1997) examinations of food and place—including ideas about scales from local to global. When used together, these theories provide a framework within which to consider the human/fruit relationship.

In Arjun Appadurai's discussion of a "social life of things," he argues that the meanings of things "are inscribed in their forms, their uses, their trajectories" because "it is the things-in-motion that illuminate their human and social context" (Appadurai 1986:5). It is for this reason that I look at the social, cultural, and economic histories of tomatoes and dragon fruit in relation to their geographic movements and their current positions in the world. Appadurai demonstrates how the commodity phase of a thing is born not out of its inherent qualities, but rather of the social interactions with and over the thing. This theory is useful in investigating the general ability of things to become more than their physical selves and collect and relay ideas imbued through social relations, in this case, meanings about scale, identity, and place. Using this theory, I look at fruits in their commodity phases and attempt to identify or become more aware of what the social relations formed around that fruit are and where and when they formed.

In essence, I "follow the thing," in the spirit of George Marcus' multi-sited ethnographic research. As Deborah Barndt, author of *Tangled Routes: Women, Work, and Globalization on the Tomato Trail*, argues, following the thing allows to use the thing as "concrete entry points for

exploring broader processes that move beyond the particularity of the tomato” or the dragon fruit (Barndt 2008:3). In following the fruit, I attempt to connect the social, economic, geographic, and botanical aspects of fruit and reveal the various parties and categories implicated in their complex interweavings. As Ian Cook writes in “Follow the Thing: Papaya”:

If we accept that geographical knowledges through which commodity systems are imagined and acted upon from within are fragmentary, multiple, contradictory, inconsistent and, often, downright hypocritical, then the power of a text which deals with these knowledges comes not from smoothing them out, but through juxtaposing and montaging them. [Cook 2004:642]

By following the tomato and dragon fruit, we go beyond the commodity phase to the contexts in which they become commodities. Appadurai writes, “Knowledge *about* commodities is itself increasingly commoditized,” meaning that at least part of the value of, say, the local fruit is a result of how knowledge about the tomato’s or dragon fruit’s production is itself a commodity (Appadurai 1986:54). This is particularly true in an age where industrialization distances the consumer from production and information is difficult to obtain. Consumption of the “local” (or “national,” “ethnic,” et cetera) involves simultaneously consuming and commodifying the material product itself, ideas about its local quality, and the knowledge that has contributed to the construction of these meanings and qualities. “*Politics* (in the broad sense of relations, assumptions, and contests pertaining to power),” Appadurai argues, “is what links value and exchange in the social life of commodities” (Appadurai 1986:57).

Mary Douglas expands upon this “politics” in her theories on consumption. She asserts that consumption is driven by social expectations and obligations and that it “is the very arena in which culture is fought over and licked into shape” (Douglas 1996:37). Areas or “arenas” of

consumption are thus appropriate spaces in which to study the culturally formed ideas about scales and designations such as “local,” “national,” or “ethnic.” She concludes, “Goods are now to be seen as the medium, less objects of desire than threads of a veil that disguises the social relations under it. Attention is direct to the flow of exchanges, the goods only marking out the pattern” (Douglas 1996:152). In the same vein, Brandt writes, “Tomatoes are much more than fruits of the earth but are codes for broader social processes and debates,” which can be similarly applied to dragon fruit—or possibly any fruit—as well (Brandt 2008:50). Douglas’ theory is useful for thinking about the socially-constructed motivations driving participants in local or national food economies and movements, the cultural usage and social meaning of designations of scale, such as “local,” in patterns of consumption, and the role of consumption in shaping and perpetuating ideas and ideals about these designations.

We are looking at how things—specifically food—carry meaning. Sidney Mintz’s work on sugar is thus an appropriate piece to use in conjunction with Appadurai’s and Douglas’ theories. In *Sweetness and Power*, Mintz examines the social history of sugar and how it relates to power. He writes, “Differences in quantity and in form of consumption [of sugar] expressed social and economic differences,” (Mintz 1986:79). Mintz argues—and Douglas would agree—that sugar is a medium with which to distinguish place in social worlds. Sugar and its consumption carries meaning about status, ability, and values, but these meanings, as Mintz demonstrates in his decision to trace the historical path of sugar, are not static or permanent. “Tobacco, sugar and tea were the first objects within capitalism that conveyed with their use the complex idea that one could become different by consuming differently,” he concludes (Mintz 1986:185). This idea, Mintz continues, was “closely connected to England’s fundamental transformation from a hierarchical, status-based medieval society to a social-democratic,

capitalist, and industrial society” (Mintz 1986:185). The value of Mintz to my work is largely in the history he maps out, as it is one that includes both the human history and the history of the food he is exploring. In this history, he demonstrates the interconnectedness and the embeddedness of food history and human history within the other, and the fluidity of the boundaries among scales, actors, and contexts. Over time the meanings food carries transform with changing accessibility and social contexts. I say “with” here because these meanings are both transformed by *and* help transform accessibility and social norms.

This mutual constitution includes the relations between food and place. In their work, *Consuming Geographies*, David Bell and Gill Valentine examine the connection between food and place, including ideas about scale and identity. According to Bell and Valentine, “The history of any nation's diet is the history of the nation itself, with food fashions, fads and fancies mapping episodes of colonialism and migration, trade and exploration, cultural exchange and boundary-marking,” which applies very aptly to the idea of global fruits that travel across time and boundaries with the help of humans (Bell and Valentine 1997:168). Another important framing their work provides is that although “local” and “global” are often used as antonyms, it “is important to not overemphasise the separatedness of these scales, but to see them as all mutually constitutive and entangled” (Bell and Valentine 1997:201).

I should note here that the mutually constitutive nature of scales is essential not only to the thesis of this paper but to how it is read as well. Throughout the paper I talk about ideas about “localness” and “globalness,” but designations of “local” and “global” in the United States are different from those in Vietnam. It is important to keep in mind that the terms “local,” “national,” and “global,” all have varying gradations of scale. Vietnam, having been isolated from the global market for so long, has not entered the “global” enough to really have formed a

“local” to the same scale we might consider “local” to be in the United States, particularly in the “local food movement.” This does not mean there is no “local,” but rather that “local” may carry a somewhat different set of meanings, perhaps relating more to the ‘national.’ Of course these differences are hardly static and do not only exist between the United States and Vietnam, but also among other countries, regions, peoples, and even individuals. While such semantics may be confusing, it is critical to our understanding of our relationships with food to engage and use the language of food in all of its complex and contradictory meanings.

Using these terms and the theories mentioned above, I explore the interrelationship of humans and tomatoes and of humans and dragon fruit. Through close readings of the histories and meanings of tomatoes and dragon fruit over time and across distances, I look at how these fruits have helped people to understand the world around them. This world is constantly changing through myriad forces including those of colonialism, imperialism, industrialization, capitalism, and globalization. Changes and the forces that bring them are not entirely or wholly unresisted, as we can see quite clearly with our current food system. The globalized industrial food system within which we live is opposed by people participating in the food movement and alternative food economies. At the same time it is engaged with by Vietnamese people seeking to raise the international status of their nation. Fruit helps people understand and mediate the changes, forces, and movements that shape the in which world they live.

### **Deconstructing Fruit**

I chose to examine the tomato and the dragon fruit together in this paper for several reasons. Their global movements and local adoption have given rise to paradoxical, polyvocal fruit. They have helped people navigate, understand, shape, and rework their identities and the contexts in which these identities are formed and performed. Their histories are intertwined with

histories of human progress, technological or economic advances, industry, domination, and alternatives to each. Their stories are not just stories about fruit, but also about people and global forces.

I probably could have chosen almost any two fruit and gotten different, yet ultimately similar stories and conclusions. However, I chose tomatoes and dragon fruit for a few specific reasons. For one, both fruit originate from Central and South America and were moved through the forces of colonialism. While this alone is hardly basis for a study of these two fruits, my second reasoning is more significant: both of these fruits have established themselves or have been established as “local” and have made significant culinary, agricultural, and economic impacts in an area other than that of their origin. My third reason is that the popularization of tomatoes and dragon fruit has happened in very different regions in different manifestations and at different times, but both are now considered “local” in varying ways. The ideas and values present in discourses of “the local” traverse the differences and distances between these fruit and their locations and I investigate how these discourses shape and are shaped by these fruit.

My selection was also a matter of convenience. Tomatoes are easily accessed in New England markets, and they have been a consistent part of my life as a child helping my parents grow and process them, as a student gardener, as a “foodie,” or participant in alternative—and often elite—food systems, and as a farmhand. I chose the dragon fruit as my second fruit of study partly because of dragon fruit’s the dragon fruit’s movement across global and national scales, and partly because I had the good fortune of accompanying Tufts Biology Professor George Ellmore to Vietnam to study dragon fruit physiology during the winter of 2012. This trip presented me with the invaluable opportunity to live on a dragon fruit farm and observe the street

markets and grocery stores in which Vietnamese-produced dragon fruit are sold in the city of Hanoi.

### **Fruit and the Author**

As a food activist, gardener, farm laborer, cook, patron of community supported agriculture and local food producers, student of anthropology, student of biology, researcher, and eater I, myself, am navigating the same spaces that I am researching. This navigation has actually resulted in rather contradictory or conflicting actions on my part. Like the tomato and the dragon fruit, my place in food systems is tied up in my history, my movements, my identity as shaped by myself and others, my cultural and social context, and my own relations to and with food like tomatoes and dragon fruit. My involvement in different scales, contexts, and spaces does not immediately feel or appear contradictory because like these scales, contexts, and spaces, my roles are not rigidly bounded from each other.

Similarly, there are gradations of localness and globalness and such designations are inevitably connected to and framed by the others. There are gradations of participation in these scales, and such participation itself has a history intricately tied with the history of those scales. In New England I was local, while in Vietnam I was globally placed while working to support the local Vietnamese in an effort to help the local join the global. In one place, tomatoes, dragon fruit, local, and global mean one thing, and in another, they mean something different. So it is with my ideas about industrialization and the global food system. When I am an activist, for instance, I find my relations and understandings framed differently from when I am a farmworker or student or scientist or consumer.

I, too, cross boundaries and borders and play multiple, sometimes ambiguous, roles from farmworker to scientific researcher to student food activist. My involvement has been



multifaceted and multidisciplinary. I brought my ideas and passions into my work as a farmworker and as a researcher, and vice versa. I recognize that there are moments and places where the values of one are in tension with the values of another.

### *The Author as a Farmworker*

In the past year, I worked on three small, local farms. They all varied in size, scope, and mission. As I wrote this paper, I thought back on my experiences on all of them. These were the spaces where local production of both food and ideas about localness was actually happening. Our work growing food to be sold nearby was the very action that is at the foundation of the ideas and ideals of the local food movement: locally grown food. I had switched sides, from consumer to producer, but the values were still largely there. While writing, I found myself asking where I, a part-time member of the weeding crew, fit into the discourse about local food. What values and ideals was I enacting? What values and ideals was I refuting? Where was I in the local food system? The global food system? Where did I fit into the story of the local tomato, and it into mine?

My intention in working on these farms was to participate more fully in resisting what I see as an unjust, exploitative, profit-driven industrial food system. I wanted to be part of a community that finds fault with the status quo and actually does something to change it. There were disappointments on this front. Some of the abuses or values commonly associated with industrial agriculture and the capitalist market were not altogether absent from these farms. For example, on one of the farms, there was a farm-wide concern for the bottom line that superseded the ideals of community upon which the farm was based. Painful parsnip burns suffered on the part of the weeding crew on this farm went unacknowledged because of a blinding need to keep the workers in the field and the money flowing. However, despite their failures to meet the ideals

of “community,” all of these farms were founded as alternatives to “Big Ag,” a commonplace term for the system of commoditized and corporatized agriculture. Maybe the “local” farms use fewer chemicals, maybe they participate in an alternative market economy, or maybe they value people over profit. Whatever the tactic, as a farmworker, I embedded my own history into a much larger one concerning food and food systems.

### *The Author as an Activist*

Many people are working to change the food system, including myself. The approach that inspired this thesis is one many refer to as the “local food movement.” The local food movement centers around championing foods grown, produced, and consumed locally—still a vague and flexible term—and a faith that local food production and consumption can support the health of the local economy, environment, and society. The movement largely manifests itself in consumers who choose to buy their produce from farmers’ markets, community-supported agriculture (CSA) programs, and other direct marketing models, rather than from supermarkets. Subscribers to the movement also often agree with other facets of the food movement in general, but what defines the *local* food movement is a belief that supporting local food production can help build communities and fix what participants consider to be a broken food system (Grubinger 2010).

The food movement has histories that trace back to various iterations of back-to-the-land sentiments, agrarian ideals, and other periods of food reform or romanticization of farming (Haydu 2011, Brown 2011, Lears 1981). All of these were responding to concerns about a degradation of some sort, be it in society, in food quality, food safety, or environmental health. The idea of eating locally as an alternative can be seen in World War II advertisements promoting home “victory gardens” and food rationing. One declared, “Home-grown is best” and

a Connecticut-based poster challenged residents to “Be loyal to Connecticut: Use the potatoes the farmers have grown” (Yes! Magazine 2010). In the 1960s, a “back to the land” movement coupled with reactions to Rachel Carson’s *Silent Spring* shaped the movement as one in opposition to the environmentally destructive practices of the government-subsidized industrial food system (Ikerd 2009, Haydu 2011). Today’s food movement concerns itself with all of the issues brought forth by past movements, having been informed and shaped by them.

Members of the food movement protest elements from all along our food system, from the inequitable policies privileging industrial monoculture cropping to the consolidation of food processors and distributors to the overuse of pesticides. Food activist approaches to battling the detrimental institutions of an industrialized food system include protesting biotechnology giant Monsanto, voting for labeling genetically modified food, designing ways to improve fresh food access in underserved communities, and many, many more. Some food activists advocate for all-organic production to combat the presence of toxic pesticides in and on supermarket produce (Organic Consumers Association 2013). Others push for more radically holistic or ecologically minded farming practices (Holistic Management International 2013).

As a food activist, I have worked to educate friends, family, neighbors, and classmates about the flaws and detriments of the industrial food system. On the Tufts University campus, I helped establish the Student Garden in an effort to give students a space to connect to their food. As part of the student garden group and another food-focused student group, Food For Thought, I also helped organize speakers, conferences, panels, movie screenings, and more to educate the student population about issues relating to food justice, sustainability, and fairness in our food system as it exists today. I wrote weekly articles concerning food issues and introduced people to community supported agriculture, farmers’ markets, home gardening, composting, and more. I

have also marched in solidarity with migrant farm laborers, worked long days under the sun on small-scale farms, and taken classes on food activism, biotechnology in food systems, and sustainable agriculture. In my version of an ideal world, our lawns would be devoted to growing food, we would never worry about pesticides contaminating our water supply or poisoning our bodies, and monopolizing biotechnology and seed companies would be non-existent.

### *The Author as a Researcher*

I was a farmworker and I am an activist, working against a system that puts huge stock into science and profits from global capitalism. But then I became a researcher, very similar to the researchers who led the Green Revolution that ushered in industrial agriculture as we know it today. As do many researchers, I had the best of intentions when I agreed to join Professor Ellmore on his trip to explore dragon fruit physiology. The purpose of the trip, on paper and in our minds, was to help save dragon fruit farmers money. As part of the Tufts Research Team in Vietnam, however, I was actually also an agent furthering a global food system.

Our research team was comprised of three Americans—myself, Charles van Rees, a graduate student in biology, and Professor George Ellmore—and three Vietnamese—two graduate students, Đinh Duy Thành and Hương Liên Nguyễn Thị, and Vietnam National University assistant dean, Nguyễn Trung Thành. As a team, we designed and implemented experiments with the hope of cutting electricity costs for Vietnamese dragon fruit farmers during the “winter” season. Our aim was to capitalize on the fact that dragon fruit are long-day plants and farmers can induce flowering by illuminating the plants at night. In theory, farmers should only have to illuminate the cacti a couple hours in the middle of the night to induce flowering. Our Vietnamese colleagues implemented the experiment a month before our arrival and in December 2012 we travelled together to Binh Thuan, the dragon fruit capital of Vietnam, to

observe the results. While the results were not as we had hoped or expected due to weather conditions and unforeseen problems, we did identify various other ways farmers could cut costs. While there, we also measured various traits of the dragon fruit, and upon returning to Hanoi, we designed additional ways to explore the capabilities of dragon fruit.

I reconciled my involvement in the research—which was global in nature as it connected global researchers in a common goal to secure Vietnam’s place in the global market—by focusing on the benefits for the individual farmers we worked with. However, this does not negate the fact that as an American student travelling to Vietnam to “improve” dragon fruit production, I was, in a way, perpetuating the same system I find fault with as a food activist.

Good intentions have been behind some of the worst of the effects of industrial agriculture. Norman Borlaug’s Green Revolution is one example. Convinced that his technologically and chemically based agricultural initiatives would help feed the world, Borlaug did not anticipate the damage such methods would do to small scale farmers in places like India. Today, farmers struggle under debt incurred from purchasing endless inputs such as seed, chemical pesticides, and fertilizers introduced by the Green Revolution (Stephenson 2013, Shiva 1991). The benign goal of our research was located in the industrialization and globalization of the “developing” country of Vietnam and of agriculture in general. I had become an agent of the forces I was struggling against back in the United States.

Colonialism was based on the idea that Europeans had the obligation to spread their “wisdom” to the “ignorant native peoples.” The industrialization of agriculture has followed a very similar vein, indeed often using colonial legacies to bring in “advanced” science and “better” methods to underdeveloped countries—a move that has, at times, undermined the stability, security, and sovereignty of an area. As a researcher in a foreign country, I was a

participant in a system and a paradigm that has had its share of negative outcomes. It is these negative outcomes that I protest, but, as I have found, I may nonetheless find myself to be a participant in them. I am part of a set of systems that includes Western education and scientific research that is based on the principles of science. Yet these systems are also filled with people who, like myself, are somewhat ambivalent about the outcomes of these principles. We find ourselves somewhere between a faith in science and a skepticism about it. Such ambivalence has characterized many of the solutions offered by people in the West to address the problems of industrialized, commoditized food and farming systems.

### *The Aware Author*

In anthropology we are taught to be self-aware as we conduct our research and analyze our findings. I am aware that my presence as a foreigner may have motivated my Vietnamese colleagues to buy Vietnamese products as an encouragement to me to do the same and support their country. I am aware that my status as a Western student comes with privilege and an association with the paradigm of Western research. I am aware that my own perspective is largely influenced by being involved in food activism in an institution of higher education, coming from a rural, agricultural area, and being a highly educated, engaged student. As a researcher, activist, and consumer, I play a role in circulating ideas and knowledge of food through my practices, behaviors, and my research itself. Even with the best intentions, we all find ourselves straddling multiple lines and occupying positions that are in internal tension with one another.

### **Following Fruit**

As this research focuses on examining ideas about food and scale, I had to determine how I would study the circulation of tomatoes and dragon fruit within and across the rather

conceptual and intangible spheres of local, national, and global, and the ideas about this circulation. I began with several very basic, but not necessarily simple, questions: Where is the fruit now? Where has it been? How did it get to these places? To address these, I needed to take both a historical and an ethnographic approach. In terms of ethnographic work, I wanted to get at least a glimpse of how people were using the fruit in ways that spoke to and about local values; I wanted to explore the respective local food economies in which these fruit appear. However, these economies, while still small compared to the grocery supermarket system of the United States, are too large to fully explore in this paper. Such an endeavor would require looking in-depth at farmers' markets, street vendors, community supported agriculture, co-ops, farm stands, community gardens and farms, personal gardens, informal and alternative exchange systems and more. With limited time and access, I decided to look at these local food economies as they existed within the specific settings in which I found myself.

In the case of the tomato in the United States, I chose to look at several farmers' markets, farm stands, and small-scale farms because these spaces are part of the New England local food economy. Living in the Boston area and being a participant in the local food movement afforded me the opportunity to investigate several area farmers' markets and work on three small Boston-area farms. Because New England farms are relatively close to cities, Bostonians can fairly easily enjoy a wide selection of produce from a large number of farms. The diversity found during peak growing months includes typical farmers' market fare like tomatoes, squash, onions, lettuce, apples, and carrots, as well as ethnic produce like bok choy and tomatillos. Data from the USDA indicates that New England and Boston in particular have some of the greatest concentrations of farmers markets in the nation (Lohr et al. 2011:4). In this area, there are many well-educated liberal consumers—people who tend to support the food movement. In the Boston

area alone there are more than 150 farmers' markets on different days and during different times of the year (Boston.com 2013). The high concentration, range of options, and neat orderliness of New England farmers' markets make them the poster child of the local food movement.

Additionally, as mentioned before, I worked on some of the farms supplying such markets. As part of the local food economy and dialogues about localness and alternative food systems, and as spaces I was able to more fully participate in, I found farmers' markets, farm stands, and farms to be appropriate for the scope of my research.

Unlike the tomato, the dragon fruit was completely foreign to me before the spring of 2012, when I first learned I would be accompanying Professor Ellmore to Vietnam. Because of its unfamiliarity, I approached studying the dragon fruit in a slightly different way. I found that conversations about and inspired by our team's biologically-oriented experiment proved valuable to my anthropological research, as they revealed what our Vietnamese colleagues thought was most important for foreigners to know about their fruit. As with the tomato, I identified markets and farms as spaces I believed to be indicative and exemplary of consumption of a certain scale and idea—that of the local Vietnamese product.

As I discussed earlier, the definitions of the terms “local,” “global,” “national,” et cetera, are highly flexible and context-dependent. While dialogues about “localness” are not necessarily prevalent in Vietnam in the same way they are in New England, the Vietnamese value their domestically produced fruits. That “local” does not carry the same meaning in the U.S. and Vietnam speaks to the differences that exist between the two countries' histories and politics as well as the human/food relations within them. The “local” in Vietnam refers more to *values* that are closely aligned with ideas about nationalism and domestic production. To observe spaces in which these values are created and performed, I chose to look at street vendors, which serve as



affordable markets; grocery stores, which are indicators of Western influence and spaces of privilege; and farms in Binh Thuan, which are the primary spaces where dragon fruit are grown. Doing so let me witness the dominant food discourse as well as other discourses surrounding and valuing Vietnamese products.

Markets are valuable spaces of observation because they are, as S. Buie describes them, “Radiating centers... [T]hey are places of gathering, in which virtually all aspects of life are in play, united in shared space. Beyond satisfying their first function as a place of the exchange of goods, they are centers of social life, of communication, of political and judicial activity, of cultural and religious events” (Bell and Valentine 1996:139). I chose to look at the markets in the U.S. that tailor to proponents of eating locally so that I could get a sense for the social and cultural life that values “localness.” In Vietnam, I chose to visit both Vietnamese grocery stores and their alternatives, street markets, to get a sense for the market scene in Vietnam.

While markets are valuable for examining the mediation of values on the consumer side, I also wanted to observe the fruit before it reached the consumer. To do this, I chose to look at spaces in which these fruit are grown. In doing so, I got a sense for how, where, and by whom the “local” was being produced. This included participant observation on farms in both New England and in Vietnam.

### *Participant Observation*

In both New England and Vietnam, I was a participant observer in the production, distribution, and consumption of the respective fruits. As a participant observer in the production of the local tomato, I worked on three different Boston area farms during the spring and summer of 2012. At all of these farms, tomatoes were the focus of a disproportionate amount of attention and maintenance because, as one farmer said to me, “Tomatoes are what bring people to the

farm.” I participated in everything involved in growing tomatoes, from planting and fertilizing to stringing and mulching, and I observed the popularity of the tomatoes at the farm stands. The farms were a valuable space for observation because they revealed “behind-the-scenes” understandings of the products to be sold as “local.” Additionally, I participated in the Tufts Student Garden Group in which I observed the popularity and affection for growing tomatoes in home or, in this case, student gardens. I also attended and was a patron of farmers’ markets where discourse about local food was being enacted and created.

To supplement my fieldwork, I also explored popular culture representations of “local” and of tomatoes. This exploration included perusing blogs of home gardeners, urban agriculture initiatives, and food movement activists. I also observed advertisements for tomatoes and eating local in everyday scenes such at the subway and at bus stops. Additionally, I paid attention to the news and food activist e-lists for conversations that placed tomatoes in contexts of resistance to the industrial food system, as these dialogues can be indicative of national or increasingly popular trends within a growing community concerned about food. These exchanges often discussed local markets and production conditions, which reinforced my decision to examine these spaces as part of my research.

In Vietnam during the observation period of our experiment, we spent one week living on a dragon fruit farm in Binh Thuan, where our Vietnamese colleagues had set up the experiment a month earlier. During our stay, I was able to investigate the production side of Vietnamese dragon fruit, chatting with farmers and their families about when and why they started farming dragon fruit, and what is involved in production and distribution. I also assisted Professor Ellmore in measuring various qualities of the fruit such as size, shape, sugar content, and the impact of farmer practices on these qualities. In these investigations, we were accompanied not

only by our Vietnamese colleagues from Vietnam National University, but also by the farmers, Mr. Nguyễn Văn Chác and Mr. Nguyễn Đức Tuấn, who were enthusiastic to learn more about their crop and identify ways to cut costs and increase profits during the off-season months. In these interactions, I learned a lot about the values farmers ascribe to their fruit and from where these values were coming.

In seeking the local, I wandered around Hanoi street markets that sold—among an astonishingly large variety of foods—dragon fruit. These spaces in some ways paralleled the New England farmers’ markets, as consumers and vendors directly interacted and participated in alternative economic systems like bartering and price negotiation. In other ways, they were dramatically different from the clean, orderly, middle-to-upper-class farmers’ markets I visited in Boston. Street markets in Vietnam are largely spaces for people who cannot afford to go to grocery stores. Smells of rotting fruit mix with exhaust fumes as vendors squat on the ground next to their wares. Animals, children, vendors, motorbikes, shoppers, fruits, and vegetables bump up against each other. This rarely results in crisis, but is in stark contrast to the orderly stands and social courtesies of New England farmers’ markets. These markets were also not exclusively stocked with locally grown or locally produced products. They were more spaces of affordability than spaces of “local” value production and consumption.

I also investigated grocery stores in Hanoi, whose Western influence makes them dramatically different from the surrounding shops and street markets. These stores are often located in high-rise malls and look very similar to American grocery stores, with aisles of processed foods, a bakery, and a produce section. They are clean and orderly and wealthier residents choose to shop here over street markets because, according to a faculty member at Vietnam National University, it is safer in terms of getting a fair price and honesty about origins.

Grocery stores are important spaces to explore ideas about localness in Vietnam, as most products were labeled with their purported origin, and the Vietnamese I shopped with made an effort to identify and purchase Vietnamese products, particularly fruit.

Paradoxically, Vietnamese grocery stores are also very much representative of the extensions of the global industrial food system into Vietnam now that it has been opened up for trade with capitalist, industrialized countries like the United States. American supermarkets and fast food restaurants grew out of industrialization, and as the forces of industry reach globally, these institutions are spreading. Vietnam does not necessarily have the scales of agriculture that would supply supermarkets and fast-food restaurants, but other participants in the global market do, and can thus insert their own mass-produced, highly uniform goods in a way that references past colonial structures. Such mass-production of food and food products has given rise to increased safety regulations, and supermarkets have thus become spaces in which safety is, to a certain extent, guaranteed. Guaranteed safety is a luxury of those who can afford to shop at the more expensive supermarkets, while other consumers purchase their fruit from street vendors who follow no regulations. Within the industrialized, commoditized, globalized space of the supermarket is the particularly interesting paradoxical way in which ideas about food safety are constructed. In some ways, supermarkets offer transparency and perhaps greater safety, but longer-term shifts towards an industrialized system necessary to supply supermarkets may actually lead to less transparency, knowledge, and control over food choices and origins. It is this longer-term shift that has inspired the American food movement and a return to the small-scale, messy, supposedly “backward” farmers’ markets. Vietnam is just embarking on a process that happened in the U.S. in the mid-twentieth century when the clean, safe appeal of the supermarket drew in consumers. Vietnamese supermarkets are indicative of the influence of the values of

industrialization and capitalism in developing Vietnam and they are therefore particularly powerful spaces in which to explore the development and navigation of ideas about Vietnam's place in the global market.

### *Informal Survey*

One of the research methods I used was surveying, using brief informal questionnaires conducted verbally. The surveys I conducted for each fruit were very similar. The goal of the survey was to gain an understanding of commonly held ideas about each fruit in their respective local areas. I approached people in marketplaces to ask very simple questions about their feelings about the fruit in question. My queries ran along the lines of “Do you like [tomatoes/dragon fruit]?” and “Can you identify why you do or do not like [tomatoes/dragon fruit]?” I asked similar questions to tomato and dragon fruit farmers, with additional questions like, “When and why did you start farming [tomatoes/dragon fruit]?” While people were generally quick to respond to the first question, the following questions, while still simple, actually forced them to question their relations to the fruit. By doing this, I hoped to obtain insight into things people take as given, such as the ideas people held about the fruit, about the fruit and themselves, and about the fruit and the world.

For the tomato, I chose to also conduct my survey at farmers' markets as these are among the most interactive spaces for consumers and producers around local food. Being at once symbols and promoters of the “Eat Local” movement, I reasoned that these were prime spaces where meaning is being formed, performed, and discussed through the interactions and discourses over the local food, and thus spaces to ask about those meanings. Over the course of a fortnight during peak tomato season, I attended five different farmers' markets for the purpose of

informally surveying attendees and observing the interactions happening over and with tomatoes. In total, I surveyed 38 patrons and 12 vendors.

In order to understand discourse about dragon fruit in Vietnam as it is understood and shaped on the ground, I also conducted informal surveys in spaces of consumer interactions over these fruits. I went to grocery stores with our colleagues, who, in the process, told me about what they like to buy and why they choose the grocery store over the street vendors. In other instances, they would ask us what we had paid for whatever fruit we were eating at the time, or initiate a conversation about food safety in the U.S. and Vietnam. Of course, we talked about dragon fruit a lot, as it was the focus of our study. I had conversations with several dragon fruit farmers and their families about farming dragon fruit and ideas about Vietnamese food. These informal and spontaneous conversations were not only informational but also indicative of the kinds of things on people's minds as we interacted with and over dragon fruit.

### *History Sources*

To get an idea for the history of the tomato, including its geographic travels and its transformational cultural connotations and biological manifestations, I read several published histories of the tomato and its movements between continents, including works by tomato historian and scholar Andrew Smith, and food writer Barry Estabrook. I also found histories in current news stories that proved useful for identifying how the history of the tomato is understood in relation to its modern day existence.

Literature on dragon fruit is less prolific than that on tomatoes, so much of my research of the history, travels, and transformations of dragon fruit came from different types of sources. I found brief histories in scientific journal articles that helped give me an idea of the general origins and global movements of the dragon fruit. I also spoke with dragon fruit farmers such as

the family our research team lived with and our Vietnamese colleagues, who were all extremely helpful in explaining what they understood the history of the dragon fruit to be. I found bits and pieces to fill in the remaining gaps in various other dragon fruit information sources such as home-growing guides and commercial dragon fruit vendor sites.

## **Conclusion**

By using such methods as participant observation and surveys in conjunction with a historical approach and the theoretical framework laid out at the beginning of this chapter, I was able to investigate fruit and their various meanings on various scales. In the following chapters, a close reading of the tomato and the dragon fruit shows the ways people use these fruit to understand changing places, economies, identities, and food systems, including the globalized industrial food system and its alternatives.

## Chapter 2: Travelling, Transforming Tomatoes: Local Love and Worker Welfare

“There are only two things that money can’t buy and that’s true love and homegrown tomatoes.” Many people would agree with this chorus of the song appropriately titled, “Homegrown Tomatoes.” Tomatoes are well loved. They are a favorite home garden crop, sell magnificently at farmers’ markets, and can be found in markets and cuisines around the world. Today, the tomato is most popularly depicted as red and round, but the fruit of *Solanum lycopersicum*, or the modern domesticated tomato, has thousands of manifestations from little grape tomatoes to giant beefsteaks, from flavorful cherry tomatoes to “water bombs,” or “things that looked good and were red and shiny [b]ut [have] no taste” (Harvey et al. 2003:83). Were we to travel back to the time and place of the tomato’s ancestors, those of us who are gardeners and are intimately familiar with the telltale leaves and yellow flowers just might be able to identify the plant in its native habitat, but the rest of us would be stumped. There would be no huge Better Boys or flavorful Sweet Millions. Instead, there could be little red or maybe yellow pea-sized fruits whose size makes them hardly worth the time to pick for a small snack. Their tough skin might make them too chewy to enjoy. Throughout human intervention in the tomato’s evolution, we have selected against these traits, shaping the tomato into an object of desire. The tomato has transformed so dramatically from the form it was first discovered in that many of today’s tomato eaters would not call the original tomato a tomato at all.

In *The Botany of Desire*, Michael Pollan argues that plants and humans have formed a reciprocal relationship in which “plants have evolved to satisfy humankind” and humankind has aided the plant in its genetic dispersal and continued survival (book description, Pollan 2001). “The two parties,” writes Pollan, “act on each other to advance their individual interests but wind up trading favors” (Pollan 2001:xiv). His argument applies well to tomatoes. As humans have



dispersed tomatoes across the globe, tomatoes have returned the favor by evolving—with human help—to be bigger, smaller, juicier, redder, yellower, sweeter, more uniform, striped, drought resistant, blight resistant, freeze tolerant, transportable, and so on.

The tomato is bound up not only in human tastes, but also in human politics, economies, social relations and more. In this section I review the travels and transformations of the tomato, from its native environment to its new homes, from a tiny ball to the large, plump, juicy sandwich and salad topper we know today, from a “foul fruit” to the most popular home garden crop in the nation (University of Illinois Extension 2013). Throughout its travels and transformations, the tomato has somewhat paradoxically come to represent and exemplify both the highly industrialized agricultural industry and its alternatives. These alternatives include the local food movement and campaigns for migrant workers’ rights, which is appropriate since the tomato is a migrant itself.

### **The Prehistoric Tomato**

The story of the migration of tomatoes into New England begins thousands of years ago and thousands of miles south. According to various tomato scholars, there is little to no evidence on pottery or tapestries that indigenous peoples cultivated tomatoes before Spanish colonial contact, but research suggests that Neolithic peoples initially domesticated tomatoes in the Andean *alto plano* before 5000 B.C.E. (Estabrook 2012:4; Harvey et al. 2003:26). Scholars tend to agree on the tomato’s Andean origins, although one mid-century researcher argues that it was probably not cultivated until it reached Mexico, travelling as a weed (Jenkins 1948:1). Historical and genetic evidence strongly points towards South America as the continent of origin, as expeditions by the C.M. Rick Tomato Genetics Resource Center (TGRC) of the University of California at Davis have revealed the existence of wild tomato species, cousins to our iconic red,

round tomatoes, in the coastal highlands of Chile, Peru, and Ecuador (Tomato Genetics Resource Center 2012).

From there, possibly by following “cultural pathways similar to domesticated maize,” the tomato made its way north through South America to Central America (Harvey et al. 2003:26). It was here that Mesoamerican peoples domesticated the *tomates*—their word for tomato—and incorporated them into their cuisine. In addition to being some of the first to domesticate tomatoes, Mesoamerican people were also among the first to alter the shape and size of the tomato through artificial selection. The seeds from the strongest or biggest or tastiest were saved and planted the following season. Doing so helped eliminate weak genes and allowed selected traits, shaped by human preferences, to flourish. This technique is the foundation of crossbreeding and even gene splicing used to genetically engineer plants, including tomatoes, today. In *Tomatoland: How Modern Industrial Agriculture Destroyed Our Most Alluring Fruit*, author Barry Estabrook mentions how, through this selection for larger fruits or fruits of a certain color or texture, pre-Columbian tomatoes began to look like the varieties we are familiar with today (Estabrook 2012:4). It was in the midst of this first stage of tomato transformation that Europeans were initially introduced to the fruit. These colonists would help the tomato across the ocean and into Europe.

### **European Contact**

The Spanish conquest of Mexico in 1519-1521 was the context for the first European contact with tomatoes. According to historian Andrew Smith, at the time of European contact in the early sixteenth century, tomato consumption was limited to Central America and Mexico (Smith 1999:26). Deemed curious and worthy of dissemination, the tomato travelled to Europe,

as well as places under the Spanish colonial empire including the Philippines and the Caribbean (Smith 1994:16).

In 1544, less than 40 years after the tomato's first introduction to Europe, Italian herbalist Pietro Andrae Matthioli referred to the "mala aurea," or golden apple. It was, as Matthioli describes it in an herbal, "flattened like the Melrose [a sort of apple] and segmented, green at first and when ripe of a golden color" (Jenkins 1948:380). This record does not necessarily indicate acceptance of the tomato as edible, however. When first introduced to Europe, tomatoes were shunned as poisonous and contemporary herbals describe tomatoes as "foul" or "rank" and thus unsuitable for eating. They were instead enjoyed simply as curiosities in private exotic collections and as medicine for headaches, gout, and vapors (Harvey et al. 2003:32, Estabrook 2012:5).

Despite these conceptions of the tomato, it spread through Europe. Its exotic quality, successful and easy cultivation in the Mediterranean climate of Spain and Italy, and wide range of varieties helped the tomato put down roots and even entice a few people to try eating it. By 1608, it was being used in salads with cucumbers in Seville. In 1692, a cookbook with recipes containing tomatoes was published in Naples. By 1755, there were "reports that among Jewish families in particular, tomatoes were eaten both stewed and raw" (Harvey et al. 2003:31).

Along the way, tomatoes picked up the French name *pommes d'amour*, or love apples. Tomatoes were said to have aphrodisiac properties, possibly due to their association with the mandrake, a fellow nightshade whose roots intertwine like lovers (Hospodar 2004:89). The aphrodisiac association might have also been a result of its name, "Pomme d'amour," which may actually be a distortion of the Spanish name, *pome di Moro*, or Moor's apple. The fruit gained this name because it was popular among the Moors, dark-skinned North African Muslims, thus

associating the early tomato with exotic cultural otherness in Europe (Estabrook 2012:5, Welty 2013). This exoticization and initial association of the pomme d'amour or pome di Moro with the alterity of the Moors may, in part, account for European resistance to adopting tomatoes into their cuisines.

Although the tomato was an exotic wonder for the elite, those who actually first ate them in Europe were people on the fringes of society. It is interesting to note here the differences in the popularizations of tomatoes and sugar, another meaningful food product found worldwide. In Sidney Mintz's *Sweetness and Power*, the author describes how sugar was adopted first by the elite and then was gradually democratized, allowing the average individual to indulge in what was once a symbol of status and power. Tomatoes followed a different trajectory, as they were adopted first by marginalized people such as the Moors in Europe, and, later, slaves in the American colonies, and Huguenot refugees in New Orleans. Whereas sugar went from elite to popular, the tomato began as a food of the margins and made its way into more mainstream and elitist dishes over time.

By end of the 19<sup>th</sup> nineteenth century, tomatoes introduced into Spanish colonial territories had spread into surrounding areas. Having traveled with the Moors and British colonists, the tomato was adopted into Middle Eastern cooking by the mid-1800s. It has become an essential ingredient in several now-"ethnic" dishes including tabbouleh and shakshouka (Pile 1881:223). During this time tomatoes also reached Asia, where they did not make much regional culinary impact beyond incorporation into salads, but would later affect the global tomato market, as I will explain shortly.

## A Tomato Grows in America

Tomatoes followed a similar social and culinary trajectory in the American colonies as it did in Europe. In 1710, English herbalist William Salmon “revealed that he had seen tomatoes growing in Carolina” (Smith 1994:17, 25). The tomato probably made its way up to the American colonies from Central America and the Spanish colonies in the Caribbean, rather than from Europe, resulting in a name based on the Mesoamerican “*tomate*” rather than the European “*pomme d’amour*” (Estabrook 2012:5). The tomato, like many other plants, may have travelled with the movement of slaves who had incorporated tomatoes into their food while in the Caribbean, and its dispersal very likely was helped along by Huguenot refugees growing and cooking tomatoes in New Orleans (Smith 1994:85, 31). Here again, the tomato was adopted and popularized by marginalized peoples, which may have helped set the stage for later usage of the tomato as a populist food and tool of identity-creation.

As in Europe, many people were reluctant to try eating the tomato. Resistance to tomatoes in America was particularly strong in rural areas where contact with new foods was rare. Tomatoes’ red coloring, toxic leaves, and unique smell were grounds for the belief that the fruit could be dangerous and should be avoided. Smith writes, “One gardener stated that the first time he saw tomatoes, they ‘appeared so disgusting that I thought I must be very hungry before I should be induced to taste them.’ The look of the tomato was so disagreeable that many people supposed that it would ‘never receive a permanent place in our list of culinary vegetables’” (Smith 1999:34).

The smell, too, received a lot of attention. Smith cites a writer for the *Horticulturist* in 1849 who describes tomatoes as “odious and repulsive smelling berries” (Smith 1994:42). Another man, Joseph T. Buckingham, claimed they were “the twin-brothers to soured and

putrescent potato-balls” and proceeded to call for deliverance from tomatoes (Smith 1994:42). Unfortunately for Buckingham, once tomatoes were realized to be edible and not altogether unpleasant, they spread rapidly around the country.

Various people have claimed to be the first to eat a tomato in America, but almost all accounts include some expectation by the public that they would see the eater “fall frothing to the ground, and die a painful death” (Smith 1994:3). Some people claimed to have suffered from bleeding gums, loose teeth, and stomach conditions as a result of consuming tomatoes, but these accusations faded out of the limelight as the tomato’s popularity grew (Smith 1994:43). Smith writes that in spite of their strong acidity, potent odor, and reported toxicity, “most became fond of them after eating them a few times” (Smith 1994:42). As a result, increasing numbers of people along the East Coast began to grow and eat tomatoes by the middle of the nineteenth century.

Tomatoes travelled rapidly. Smith speculates that John Bartam, preeminent natural scientist in colonial America, “brought [tomato] seeds back to sow in America’s first botanic garden, which he had established in Philadelphia on the bank of the Schuylkill River” after finding them in Florida in 1765 (Smith 1994:29). Less than twenty years later, Thomas Jefferson recorded in his meticulous notes that he observed tomatoes growing in Virginia, and by 1814 tomatoes could be found in Boston cookbooks (Smith 1994:85, 32).

During the nineteenth century, tomatoes became increasingly popular in the U.S. Washington market vendors sold them, members of the House of Representatives carried their seeds up and down the coast, and the *American Farmer*, the first successful American agricultural journal, started featuring tomato cultivation in their periodicals (Smith 1994:29, 34, 52). Tomatoes were popularized in part for their versatility and diversity, and in part for their

purported health benefits. Similar to the early British medicinal usages, tomatoes were said to “cure ills ranging from constipation to chronic cough to the common cold,” paving the way for “tomato mania” in the 1830s and 1840s and the invention and explosion of tomato pills, touted to cure numerous maladies (Estabrook 2012:6; Smith 1994:126). Italian Americans have a saying that tomatoes did seven things: “relieved your hunger, quenched your thirst, filled your stomach, cleaned your teeth, made you sleep, helped you digest, and colored your cheeks” (Smith 1999:75). As it turns out, the health benefits of tomatoes were not all invented. Many people may actually have benefitted from diversifying their diets with tomatoes because of their high concentrations of vitamins A and C, as well as the recently discovered potentially cancer-fighting compound, lycopene (Brody 1997).

By the 1840s, more and more American cooks and cookbook authors were incorporating tomatoes into their work. Smith demonstrates the tomato’s proliferation and growing popularity by pointing to the increase in incidences in which tomato soup appeared on menus, which “often marked festive occasions” in Boston (Smith 1999:65). Many people were still growing at least some of their food around this time, but industrial processing was also beginning to enter and transform the food system. Thousands of acres of tomatoes were grown all up and down the east coast to feed city demand, which showed no signs of slowing. As a result of high and increasing demand, producers began pursuing ways to grow and process tomatoes more efficiently. Fortunately for producers, tomatoes were particularly biologically suitable for increased industrialization, particularly in the form of canning; their high acid content prevents the growth of a toxin-producing bacterium that induces the deadly botulism illness in humans if consumed. Tomatoes’ easy, quick cultivation and safe canning made them a popular food on both sides of the Civil War, as evidenced in contemporary cookbooks (Smith 1994:149). Many soldiers grew

to love them, bringing a taste for them home after the war, which helped spread the tomato craze even wider, reaching as far as the West Coast by the 1870s (Estabrook 2012:6).

Back in Europe, the tomato had finally made its mark in Italy. Smith describes the integration of the tomato into Italian cuisine:

While the tomato had been introduced and had been used for culinary purposes in Italy in the mid-sixteenth century, it did not become the predominant ingredient in southern Italian cookery until the late eighteenth century. One Italian observer reported that it took the famines of 1745, 1771, and 1774 to induce southern Italians to adopt the tomato.

Tomatoes were grown in northern Italy by the late eighteenth century, but evidently they did not become an important part of northern Italian cuisine until after the Italian unification in 1861. [Smith 1999:75]

The incorporation of the tomato into Italian fare would later serve to further the tomato's involvement in agricultural industrialization and processed foods in the United States, particularly after large numbers of Italians began to migrate to the U.S. in the late nineteenth and early twentieth centuries. As the twentieth century went on, an interest in ethnic cuisine created an ever-increasing demand for the tomato products that topped Italian fare and, later, Italian-American staples such as pasta and pizza.

### **Industrializing the Tomato**

Over the course of the nineteenth century, the United States underwent an industrial revolution. Developments and improvements in transportation in the form of roads and river travel helped move more people and products around the country. In 1861, the first transnational telegraph network was set up, enabling rapid cross-country communication and the spread of news and information. In 1869, the First Transcontinental Railroad was completed, which



allowed for a quicker and more efficient transportation of goods across the nation. Inventions during this time also included light bulbs, telephones, and the assembly line, not to mention advances in agricultural technologies like milking machines, silage, chemical pesticides and fertilizers, and tractors. These innovations represented a significant shift into the modern industrial food system.

Central to both American industry and industrial agriculture is a model characterized by specialization, standardization, and centralization of control, driven by the ever-present capitalist market (Ikerd 1996). Motivated by profits and modeled in the spirit of efficient industry, agriculture has become highly specialized. Monoculture fields of corn and soybeans dominate the landscape in the Midwest. The method of production for these crops limits biodiversity and in the long run, degrades soil and makes the crops vulnerable to pests, diseases, and natural disasters. To combat these risks, farmers often apply chemical pesticides and fertilizers to ensure a successful harvest. This approach has helped keep food prices low and “made it possible for societies to rise above subsistence living,” as John Ikerd, Professor Emeritus of Agricultural and Applied Economics at the University of Missouri, Columbia, argues (Ikerd 1996).

Tomatoes too, are now grown in industrial-scale monocultures, and have been rather central to the rise of industrial agriculture. Increased tomato production across the nation enabled the popularization of processed tomato products and new popular taste for these products drove increased production. Beginning in the latter half of the nineteenth century, Henry Heinz, founder and namesake of H.J. Heinz Company capitalized on the cheap tomatoes and increased processing capabilities to make the “57 Varieties” Heinz still advertises on its bottles today (Telegraph 2013). Joseph A. Campbell, of Campbell Soup Company, the popular soup company, also began processing tomatoes into canned soup products around this time (Campbell Soup

Company 2011). By extending the shelf life of the tomato, processing allowed more people to eat more tomatoes more often.

Culture, too, played a role in the tomato's growing popularity. In the early twentieth century, Italian immigrants were coming to the United States in large numbers looking for jobs in America's expanding industrial economy. They brought their cuisines with them, which, by this point, had adopted and incorporated tomatoes to a significant extent. Over the course of the century, Americans became increasingly interested in the "ethnic" cuisines being introduced and made available by the immigrant populations attracted by industry jobs, including Italian workers. Although many immigrants did not intend to stay in the United States, some opened up restaurants in the areas in cities that came to be known as "Little Italy," where mostly Italian immigrants lived. These restaurants initially served the Italian community with familiar food from home, but they soon became places for people to visit to get a taste of "ethnic" cuisine (Mariani 2011:43). Italian food in America eventually became Italian-American food as it was mainstreamed through the technologies of industrialization and the eventual rise of the fast-food industry. California's production of tomatoes destined for canning was encouraged by this growing demand for ingredients found in Italian ethnic cuisine as well as wide market access as enabled by improvements in preserving technology and transportation infrastructure. Year-round demand for tomatoes motivated increased production, and industrialization in turn let national producers feed that demand.

According to a publication from the Florida Tomatoes Committee, the first major tomato-for-market farms in the U.S. began in Manatee County around 1870 (Florida Tomato Committee 2013). Since then, the tomato industry has firmly rooted itself in the area, as well as across the country in California. In 1871, *The California Horticultural and Floral Magazine* declared that

“tomatoes grown in California were better than tomatoes grown in the eastern United States,” prefiguring the emergence of California as an important supplier of fresh fruit and vegetables to the rest of the nation (Smith 1999:110). Enabled by the technologies of the industrial revolution, including railroads, processing assembly lines, and agricultural machinery, today, Florida and California are the main producers of tomatoes for the United States—Florida for the supermarket tomato, and California for canned tomatoes and processed tomato products.

By the turn of the 20<sup>th</sup> twentieth century, then, tomatoes were entrenched in American cuisine. There were many varieties available by this time, largely due to the late-nineteenth-century work of botanist Alexander Livingston. Thousands of years after the Mesoamericans started selecting for certain traits, Livingston describes a very similar process in his own work: “The seeds from this plant were saved with pains-taking care, and made the basis of future experiments. The next spring, from these seeds, I set two rows across my garden... and to my glad surprise they all bore perfect tomatoes like the parent vine” (Livingston 1893:23). His work produced what was to be known as the Paragon Tomato, “the first perfectly and uniformly smooth tomato ever introduced to the American public” (Livingston 1893:24). The Paragon—whose name means the epitome of excellence—set the standard for the perfectly uniform smooth, red, round shape that supermarket tomato producers strive for today (Estabrook 2012:7). The uniformity Livingston boasts of in his account speaks to growing societal preferences for blemish-free and homogeneous products that were shaped by the new standards of the industrial era during which Livingston lived.

Industrialization found a market for its cheap, uniform, mass-produced goods in supermarkets and fast food restaurants. In the spirit of industrialization and efficiency, small family grocery stores were increasingly consolidated in the middle of the twentieth century into

what would become today's supermarkets. In a similar motion, fast food's predecessor, carhop drive-in restaurants, started popping up in the early 1900s. By capitalizing on low food prices, increasing popular mobility thanks to the car, and a growing appreciation for speedy efficiency, carhop restaurants gave rise to drive-through fast food, particularly after World War II (Schlosser 2012:17-20). Today, tomatoes are commonly found in supermarkets and topping fast food tacos, pizzas, hamburgers, and more. As I will discuss shortly, because of their place in fast food, tomatoes are powerful tools with which to start to change the industrial food system that uses the red, round tomato in cheap, mass-produced food.

Over a century later, the qualities of Livingston's Paragon—smoothness, redness, roundness, and uniformity—continue to be measures of tomato quality, at least in popular media, fast food advertisements, and on supermarket shelves. Livingston's work altering and improving the tomato to satisfy human desires for productivity and aesthetics is representative of the rise of values of the industrial food system, values with which not everyone agrees.

### **Rethinking the Industrial Tomato**

While industrialization may have helped “elevate” society, Ikerd also contends that “the economic benefits of industrialization have declined as its ecological and social costs have risen” (Ikerd 1996). The developing industrial agricultural system started pushing towards the singular goal of maximizing profits in a growing competitive capitalist market. In working toward this goal, industrial agriculture has become known increasingly for exploiting workers, damaging the environment, creating monopolies of production, and producing food whose quality and even safety is questionable.

The tomato industry has suffered from these negative effects. While Livingston's “improvements” of the tomato opened up the fruit to further manipulation by industry, the

tomato has not necessarily improved in every way. With the rise of the fast food industry and the grocery store, producers needed to find ways to continuously grow tomatoes year round and make sure those tomatoes reach customers across the nation. Industrial tomatoes have therefore been designed to grow quickly and reliably, ripen uniformly, survive transportation across large distances, and be red and round. Industrial tomatoes are *not* necessarily designed to taste good, and many people I surveyed complained about the lackluster supermarket tomato, reporting, for example, “Genetically engineered ones aren’t as good-tasting,” particularly when compared to fresh farmers’ market tomatoes (Humiston 2012b).

Not only has the tomato suffered a decline in quality, but methods of large-scale tomato production, notably in Florida, have had negative effects on humans and the environment. Florida accounts for almost all of the United States’ fall and winter tomatoes when places like New England cannot grow their own without heated greenhouses (Gross 2011). Florida tomatoes, however, are grown in sand, which requires what is essentially a hydroponic system pumping into the sand the essential nutrients the plant needs to grow. This method and the constant threat of bugs and disease in Florida’s humid climate necessitate widespread intensive chemical usage to produce tomatoes on an industrial scale (Gross 2011).

Additionally, in an effort to maximize profits while keeping tomato prices low enough to keep consumers content, tomato growers exploit migrant laborers for hard work with low wages. The labor required in domestic tomato production is done mostly by migrant workers, many of whom come from Mexico looking for jobs to send money home. This is the case for most of the industrial agriculture system, and even parts of the alternatives.

The hard labor, low pay, and long days keep many American job seekers away from farm work, and migrant workers fill the void. According to a *Huffington Post* article about the

potentially disastrous effects of the E-Verify system designed to help enforce immigration laws, there are over 1 million migrant workers taking to agricultural fields every season, and over 80% of them are undocumented (Caldwell 2011). “Some employers are all too eager to take on undocumented workers and exploit them for their willingness to work long hours for low pay,” writes Paul Harris for *The Guardian* (Harris 2013). When workers attempt to report or complain about workplace treatment or conditions, or even try to collect unpaid wages, they risk getting arrested and deported, so many continue to suffer silently.

In a system where the bottom line matters most, cheaper labor means more profits, as does more efficient plant production enabled by geneticists and plant breeders following in the footsteps of Livingston. Riding on the progress of mechanical and biological technology and consumer demand, tomatoes followed and participated in the expansion of big agriculture, food processing, long-distance transportation, and the fast food industry.

The tomato, in many ways, is exemplary of the increased scales of production, utilization of new and improved processing technologies, and market expansion that marked the development of our modern industrial food system. At the same time, it also exemplifies two different modes of pushback against industry. The tomato is mobilized in discourse about localness and getting back or closer to the land through growing and consuming local tomatoes. It is also entrenched in issues of ethnicity and labor, as in the case of migrant workers in Florida tomato fields. In an incredible feat of versatility and flexibility, today’s tomato has come to represent and work within seemingly conflicting and contradicting aspects of our food system, and it is mixing and blending levels of globalness, nationality, and localness.

Consider, for a moment, the tomato in China. Although the tomato is hardly present in Chinese cuisine, over the past five years China has emerged as one of the largest producers of

tomatoes in the world (Smithers 2013). Chinese tomatoes are roughly processed into a paste to be shipped across the globe and further transformed into sauces and salsas. China is not the first country that comes to mind at the mention of the tomato, yet this fruit is in and is coming out of China to be used in Italian pasta sauces or Mexican salsas. There is a demand for tomatoes and tomato products as ingredients in non-Chinese ethnic and national foods, and China is capitalizing on it as part of its large-scale move into globalized capitalist markets.

This demand exists because of the tomato's polyvocality and wide presence in cuisines of all types, including those framed as "American" as well as ethnically-inflected foods. Tomatoes are in quintessentially American dishes like chili made for Sunday football games and the classic BLT sandwich, and condiments for foods like hotdogs and tater tots. But when I asked patrons of several farmers markets what they associate the tomato with, many mentioned foods or cuisines commonly associated with another nation. "Tomatoes are great with pasta," offered one middle-aged woman, referencing, as many did, the idea that they are, in the words of a young, female shopper, "prevalent in Italian food" (Humiston 2012b). Many individuals also mentioned salsa, which, although often found in the aisle labeled "Mexican," can be found in almost every American grocery store. Even within the space of a farmers' market, which embodies and communicates values about local production and consumption, people can still connect the tomato to a national idea—that of Italian or Mexican food, for instance—that is global in relation to the local space of the farmers' market, and is national in relation to the global market.

In that global market, tomatoes have recently been the subject of talks of a "Tomato War" between the U.S. and Mexico, whose 2011 tomato trade was worth more than \$1.8 billion, as U.S. producers complain that imported Mexican tomatoes challenge the domestic winter tomato market (Associated Press 2013; Chappell 2012). Ironically, but not surprisingly, many of the

migrant workers who harvest the domestic winter tomato being undercut by Mexican tomatoes are, in fact, from Mexico. As evidenced by the presence of Mexican and Chinese tomatoes in the news, the tomato is involved in international affairs as well as popular ideas about international food. At the same time, is also mobilized in various modes and symbols of domestic resistance to the forces that simultaneously popularized, dispersed, and standardized the tomato and its production. In fact, while tomatoes have been central to American industrialized agriculture, they have also been at the heart of the local food movement and recent labor organizing that seeks to overcome some of the inequities of the industrial food system.

As outlined in Chapter 1, a growing number of consumers are concerned about the impacts of large-scale and industrial agriculture, including that of tomatoes, on ecosystems, personal, community, and farmworker health, national and local economy, and consumer choice. As food production and distribution chains become more and more centralized, many people are finding ways to resist the consolidation and industrialization of their food supply before they entirely lose control over it. Creating or participating in an alternative food system is often talked about as participation in the “food movement,” something that, as Mary Douglas would argue, reflects alignment with a certain set of values attached to particular foods. These patterns of consumption and the ideas and ideals of “goodness” mapped onto them are constantly being “fought over and licked into shape” in people’s interactions with the products they consume (Douglas 1996:152).

The phrase “Tomatoes are what bring people to the farm,” already noted in Chapter 1, is one that resonates with my own experiences. I spent time on three different farms over the summer of 2012 working as a farmhand. From this position, I was able to see the different levels of resources appropriated to the various crops. Tomatoes received a disproportionate amount of



attention, much more than any other crop with comparable yield. As a farmworker, I spent weeks planting, fertilizing, mulching, twining, and weeding tomatoes—much more than I did for anything else. The attention these farms paid to tomatoes was validated by the number of people who turned up at the on-site farm stand specifically to buy them. This trend was visible in farmers’ markets as well. No farm’s table was complete without at least a portion of it dedicated to tomatoes.

The tomatoes I found at the farmers’ markets were reflective of both the conventional, mainstream conceptions of tomatoes and the growing interest in heirloom tomatoes. Perfect round red tomatoes, descendants of Livingston’s Paragon, sat next to their odd, colorful, and often pricey heirloom cousins on vendors’ tables. Heirloom tomatoes are tomatoes that are “still maintained by gardeners and farmers particularly in isolated or ethnic communities,” and appear in a variety of colors and shapes (Whealy 1990:1).

As one heirloom tomato farmer selling his multicolored, lumpy wares at the Davis Square Farmers’ Market told me “People may look and say, that’s not a tomato, but we need to educate them and once they try them, they come back again and again,” he told me. What do they expect it to look like? The answer is on almost every tomato soup label, ketchup bottle, and fresh produce sign: uniform, red, round, smooth, and juicy. A quick Google image search in 2012 for “tomato” corroborates this trend. Of the millions of results, the vast majority show the red round tomato, or some artist’s rendering of it. In fact, the first image picturing something other than the iconic red round tomato is twenty images in, and shows multicolored tomatoes sprinkled in among the standard tomato.

This trend is not limited to industrial tomatoes or supermarket products. More often than not, signs for farmers’ markets feature the red round tomato somewhere in the layout.

Advertisements for community supported agriculture shares almost always mention their inclusion of tomatoes, often providing a picture of the share's contents, which include the red round tomato. We even see the red round tomato as the predominant image of choice for articles about alternatives to the very industrial food system that gave rise to this tomato, such as eating locally or buying organic.

However, along with the fetishization of the red round tomato is a counter-idealization of the heirloom tomato. Heirloom tomatoes are not designed to withstand the transportation required in an indirect marketing system. They do not last long on shelves and their delicate skin makes packing and shipping them near impossible. They are not designed for industrial life. Therefore, heirloom tomatoes are almost exclusively found within the direct marketing models touted by the local food movement.

Customers at farmers' markets are familiar with these alternative tomatoes. When asked what they knew about tomatoes, a few people I surveyed responded along the lines of, "There are lots of types of heirlooms" or "There are many heirloom varieties," which was easily observable at the farmers' markets I visited. Shoppers would inspect the tomatoes, occasionally picking one up to test its firmness or to smell it. Sometimes they would hold up a tomato and ask about how it was grown, questioning the vendor about pesticides or seed source, but most of the time the odd sight and shape of the heirloom was enough to convince them of its quality and localness. Heirlooms at these markets were more expensive than their red, round cousins, and considerably pricier than any supermarket "water bomb." That consumers were willing to pay extra money for heirloom tomatoes hints at their value as something more than just a food to eat. Heirlooms represent a purchasing decision that supports a system combating the perceived evils of industrial agriculture. They address consumer concerns about personal and environmental

implications in tomato production such as diminishing food autonomy and biodiversity and these aspects get bound up in its quality as a local product. Building off of an American love for tomatoes, the heirloom brings back the taste long lost in supermarket tomatoes and guarantees localness, and offers an alternative to the conventional and popular understanding of a tomato.

A second use of the tomato as a tool of resistance seeks to reform rather than reinvent the dominant industrial food system. One of the main criticisms of the local food movement is its lack of attention to workers' issues. Derek Johnstone, representative for the United Food and Commercial Workers Union, told Canada's *Globe and Mail*, "People seem to have a lot of sympathy for the environment—which they should—but when it comes to the people who are working in these industries, the issue doesn't seem as pressing, which kind of concerns us" (Leung 2012). Even within the alternatives, workers' rights are sidelined. As one article puts it, "For the average heirloom tomato eater, the words 'organic farm' often conjure up an idyllic agrarian picture: happy communes of earnest farmers growing veggies straight from the goodness of their hearts" (Donohue 2012:1). In reality many workers on small or organic farms are poorly paid migrants facing the same exploitative conditions as those in industrial agriculture. The local tomato is not necessarily the ethical tomato, and the ethical tomato is not always local.

In fact, the ethical *industrial* tomato is on the rise, thanks to work of a group of migrant workers in the Florida region of Immokalee. In 1993, the group began meeting in churches to discuss how to improve their working conditions. Like many other seasonal migrant workers, Immokalee workers were subject to low wages, sexual abuse, conditions of modern-day slavery, and other unethical working conditions, but this is changing. Their meetings resulted in what is today known as the Coalition of Immokalee Workers (CIW). The CIW is "a community-based

organization of mainly Latino, Mayan Indian and Haitian immigrants working in low-wage jobs throughout the state of Florida” (Coalition of Immokalee Workers 2013a). Many of their 5000 members work in the agricultural sector. A major part of this sector is comprised of tomato production, which, as mentioned earlier, supplies most of the United States’ winter tomatoes through industrial production.

The industrial food system has created the poor working conditions the Coalition strives to address. They are not seeking to dismantle this system, though. Rather, they want to improve it. They fight, their website states, for:

A fair wage for the work we do, more respect on the part of our bosses and the industries where we work, better and cheaper housing, stronger laws and stronger enforcement against those who would violate workers' rights, the right to organize on our jobs without fear of retaliation, and an end to forced labor in the fields. [Coalition of Immokalee Workers 2013a]

By 1998, after hunger strikes and a historic 234-mile march, the work of the Coalition “ended over twenty years of declining wages in the tomato industry,” and over the last 15 years, their work has helped free over 1,200 migrant workers under forced labor (Coalition of Immokalee Workers 2013a).

In 2001, the Coalition expanded their focus to fast food chains and large grocery stores, demanding that major companies—themselves products of and participants in industrialization—recognize and address worker conditions in the fields that supply their products. Thus begun what is known as the Campaign for Fair Food. To date, under the Fair Food Program, the CIW has executed 11 successful campaigns that signed on such entities as Taco Bell, McDonalds,

Whole Foods, Compass Group, Aramark, and Chipotle Mexican Grill. The major focus of these agreements? The working conditions of Florida tomato workers.

### **The Paradoxical Tomato**

The Coalition of Immokalee Workers is not a facet of the local food movement, but rather a group that calls on the values espoused by the food movement to work toward an alternative *industrial* food system. For this reason, it is a good group with which to think about the local/industrial, good/bad categories and contradictions within them.

The CIW uses the tomato to engage with the effects of the industrial food system without calling for its erasure. By working within the system that drives the industrial agriculture sector—a system of supply and demand—the Coalition works to change consumer demand. Demand here refers to not only the economic idea of desire for a product, but also the expectations that consumers hold of the places from which they purchase their products.

Consumers are increasingly making purchasing decisions based on the conditions of production or distribution of the product in question. In exactly the way that Arjun Appadurai has noted, knowledge about the commodity has become a commodity itself, which explains the higher prices of organic products or farmers' market wares. Consumers are motivated to make responsible decisions because of the growing presence of dialogues, generally grouped under the idea of the “food movement,” surrounding the social and moral obligations consumers have to change their habits and demands and thus change the market.

The CIW's approach to bettering the lives and working conditions of its members recognizes both the power of the consumer and the power of the tomato. The tomato manages to bridge seemingly opposing food systems, categories, and conceptions without its “tomatiness” falling apart. The tomato can do this because of the realities of the relations between the

industrial food system and its alternatives. They are not separate from each other, although they are conceptually in opposition. Many people are patrons of both, despite food movement discourse framing industry as “bad” and local as “good,” because these oppositions are, in large part, artificial, and hide their intertwined and interconnected histories. The farmers’ market tomato is not just local, and the supermarket tomato is not just industrial. Customers and tomatoes alike move across these largely arbitrary conceptual boundaries.

As discussed earlier, the food movement encompasses a huge range of concerns and proposed solutions for those concerns. As one of the major proposed solutions, the local food movement communicates many values and assumptions, some of which are not necessarily entirely realistic. Ethical production and localness often get mapped onto each other. Local production is not necessarily ethical; I have heard from fellow farmworkers in the Boston area that some nearby farms pay their undocumented workers far less than their white American laborers. This is not ethical, but it *is* local, and so it is assumed to be ethical. Such assumptions are easy to come by. Falling under “good” in dialogues about our food system are categories such as ethical, local, small-scale, healthy, native, sustainable, moral, natural, et cetera. These categories have roots in past and current connecting movements that help shape today’s food movement. These categories are placed in opposition to those associated with supermarkets and the industrial food system. Within this dichotomy, the CIW, although not advocating for local, small-scale, natural, or many of the other “good” categories, is conceptually placed on the “good” side of the divide. Just as the moral, ethical mission of the CIW is grouped with ideas about sustainability and health, many of the “good” categories have been lumped together in ways that are not altogether accurate.

“Local” is one term that has been chiefly used to reference the “good” categories. Referring, in theory, to a scale, the actual on-the-ground usages of “local” range in scale and association as the term is used in different contexts and in response to different tensions. The tomato signifies this malleable “localness” by itself having travelled and continuing to navigate the gradations of scales, pulling ideas across imagined boundaries. The tomato carries with it a strong set of national meanings because of its role in the development of the industrial food system. It not only participates in industrialization but is also an agent in spreading and enabling this force as well as its alternatives, which pull in other sets of meaning that are very much focused on “localness” or ethics and morality. It is pervasive in American eating habits and is biologically, culinarily, and socially versatile enough to cross boundaries and borders and adapt to new places and spaces.

Because of this versatility, there are contradictions and excesses in the image of the tomato. It is local. It is industrial. It is natural and healthy. It is a product of science and covered in toxic pesticides. It is American. It is ethnic. It is a symbol of the mainstream. It is a symbol of resistance. In being all these things and more, the tomato reveals the reality of the interconnectedness of and gradations within spaces, places, designations, categories, and identities, of not just tomatoes, but of people as well. The tomato is useful and used to help expose and navigate and mediate these messy connections. The whole system is messy, and the tomato reveals these spaces of messiness, overlap, and contradiction because it is such a ubiquitous, versatile, well-loved and well-used fruit.

### Chapter 3: Dragon Fruit Tales: How a Global Fruit Becomes “Local”

Despite its Central American origins and colonially enabled travels, the flamboyant dragon fruit has become “Vietnamese.” Its magenta skin, bright green spiky offshoots, and clean white center make it exciting to behold, but it does not look out of place next to other fruit found in Vietnam, such as lychees and rambutans. Dragon fruit’s biological properties and horticultural success in Vietnam have enabled people to mobilize it to understand and shape their own identities as well as that of their rapidly changing country, particularly in the global market and in the face of its dominating neighbor, China.

Consider the value of Mintz’s (1986) social history of sugar in examining how dragon fruit became “Vietnamese.” Mintz looks at sugar’s historical contexts and story as an approach that enables him to investigate the greater conditions that both shaped and were shaped by sugar. Using a similar historical approach, in this section I look at the movement of dragon fruit and where this movement sits in terms of Vietnam’s history. As with sugar, such an approach is useful for revealing agency on the part of the dragon fruit in shaping human politics, economics, and other contexts. Consider also Appadurai’s “things-in-motion” theory which seeks to “illuminate [things’] human and social context” (Appadurai 1986:5). In the case of the dragon fruit, the context has a lot to do with its foreign relations. Set in motion over a vast distance by, presumably, French colonialists, the dragon fruit’s growth and success has paralleled and existed within Vietnam’s growth and success against outside domination. Dragon fruit paradoxically represents a history of domination under foreign powers and modern Vietnamese resistance to continued domination.



## Dragon Fruit Details

Unlike the tomato, the dragon fruit is unfamiliar to many Americans, so I think it is important to give it a brief introduction here. “Dragon fruit,” also referred to in Latin America as “*pitaya*” and in Vietnam as “*thanh long*,” is any of several species of the genus *Hylocereus*, and can refer to either the plant itself or the fruit of the plant. For the purposes of this paper, I refer to both the plant and the fruit of the species *Hylocereus undatus*, the plant that specifically produces fruits with red skin and white flesh. *Hylocereus undatus* is the most common variety of dragon fruit cacti cultivated in Southern Vietnam where I conducted my research. The fruit of the other species can have yellow or red skin and red, pink, purple, or white flesh. The plant itself is a tropical/sub-tropical vining cactus with three-sided dark green leaves sprouting from the top of the vine stem. The fruit grows from these leaves, first forming large, showy, white, fragrant night-blooming blossoms that close once pollinated by nocturnal bats and insects. The flower gives way to the brightly colored fruit, which a *New York Times* article described as “a psychedelic hood ornament from the arms of a cactus” (Gordinier 2011). The smooth skin of the body of the *Hylocereus undatus* ranges in color from pink to magenta. Jutting out at small angles from the body are green ears that curl back with ripening. The plant and its flowers and fruit are dramatic, but the taste is subtle. “The thing doesn't taste as wild as it looks,” writes Jeff Gordinier (Gordinier 2011). The flesh under the flamboyant skin is a creamy white, speckled with black seeds. It is sweetest in the center, and has a cool, clean taste. Like many other people, I find its texture reminiscent of a kiwi. Because of its refreshing and light qualities, it is often served at the end of a Vietnamese meal as a simple palate-cleansing dessert.

## **Vietnam's Vexations**

In order to understand where dragon fruit exists today, we must remember Vietnam's history, particularly in relation to other countries. Vietnam's relations with China and the United States are particularly notable as they are two powerful entities that have dominated Vietnam politically and economically. David L. Anderson writes that one of the historical characteristics of the Vietnamese people that has emerged from their past was "a sense of separate ethnic identity and resistance to outside-domination derived from a millennium of resistance to control by their powerful Chinese neighbors" (Anderson 2011:10). I felt this during my stay in Vietnam. There was a pride in being Vietnamese or consuming Vietnamese products. Many of our conversations about the research we were doing were threaded with an understanding that research benefitting Vietnam was research *not* benefitting China, thus enabling Vietnam to be competitive in a global market regionally dominated by China.

Vietnamese resistance to Chinese domination dates back to 111 B.C.E. when China's Han dynasty extended governance over people in northern Vietnam. This was not an isolated incident. Throughout history, Vietnam has reclaimed autonomy several times from powerful countries. In 938 C.E., Vietnam regained full political independence after centuries of Han dynasty rule during which Chinese culture had begun to shape Vietnamese language, arts, and philosophy (Anderson 2011:10). During the next 500 years, Vietnam, amidst tenuous national unity, pushed back Mongol forces and fought invaders from Champas—now central Vietnam—until national divisions among the Vietnamese opened up space for the Chinese Ming Dynasty to attempt domination (Anderson 2011:11). In the 1420s, national hero and legend Lê Lợi waged war against the Chinese using guerilla tactics, eventually restoring Vietnamese sovereignty

(VietNamPlus 2008). Over the next several hundred years, Vietnam underwent a period of southward expansion, a process that once again fractured Vietnamese unity.

This fracturing made it possible for French missionaries who arrived in the seventeenth century to make connections to the Vietnamese population by supplying European mercenary assistance to particular factions. French colonialism in Indochina—comprised of Vietnam and neighboring Cambodia and Laos—expanded through military force in the nineteenth and twentieth centuries. During this time, the French divided Vietnam into three separate regions and endeavored to replace Chinese influence with Western thought, politics, leadership, and markets. By exploiting the hitherto subsistence-based economy for profit-driven mercantilism, France “gave no opportunity for a broad-based system of capitalism to develop among the Vietnamese” (Anderson 2011:13). Conditions under French colonialism bred revolutionary thoughts in the mind of the Vietnamese out of which, Anderson argues, “came a modern sense of Vietnamese nationalism” (Anderson 2011:14).

In the 1950s, after decades of resistance and revolts and the development of Vietnamese communism, the Vietnamese threw off French colonial rule. Japan’s military had controlled French Indochina during World War II, but the Japanese pulled their forces away after surrendering to the Allies. Under the leadership of revolutionary leader Ho Chi Minh, Vietnam reasserted itself. In the following years, the Vietnamese fought the French into a stalemate in the First Indochina War, and the United States found itself supporting France in response to Cold War fears of the spread of communism. This led to U.S. intervention in the Vietnam War, in which a divided Vietnam fought itself. Lasting 20 years, the war ended when the U.S. pulled out of Vietnam following the capture of U.S.-supported Saigon by North Vietnamese Communist forces. The following year, in 1976, Vietnam was united as one country. Shortly thereafter,

Vietnam invaded and occupied Cambodia after repeated border conflicts, which prompted the Chinese invasion of northern Vietnam in 1979 in what is known as the Sino-Vietnamese War. Anderson writes, “Although the SRV [Socialist Republic of Vietnam] had ended the murderous rule of the Khmer Rouge, the United States and Vietnam’s Southeast Asian neighbors continued to isolate Vietnam from much needed economic markets and investments” (Anderson 2011:67). After the Vietnam War, Vietnam largely remained in economic isolation due to international refusal to engage with the Communist government, despite Vietnam’s membership in the United Nations beginning in 1977 (CountryWatch 2013). During this time, global capital markets grew rapidly after the fall of the Soviet Union and China underwent a “Capitalist Revolution” under Deng Xiaoping, resulting in a strengthening of Sino-U.S. relations. In an effort to reinvent itself as a reunified nation and member of the international sphere, Vietnam initiated economic and social reforms, known as *Đổi Mới*, in the mid-1980s (Horsely 2004). Since these reforms, Vietnam has increasingly been granted access to global markets and diplomatic agreements. In 1995, the United States normalized relations with Vietnam, opening up trade between the two countries, and in 2007, Vietnam joined the World Trade Organization (Embassy of the United States Hanoi, Vietnam 2009). In 2004, BBC reported that Vietnam is one of the fastest growing economies in the region, with an annual economic growth of 7% (Horsely 2004). Rapid economic growth has enabled improvements in infrastructure as well as investments in entrepreneurial capitalist ventures, which have strengthened both domestic and international trade.

Today, China and Vietnam engage in trade and their diplomats are working towards bilateral agreements in many matters. However, recent disputes over islands off the coast of southern Vietnam indicate tensions persist (Krishnan 2013). It is important to keep this history of

Vietnam's global relations and place in international economics in mind when examining the movement and proliferation of dragon fruit in Vietnam.

### **Diary of a Dragon Fruit**

As we have seen in the preceding chapter, the global/national/local divide is in no way a solid, insurmountable, or stagnant division. Bell and Valentine (1997) speak to the impact of boundaries and colonialism on a nation's diet. The case of the dragon fruit is a particularly good illustration of their argument that a culture's cuisine is the product of many forces working on tastes and associations. Many of the tensions and anxieties present in the Vietnamese discourse on food have arisen from the centuries of warding and fighting off domination mentioned above. Each attempt at domination has left a bit of itself with the Vietnamese. China's repeated efforts left Vietnam with a religion and culture based largely on those of the Chinese, though in a distinctly Vietnamese manner. Among the things French colonialism left are colonial architecture that is still in use, baguettes, and, according to the available research, dragon fruit. As Vietnam's autonomy and borders were challenged and shaped, dragon fruit quietly made its way into Vietnam's landscape.

We can examine the dragon fruit within the context of the history of Vietnamese relations to dominating countries, but the history of the dragon fruit itself is difficult to trace. There is not much literature in English or Vietnamese on the movement or development of dragon fruit, especially when compared to the information available on tomatoes. I can identify several reasons why this may be.

In terms of geography, dragon fruit have not thrived in as many corners of the world as tomatoes have, due to their low tolerance for areas whose climates are not desert-like. Because of their limited growing areas, dragon fruit do not reach as broad a consumer base as tomatoes. On

a very basic level, fewer people know about dragon fruit. Dragon fruit are not nearly as versatile as tomatoes, in either cuisine or cultivation. Within the various dragon fruit varieties is some difference in sweetness or in color, but these differences are not nearly as dramatic as the difference between a tiny, yellow, sweet Sun Gold and a giant, red, juicy Beefsteak. Dragon fruit is usually just eaten raw and it does not tolerate wet or cold conditions well. It has also only become popular and economically viable in Vietnam and other parts of Asia within the past thirty years. Extensive studies examining dragon fruit have yet to be conducted, while tomatoes have an entire center, the C.M. Rick Tomato Genetics Research Center mentioned earlier, devoted to their study, in addition to long histories within regional, ethnic, and national cuisines and identities.

For these and other reasons, the travels of the dragon fruit have hardly been tracked. Therefore, the available sources for my research consisted of scientific papers mostly focusing on the biological properties of dragon fruit. I also looked at newspaper articles praising the fruit's exotic novelty and reporting its incorporation in health beverages and alcohol, mainly in America. I investigated websites, some legitimate, others lacking necessary citations, that ranged in topic from dragon fruit cultivation to how the fruit got its eccentric name. In addition to these resources, I worked with Vietnamese professors and students from the University of Science of Vietnam National University, Hanoi to access information available only in Vietnamese.

All of my resources—scholarly and otherwise—seem to agree that the dragon fruit is native to tropical and sub-tropical areas of Central and South America. According to one plant scientist, dragon fruit comes from southern Mexico and the Pacific side of Central American countries further south such as Guatemala, Costa Rica, and El Salvador (Zee et al. 2004:1). Another scientist describes it as a “slender hemiepiphytic cactus native to dry tropical forests

from Mexico to northern South America” (Nobel 2006:469). In the wild, the plants climb host rocks or trees using adventitious roots coming from the stems, growing as tall as the host object itself, a property that has been capitalized on by dragon fruit farmers today (Weiss et al. 1994:1487). When and where it was first cultivated has not been thoroughly researched, but by the time of colonialist contact in Central and South America, dragon fruit had made its way into indigenous tropical meals and the realm of domestication.

According to scientists exploring the physiology and development of dragon fruit, the plant can be found in at least 22 tropical and subtropical countries around the world, most notably Israel, Taiwan, and Vietnam, my center of research (Gunasena 2006:117). Many sources agree that the dragon fruit made its way to Vietnam via French colonialists. One source reports that the dragon fruit was brought into the country by the French as an ornamental crop grown exclusively for the king over a century ago (Luders et al. 2006:2; Masyahit et al. 659). The exotic, flamboyant appearance of the fruit and its regal associations helped popularize it among the country’s wealthy families (Gunasena 2006:117).

Like many other foods, dragon fruit’s uses, meanings, and place in society were constructed within the colonial setting. French rule overhauled Vietnamese economy, government, and social organization and it was within these new and transforming structures that dragon fruit was introduced, albeit quietly. These structures simultaneously created the system against which Vietnamese citizens would organize to resist and the system within which tools and symbols of resistance were born and disseminated. In *Sweetness and Power*, Mintz writes, “Tobacco, sugar and tea were the first objects within capitalism that conveyed with their use the complex idea that one could become different by consuming differently” (Mintz 1986:185). Similarly, as French rule enforced social and economic hierarchy, dragon fruit conveyed ideas

about wealth and success that helped it spread throughout the country. Popular knowledge of the dragon fruit then may have grown out of an understanding of the fruit in a context of social and economic hierarchies, as well as an awareness of its foreign introduction. It has since grown to convey ideas about raising status by achieving wealth—both individual and national—through the profit found in its cultivation.

Although most people I talked to associate the name “dragon fruit” with the cactus’ and fruits’ dragon-like appearance due to its dramatic spikes and coloring, the name is actually a marketing scheme. According to an article in *Biodiversity*, Asian marketers built a legend around the name to arouse interest in the fruit. The story goes that dragon fruit gets its name because the fruit came “from the jaws of fire-breathing dragons thousands of years ago,” but could only be collected “if soldiers killed the beast” and gave the fruit to the Emperor (Small 2011). Although little information is available on when and where this legend was born, its invention was market-driven, prefacing the fruit’s presence in Vietnam, which has been intricately and inextricably tied to Vietnam’s place in both domestic and international markets.

With help from the legend and the dragon fruit’s elite connections, over the century dragon fruit spread throughout the country, finding an environmental niche in Binh Thuan, the desert-like region of southern Vietnam. Until the introduction of dragon fruit, the land in the area had been more or less unoccupied and unusable for crops or livestock, due to its dry, arid climate. One farmer told me she saw dragon fruit cacti growing around the mountains in the North as early as 1976, but it was not until around 1990 that dragon fruit became a viable crop for Vietnamese farmers. A combination of infrastructure investment, economic development, and market access drove the dragon fruit to rapid success. According to a farmer who started growing dragon fruit in the early 1990s, in the beginning a kilogram of dragon fruit cost 80,000



Vietnamese đồng, roughly the price of a bicycle. Just 4 kilograms of dragon fruit could fund the purchase of a gold ring at the time, the farmer claimed. Considering that each individual fruit weighs roughly a kilogram, dragon fruit production was undeniably lucrative and in the spirit of capitalist entrepreneurialism, many people started farming for the profits, which could be up to ten times the costs. Such profits could help people achieve the wealth needed to raise their status—both as individuals and as Vietnamese participating in a global market—in the social and economic hierarchies left behind by French colonialism and perpetuated in contemporary international relations.

By 1990 Binh Thuan was populated with new dragon fruit farmers who have, over the past twenty years, turned the province into Vietnam's dragon fruit production center. Despite its relatively recent proliferation, many farmers and consumers I talked to guessed that dragon fruit was native to Vietnam, considering its excellent suitability to southern Vietnamese climate. Dragon fruit, being a cactus, grows well in Binh Thuan's dry, arid climate, so well that Binh Thuan dragon fruit is now one of Vietnam's fastest growing exports. Because *thanh long* has thrived in the desert environment of southern Vietnam, it holds great promise for reaching even greater markets through investment in shipping technology and processing. For this reason, many Vietnamese are interested in exploring how to better cultivate the fruit, cut costs, and produce quality fruits.

### **Development and Dragon Fruit**

Centuries of domination and years of economic isolation because of its Communist government kept Vietnam out of global trade relations until relatively recently. Since Vietnam began economic and political reforms in the 1980s, the United Nations granted Vietnam membership, the United States normalized relations with Vietnam, and Vietnam has enjoyed

some of the highest economic growth in the region (Horsely 2004). However, the country is still “developing” and, in many ways, trying to “catch up” to the “developed” West. Because of this, discourse around food is very different from that in the United States. Concerns about food are not framed in terms of “localness” per se because resistance and questioning—being shaped by particular histories and associations—have taken a different form in Vietnam as a country just now entering the globalized agricultural economy.

However, specific concerns about food are very similar. In both Vietnam and the United States, consumers are increasingly aware of the potential detriments of pesticide contamination in their food. They are asking questions about origin and labeling. They are making conscious and increasingly informed choices about their food. They are worried about their level of control over the food they eat. In Vietnam, however, these concerns are not addressed by a designated “local food movement.” They are instead couched in terms of national origin. Many of the issues around food, food safety, and food origin have been borne out of relations with China, specifically a history of distrust and domination. Whereas the American local food movement is a form of resistance to a globalizing and centralized food system, Vietnamese desire to purchase Vietnamese fruit speaks more to resisting further domination and improving the status of their country in the globalized world.

Vietnam, as what Anderson calls a “defiant replica of China,” continues to experience the tensions and anxieties developed over centuries of resistance to outside dominations (Anderson 2011:10). As one article from the Associated Press reports, “Anger at [Vietnam’s] giant northern neighbor China is increasingly showing up in consumer behavior” (Brummit 2013). Partially because of this, the Vietnamese we worked with would often point out which commodities were Vietnamese-made. Many of the gifts given to our research team were Vietnamese in origin and

shops all over Hanoi advertised that their products were “Made in Vietnam.” One candy store’s catch phrase was “The Cream of Vietnamese Gifts,” and when I went to buy fleece-lined leggings, my Vietnamese friend said to me, “Regrettably, these are not made in Vietnam. They are from China.” When I presented a version of this chapter at our Spring Student Anthropology Symposium during the spring of 2013, one first-generation Vietnamese-American student commented in a blog post responding to the symposium, “Warnings about ‘Chinese chemicals’ reminds me of my father’s constant emails to me about staying away from Chinese products” (Kyle 2013).

One of the most predominant fears I heard voiced concerns about health. Many of the people I talked to expressed a wariness of Chinese products because of possible toxic chemical contamination, particularly on food. When I went into a grocery store with one of the faculty members of Vietnam National University, she pointed to a sign and told me that it said the fruit below it was from Vietnam, whereas the fruit under the other sign was imported from other countries. She only picked fruit from the Vietnam section, explaining that when the fruit comes from other countries—and most come from China—you do not know what chemicals they put on them to make them shippable to Vietnam. When the fruit comes from Vietnam, it does not have to travel as far. If you read the newspaper or information on the Internet, you know when certain fruits are in season and can buy more consciously. However, she warned me, you can never be certain and can only hope the signs and labels are true.

In addition to the chemical safety concerns, there are also economic anxieties. In fact, one of the reasons our research was accepted by Vietnam National University is because dragon fruit is highly successful in Vietnam and cutting costs for farmers would mean more profits for Vietnamese people. Vietnamese dragon fruit is competitive on the global market, even with

China whose cheap labor forces often keep Chinese prices too low to compete with. Vietnam is a small, economically developing country without widespread industrial agriculture to efficiently produce low-cost food. Despite this, it seemed to me, based on listening to Vietnamese talk about their country in casual conversation, that the country is trying to find a way to establish itself in a global market dominated by its production-giant neighbor. With many products crossing into Vietnam from China illegally, Chinese production has the potential to undermine the domestic Vietnamese economy as well. One man told the Associated Press, "Chinese made products are killing Vietnam's economy and Vietnam could become China's economic slave" (Brummit 2013). A history of resistance and uneasy alliances set the scene for contemporary Vietnamese attitudes towards China, and these attitudes are reflected in expressions of concern about health and economic security in a capitalist world.

Today, dragon fruit production is well established in Binh Thuan. The fruit is cheap and delicious there. As we travelled north, however, we noticed the price of dragon fruit increased, while the quality decreased. In the North, the high cost of dragon fruit means it is more of a luxury purchase than a daily commodity and is sometimes given as a gift to children or friends. In fact, when we returned from Binh Thuan on the train, both the Tufts Research Team and the Vietnamese researchers came with several boxes packed with dragon fruit to distribute to friends and family as gifts, which were warmly received. In both Binh Thuan and places importing dragon fruit, people usually eat the fruit as a treat as a light, refreshing desert. Buffet restaurants tailored to tourists would include the dragon fruit in the Vietnamese desert section, and higher-class restaurants would serve some on a small plate next to slices of watermelon at the end of a meal. Some make it into a juice for children, others mix it with milk and sugar, but most eat it raw without processing. In my interviews with dragon fruit farmers and consumers, I learned that

some people also boil or steam the green fruit or flowers and eat it as a vegetable with rice. Many people see the potential for processing the fruit, turning excess yields into juices and jellies for sale, but processing is hardly widespread.

Some international companies are starting to pay attention to the fruit, though. Its dramatic appearance makes the “so-called ‘superfruit’ hailing from South America and Asia” an exotic addition to Skyy Vodka (Beverage Dynamics 2011). The Body Shop introduced a “Dragon Fruit Lip Butter,” the Demeter Fragrance Library “has captured the dragon fruit’s essence in a clean, uplifting scent,” and the Equinox Spa in New York City started offering a 50 minutes “dragon fruit facial” for \$175 (Howard 2012). The purported health benefits—“rich in fiber and antioxidants”—are not just a product of international exoticism. In Vietnam, several people told me that dragon fruit are good for people with diabetes and are generally good for your body. For example, “They are cool and give you energy,” explained the wife of a successful dragon fruit farmer. For Vietnamese, the ideas about the health benefits of Binh Thuan dragon fruit go beyond the properties of the fruit itself, and encompass conceptions about the relative safety of Vietnamese-grown products.

### **Domestic Dragon Fruit**

As mentioned earlier, there is among Vietnamese consumers a desire to purchase Vietnamese products, but with little documentation and many products crossing over the border from China illegally, as a university faculty told me, “you can never be sure” of the origin of your product. This is not the case with Vietnamese-grown dragon fruit. According to several people I talked to, including farmers and consumers, the white-fleshed variety grown in Binh Thuan does not grow in China, and the red-fleshed variety grown in China does not grow in Binh Thuan. This regionality is not entirely accurate, but is generally more or less observable.

Although one article reports, “A project for the cultivation of red-flesh dragonfruit, said to be sweeter than the white-fleshed form, has provided big profits for farmers in the province of Ninh Thuan,” the fact that such a project was found newsworthy in 2012 speaks to the rarity of red-flesh dragon fruit in the area (Fresh Plaza 2012). One of the non-scholarly sources I found, dragonfruits.net, explains that the red-fleshed variety was “developed”—as the authors of the post phrase it—in China and Australia, whereas the white-fleshed dragon fruit was “developed” in Thailand, Indonesia, and Vietnam (Dragonfruitlover 2012). While it may be that fruit displaying any of the variety of flesh colors can be grown in both China and Vietnam, the trend has been region-specific cultivation of white-flesh in Vietnam and red-flesh in China. This trend likely informs what farmers and consumers believe and what they told me.

Using the logic of region-specific fruit production, the white-flesh of dragon fruit grown in Binh Thuan is essentially a biological guarantee of origin. Whereas Vietnamese “can never be sure” about the origins of their mandarin oranges or grapes, they can be almost positive of the domestic origins of their dragon fruit. However, as one man told the Associated Press, “In reality, local fruit can't meet demand,” because there are “only a few kinds of certain fruits... so it ends up that they are too expensive” (Brummit 2013, Ngan 2010). One of the appeals of industrial agriculture is in how it efficiently produces cheap food. As researchers, we came in looking to help farmers towards a similar goal: efficiently produce dragon fruit at low-cost to the farmers. In doing so, we were helping develop a system that looks a lot like industrial agriculture. While Vietnam’s domestic food economy may benefit from a turn toward industrializing its food production, with an increase and intensification in food production come detriments to environmental and personal health, such as greater chemical usage and soil depletion.

It is important to note that commercial dragon fruit grown in Vietnam are not free of chemicals. For example, while we were visiting one of the farms, the farmer, Mr. Nguyễn Đức Tuấn, took us out to watch masked women apply a chemical to the ears of the fruit. This chemical would inhibit the curling back of the ears, making the fruit more desirable and easier to ship, according to the farmer. We also learned from the farmers and scientists back at the University of Science that dragon fruit growers often apply phytohormones to the plants to induce budding in the winter season as an alternative to lighting. One farmer whose field abutted that of our host sprayed herbicide on the grassy weeds growing up among his plants while we were there. The wind carried the chemical smell over in our direction and, upon noticing it, the nephew of our host took the smaller children upwind of the spraying to protect them from the detrimental effects of the herbicide. His actions revealed concern about the chemicals used to grow these fruit. For the same reason, many farmers keep a separate patch of dragon fruit plants chemical-free, and give the fruit from these plants to their friends, family, and visitors.

Despite the chemical usage in dragon fruit production and the concerns about it among farmers, Vietnamese fruit at least *seems* safer to consumers. This can be explained, in part, by the rumors that circulate about Chinese products. An article from the Associated Press in March 2013 reported one of the many tales of the horrors borne from Chinese products:

The *Pioneer*, one of the country's largest circulation papers, repeated rumors about leeches in milk and watermelons imported from China. It went on to report on the case of a woman from northern Vietnam who was admitted into a hospital after suffering from stomachache. The doctor apparently fainted when he saw the leeches squirming inside her stomach. [Brummit 2013]

Such rumors are based at least partially on truth. Made possible by China's lax regulations, high levels of pesticide contamination, poisons and toxins in food and other goods, and other instances of concern to consumers are frequently reported globally. Mary Douglas (1996) writes, "Goods are now to be seen as the medium, less objects of desire than threads of a veil that disguises the social relations under it," and in this case, the social relations—the factual events, rumors, and tensions between Vietnam and China—are barely veiled in consumer decisions as they consciously reject Chinese products (Douglas 1996:152). This illustrates Douglas' idea that our conceptual categories, such as safe and dangerous or good to eat and bad to eat, both reflect and create social identities and affiliations. The social identities and relations have curbed Vietnamese consumption of products from China, Vietnam's major partner in trade, and the effects are visible in the market exchanges (Brummit 2013).

In addition to spreading rumors about Chinese products, the burgeoning media in Vietnam enables consumers to access information concerning their consumption behavior. Even in the midst of northern Vietnam, on top of a cloud-shrouded mountain after a day of navigating terrifying muddy roads, we found ourselves watching Hmong children peruse Internet videos. The growing country is connected and wired in, even in the farthest corners. This widespread access allows consumers not only to quickly hear about the latest Chinese product scandal, but also to educate themselves about when a fruit is in season, where it is grown, what the going market price is, and maybe even what methods are used to grow it. As one article about Vietnam/China relations reports, "Vietnam's recently minted middle class, like their brethren elsewhere, are increasingly concerned about the provenance and quality of what they put on their plates in general," and widespread information access facilitates consumer action in response to these concerns, such as purchasing Vietnamese-grown fruit (Brummit 2013).



Dragon fruit, for the people of Binh Thuan, is a livelihood—and a profitable one at that. Dragon fruit is a relatively new fruit for the Vietnamese palate, but its growth, both economic and botanical, has been enabled by and a participant in Vietnam’s burgeoning capitalist economy. Since the 1990s, dragon fruit has become a major export for Vietnam. What’s more, the quality of the white-fleshed fruit grown in Binh Thuan, according to my Vietnamese colleagues, is better than dragon fruit grown in other regions of Vietnam or China. So, they argue, the potential market for high quality, Binh Thuan-grown, white-fleshed dragon fruit is large and exciting, and improving shipping technology puts market access in the foreseeable future.

Dragon fruit’s own colonization of Binh Thuan was enabled by improving infrastructure and economy, and, in return, has succeeded domestically and shows promise internationally. One of the sets of meanings being constructed for dragon fruit is a specifically capitalist one. Sugar and other foods have signified the entry of people and places into global circuits of capitalist colonial markets and we see a similar thing happening with the dragon fruit. In tracking with older colonial patterns, the West is still determining Vietnam’s entry and status in the global sphere based on its involvement in a capitalist market system dominated by Western countries. Vietnam is expected to “develop” to meet the standards of the “developed” West via the global market. In order to do this, Vietnam has welcomed Western researchers and the technologies and systems of industrialization. When we look at the movements of dragon fruit, we can see the presence of colonialism, the pressures from a global capitalist market and desires to be a part of it, and the growth of Vietnamese economy. We also see the simultaneous development of a Vietnamese identity communicated and shaped in consumer behavior.

## **Tangled Up in Fruit**

As one article argues, “While fears about the safety of Chinese food products are often well founded, in Vietnam they are so tangled up with anti-Chinese sentiment it is hard to tell where one begins and the other ends” (Brummit 2013). In the context of a society with tangled fears about chemicals, anxieties about being competitive both domestically and on a global market, and lasting tensions in relations with dominating countries, the dragon fruit has become Vietnamese.

Like the flower in the introduction of Michael Pollan’s *The Botany of Desire*, dragon fruit have “gotten” humans to “do things for them they couldn’t do themselves” by satisfying human desires, and also by working within and mediating Vietnamese anxieties (Pollan 2000:xiv). Pollan argues against the grammar we use now to identify the hierarchy of influence, and it does us good to keep this in mind here. The dragon fruit may not have had the consciousness or awareness humans are habituated to using to explain agency, but the nature of plants can speak to a desire of humans, and it is this dialogue that got dragon fruit into the country of Vietnam and into the category of “Vietnamese.” It may have only become widespread within the past several decades, but its biology has allowed it to be adopted as Vietnamese, despite originating from Central America and being transported by French colonialists. Dragon fruit grows extremely well in Vietnam, which makes it a potential tool of Vietnamese economic empowerment in a market largely dominated by China. Additionally, the white-fleshed variety serves as a guarantee of origin to a people that suspect and fear chemical contamination from Chinese products.

By placing the dragon fruit, its travels, its biology, and its usage in the context of Vietnamese history and international relations, including its place in the global food system, we better understand how it became “Vietnamese” and what meanings it carries. The story of the

dragon fruit is a story of colonialism, being brought over from Central America by the French. It is the story of globalization, as a market-driven fruit the promises Vietnam access to the capitalist world market. It speaks of nationalism and resistance, positioned as an agent of information and safety empowering consumers to take action against a dominating neighbor. As dragon fruit signifies and enables Vietnam's entry into the global capitalist market, ideas about Vietnamese identity, place, and status are being mapped onto the fruit in its circulation of domestic and international markets. Dragon fruit tells many stories—all connected—at once. In doing so, it demonstrates the tangled, interconnected, and messy web that is our conception of global, local, and national, and our place in all of it.

## Conclusion: When I Followed The Fruit

When I began writing this thesis, I asked, “How does a global fruit turn local?” How does a tomato become an icon of the local food movement in New England when it is native to Central America? How did the dragon fruit conceptually separate itself from its Mexican origins to become a Vietnamese fruit used in resistance to economic domination? How does fruit hold contradictory meanings without losing its sense of being a cohesive object? As this paper comes to a close, I realize I have no neat and tidy answers. I have no neat and tidy answers because these fruit are not neat and tidy fruit and because the meanings of material things like food are as dynamic as the societies and people constructing those meanings.

Rather, this brief exploration of the history, travels, and meanings of tomatoes and dragon fruit has left us with two paradoxical, contradictory, polyvocal, and rather messy fruit. In both chapters I found myself continually returning to the histories I had laid out for the fruit, adding short, simplified summaries of incredibly complex movements and forces because they were inextricable from the histories of each fruit. What started as a focused and specific topic quickly morphed into what is, on some level, an extremely abridged history of humans and the world, told through the tomato and dragon fruit. That this morphing happened, and happened so quickly, speaks to the entanglement of seemingly simple fruit in a web of global, national, and local forces. Within these webs, ideas about identity, race, place, and status are being mapped onto the foods themselves as they circulate markets of all scales.

Bell and Valentine (1997) use cultural geographer Phil Crang’s ideas about displacement and consumption as they engage with the paradoxical nature of national cuisines, which have been developed and shaped by people and food on the move. Crang writes:

In broad terms the figure of displacement is used here to suggest an understanding whereby: processes of consumption are cast as local, in the sense of contextual; but where those contexts are recognised as being opened up by and constituted through connections into any number of networks, networks which extend beyond delimiting boundaries of particular places; where imagined and performed representations about ‘origins’, ‘destinations’, and forms of ‘travel’ surround the various flows of people, goods, and services in these networks; and where consumers (and other actors in commodity systems) find themselves positioned and position themselves in terms of their entanglements with these flows and representations. (in Bell and Valentine 1997:192)

The networks Crang writes about are those that have come to my attention as I worked on this paper. They are the ones that make tomatoes, dragon fruit, and any other food messy and impossible to reduce to mere biological objects. The networks themselves are frustratingly tangled and intertwined. However, as Deborah Barndt writes, “The metaphor of tangled roots and routes reminds us that these stories are neither simple nor one-dimensional but rather complex, messy, and very rich,” and the *idea* of them helps reconcile the plethora of contradictions I uncovered in my investigations of the tomato and the dragon fruit (Barndt 2008: 3).

A local food movement, a campaign for workers’ rights, and an industrial food system, along with all their respective, connected histories, are embodied in the image and idea of the tomato. Similarly, dragon fruit exists both as a remnant of periods of foreign occupation and control and as modes of Vietnamese empowerment and resistance of further domination. As I discovered the contradictions of these fruit I found the boundaries and borders separating the

scales of the global from the local and everything in between rapidly disintegrating. It became evident that the scales and contexts so often referred to in discourse about food are perhaps better thought about as gradations—gradations of localness, gradations of nationalness, gradations of globalness—because as these fruit have shown, there are spaces, places, and times when one scale shifts into another. I could no longer reasonably talk about the “local” tomato without referencing the global and national, and vice versa. Likewise, without the global dragon fruit, there would be no Vietnamese dragon fruit.

Once the divisions of scale started to blur, so did the categories of “good” and “bad” as they are talked about within the food movement. The seemingly pristine and pure farmers’ market tomato unfolds to reveal an industrialized and globalized history. “Bad” industrial agriculture gave rise to “good” local tomatoes, so does the dichotomy still exist? Are associations of local, healthy, environmentally friendly, and so on really universally or incontestably “good?” Are the forces of industrialization, globalization, colonization, etc, against which the “good” category is framed, truly inherently “bad?” I have come to the conclusion that the categories are matters of gradations and are situational, subjective, and a matter of perspective.

I arrived at this conclusion after grappling with the contradictions arising within the histories and modern day meanings of tomatoes and dragon fruit, but also after becoming aware of the contradictions in my own participation in the networks within which these fruit exist. While it took a deep reading of fruit to bring the notion of truly permeable boundaries of categories within our food system to my own life, it has become apparent that we all cross boundaries and borders, that we are all tied into the histories of equally mobile fruit, that we are all using food to understand and make sense of our own identities and place in space and time,

and that we are all walking contradictions of our own devices. I unexpectedly experienced this contradiction during my spring break.

### **The Power of the Paradox: Marching With the Tomato Workers**

Just a few months after returning from my trip to Vietnam where I played the role of international researcher come to help farmers help themselves, à la Green Revolution, I was sitting in a Food For Thought student group meeting, probably partaking in a conversation about the evils of factory farming or ways to eat locally in New England. A girl with whom I had taken Sustainable Food Systems, a class under our Experimental College, came in to invite members of the group to join her in heading down to Florida for spring break to participate in the Coalition of Immokalee Workers' March for Rights, Respect, and Fair Food. The Coalition (CIW) was marching to ask Publix, Florida's major grocery store chain, to join the Fair Food Program. I decided to go.

We teamed up with other students from around the Northeast and the DC area to take a charter bus down to the march. Our caravan of 40 students met the march on Friday at their first rest stop of the day, joining farmworkers and allies who had already been marching for almost two weeks. Our group helped swell the ranks of the marchers and fill them "with a fresh, and powerful, jolt of energy and enthusiasm" (Coalition of Immokalee Workers 2013b). Florida's warm, sunny atmosphere was a welcome change from Boston's cold, wet winter. The constant Spanish-English translations and mix of generations shocked us out of our homogenous Ivory Tower monotony. Brightly colored flags fluttered in the gentle breeze, and children ran around shrieking in delightful play while their parents sat on upturned tomato harvest buckets.

After the marchers had snacked and rehydrated, we organized for the next leg of the day. Signs in the likeness of tomatoes sporting words like "Justice" and "Fair Food," in both Spanish

and English, were distributed amongst us as we formed our procession. A large flatbed truck with mounted speakers pulled out in front of the group as people on the truck relayed instructions over a microphone. With signs and flags hoisted, music started, and shoes tied, we set out, two by two, shoulder to shoulder, down the roads of Florida.

We participated in two more days of marching, chanting, singing, breaking for snacks, eating communal meals in community centers, sleeping in churches, and rallying in front of Publix branches. By the final day, our numbers had grown to over 1,500. I found myself on security that day, walking on the side of the march making sure people did not move into traffic. From my position on the sidelines, I stepped back for a moment at an intersection and looked up and down the moving line. It was a moment that gave me chills. The marchers were laughing and singing, waving their signs and flags, and marching with the spirit of having a purpose despite the fatigue we all felt. Under the Florida sun, people from all backgrounds had come together in a beautiful, brightly colored celebration of a “New Day for Farmworkers” (Coalition of Immokalee Workers 2013a). Supporters in cars honked and received cheers in return. The flatbed’s truck speakers blasted upbeat music. Different chants sounded from various sections of the march in a cacophony of impassioned voices. The spirit was that of a party, a long, mobile, diverse street party.

We ended the march with a two-hour long rally in front of the corporate headquarters of Publix. Here, Coalition members, students, children, allies in communities of faith, and others took up the roles of performers and audience, many moving between the two. The audience was treated to speakers recounting the march and the mission of the CIW, music that kept the spirit of the crowd high, and an amusing play about the history, challenges, and successes of the Fair Food Program. At one point, in front of a beautiful background portraying a rising sun, the



Coalition came up on stage and presented the proposed rights for the Immokalee farm workers for which they had just marched 200 miles. The audience watched as one by one they listed and described the right to freedom from slavery, discrimination, and sexual harassment, the right to a penny more per pound and no more overflowing buckets, and more.

After it was all over, our group of 40 students loaded back on the bus and drove north. As of now, Publix has yet to agree to sign on to the Fair Food Program, but the march was still a success, as it rallied the spirits and compassion of thousands of people who support the rights of the Immokalee tomato workers.

As participants in this march, we crossed many, many borders and boundaries. Moving into one, however, did not mean we left the other. In a very observable sense, with the length of our procession, we could be in two counties at the same time. We crossed state and county lines, but left our mark in the minds of the residents and passersby. We went from students, farmers, and church-members to student-activists, farmer-activists, and church-member-activists. I myself went from identifying as a local foodie to marching shoulder-to-shoulder with industrial agriculture workers. Like the tomato, we were on the move. We were versatile. We were flexible in our identities and meanings. Many of us were full of contradictions, and yet the message of the march was not compromised.

The rights the Coalition had presented on stage had resonated with me on the level of activist, consumer, researcher, farmworker, and student. There were, however, tensions within how they resonated and in how we existed as a group. My friends and I were privileged students on spring break marching in solidarity with people we would otherwise probably never interact with: poor migrant farmworkers. We were foodies marching not to eradicate the industrial agriculture system, a move many foodies may support, but rather to improve it and, in a way,

ensure its future existence. We were moving past the boundaries of the categories we consider ourselves in to confront the forces that shape such categories and distance them from each other.

The Coalition's work is enabled in part by how the farmworkers mobilize mainstream and even alternative American tastes about tomatoes to challenge the abuses of the industrial food system. Because tomatoes are such an essential part of American cuisine, American supermarkets, and American fast food, the conditions of production of the tomato implicate us all in matters of labor and ethics.

The CIW's use of the tomato is an example of how visionaries of a better, brighter future can capitalize on the polyvocality, flexibility, and versatility of fruit. Producers, distributors, and consumers in Vietnam have done the same with the dragon fruit, using the ability of the fruit to hold and relay many contradictory meanings within its spiky, magenta form to resist systems that tell them how and who to be. The power I have witnessed in these paradoxical fruit leads me to ask: How can *we*, as workers, farmers, eaters, buyers, sellers, students, activists, and citizens of the earth, engage with and mobilize these paradoxes in ways that further our own intentions and values? How can we use fruit and let fruit use us to shape the world? How do we use what we know about fruits as versatile and adaptable, as influenced and influencing, as imbued with meanings because of social, cultural, political, and economic histories?

In order to enact a fruit as a part of a movement toward a more just or fair or generally better food system, we can consciously engage with the numerous levels of meaning that fruit carries. Such endeavors, however, are bound to be fraught with unintentional sidetracks, as the forces that shape the meanings of fruit are numerous and complex.

Can we change a food system by changing the meanings carried by fruit? When we understand that the meanings of fruit are developed and imbued through greater contexts, and

that to change the meanings of fruit is to change the discourses in these contexts, then yes, we can. Noticing and examining the contradictions within tomatoes and dragon fruit has revealed the truly interconnected relationship between human and fruit. Such contradictions are possible because the scales and contexts in which contradictions are framed are really arbitrary distinctions made to conceptually simplify messy, interweaving, inter-influencing relationships. But by identifying the ways in which those scales, contexts, and categories have been shaped, and reimagining the relationships among them, we can at least come close to seeing where and how we are using fruit implicated in these relationships to help us understand our identities, on whatever scale and in whatever context.

Changing the systems we find problematic requires addressing those systems through a variety of angles, which itself requires crossing boundaries and borders and maintaining an awareness of the multiple positioning and ambivalent identities of human actors and foods with which we are in relationship. My own endeavors to do just this in this paper and in my life open up spaces for expanded and deepened discussions about what makes food what it is. If we keep these spaces open, grapple with established borders and boundaries, and engage on levels beyond those defined by the food system as it exists today, as well as its alternatives, we may find ourselves imagining a different kind of relation to our fruits, our selves, and our world.

I began this paper wanting to investigate the human/fruit connection. Little did I know that “human” meant my own self, but it is only through acknowledging my place in all this that the reality of the interconnectedness of fruit and humans has truly become evident. A multispecies ethnography about tomatoes and dragon fruit ended up being an equally self-ethnographic project—essentially a multi-species self-ethnography. My own ideas and resistances and contradictions are bound up in the fruit I studied, even as I studied them. I

crossed boundaries in the pursuit of understanding the tomato and the dragon fruit, and in doing so I demonstrated and furthered their capabilities to influence people. While I tried to untangle the mess of the tomato and the dragon fruit, they made my own life even messier, but they also allowed me to more clearly see and understand the challenges in making the changes I would like to see in the world.

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